

AMWTP-082

Rev. 0

PUBLIC READING ROOM
U.S. DEPARTMENT OF ENERGY
IDAHO OPERATIONS OFFICE

Modification Request
to the HWMA/RCRA Part A Permit
Application for the Transuranic Storage Area
Interim Status Units

at the
Idaho National Laboratory
[EPA ID No. ID4890008952]

Book 1 of 1

January 2009



Bechtel BWXT Idaho, LLC

C-2009-0031

January 23, 2009

Mr. Brian Monson, Hazardous Waste Program Manager
Idaho Department of Environmental Quality
1410 North Hilton
Boise, ID 83706-1255

Subject: Transmittal of Modification Request to the AMWTP HWMA/RCRA TSA Interim Status Document, Rev. 0. – JDM-13-09

Dear Mr. Monson:

Enclosed are three hard copies and a compact disc containing the information in electronic form of a Modification Request to the Advanced Mixed Waste Treatment Project (AMWTP) Hazardous Waste Management Act (HWMA)/Resource Conservation and Recovery Act (RCRA) Transuranic Storage Area (TSA) Interim Status Document. This Modification Request addresses proposed revisions to the TSA Interim Status Units Part A Permit Application by removal of Pad-2 as an Interim Status container storage unit. On July 25, 2008, a Class 3 Permit Modification Request (PMR) to the AMWTP HWMA/RCRA Permit including a Request for Temporary Authorization (RTA) was submitted to the State of Idaho Department of Environmental Quality (DEQ) in accordance with IDAPA 58.01.05.012 (40 CFR 270.42). As part of the Class 3 PMR/RTA, the Permittee requested that Pad-2 be allowed to be permitted under IDAPA 58.01.05.008 (40 CFR 264 Subpart I) as a container storage unit. On October 30, 2008, the DEQ approved the RTA allowing Pad-2 to be permitted as an IDAPA 58.01.05.008 (40 CFR 264 Subpart I) container storage unit. Therefore, the TSA IS Units Part A Permit Application must be revised to remove Pad-2 as a container storage unit regulated under IDAPA 58.01.05.009 (40 CFR 265 Subpart I).

The AMWTP appreciates your attention and efforts on this important project. Please contact either Mr. Neil Brill at (208) 557-7316 or me at (208) 557-6404 with questions and comments.

Sincerely,

Jeffrey D. Mousseau, P.E.
President and General Manager
Bechtel BWXT Idaho, LLC
Advanced Mixed Waste Treatment Project

LSS/CTM:gc

cc: (w/o enclosures)
Nicole Brooks, DOE-ID
Neil Brill, BBWI
Robert Bullock, DEQ
Susan Burke, INL Oversight

Jeff Hunt, EPA Region 10
William Lattin, DOE-ID
Charles Ljungberg, DOE-ID
AMWTP Correspondence Control



Department of Energy

Idaho Operations Office
1955 Fremont Avenue
Idaho Falls, ID 83415

January 22, 2009

Brian Monson
Hazardous Waste Program Manager
Department of Environmental Quality
1410 N. Hilton
Boise, ID 83706

SUBJECT: Modification Request to the Hazardous Waste Management/Resource Conservation and Recovery Act (HWMA/RCRA) Transuranic Storage Area (TSA) Interim Status Part A Permit Application (OS-ETSD-09-011)

Dear Mr. Monson:

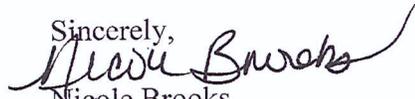
Enclosed is a Modification Request to the Advanced Mixed Waste Treatment Project (AMWTP) Hazardous Waste Management Act/Resource Conservation and Recovery Act (HWMA/RCRA) Transuranic Storage Area (TSA) Interim Status (IS) Units Part A Permit Application.

This Modification is necessary to remove the TSA Pad-2 container storage unit from the TSA IS Units Part A Permit Application due to its change in regulatory status to a Part B container storage unit regulated under IDAPA 58.01.05.008 (40 CFR 264 Subpart I). This change in regulatory status was approved by DEQ on October 30, 2008.

This Modification also addresses a revision to the TSA IS Units Part A Permit Application by removal of the TSA- Retrieval Enclosure (RE) Retrieval Modification Facility (RMF) as an IS container storage unit. The TSA-RE RMF has not yet been constructed, and there are no plans by the Permittee to construct the TSA-RE RMF. Consequently, the TSA IS Units Part A Permit Application must be revised to remove the TSA-RE RMF as an IS container storage unit.

Also enclosed are the signed certification statements required by IDAPA 58.01.05.012 [40 CFR 270.11(d) and 270.30(k)].

If you have any questions regarding this information, please contact me at (208) 526-0709.

Sincerely,

Nicole Brooks
Environmental Technical Support Division

cc Robert Bullock, IDEQ

JANUARY 2009 MODIFICATION REQUEST FOR THE TSA IS UNITS PART A PERMIT APPLICATION

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Modification Request for the TSA IS Units Part A Permit Application

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	Acronyms and Abbreviations (Strikethrough)
	Section B (Strikethrough)
	Section C (Strikethrough)
	Section D (Strikethrough)
	Section F (Strikethrough)
	Section G (Strikethrough)
	Section H (Strikethrough)
	Section I (Strikethrough)

Attachment B	Signed Certification Statements
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JANUARY 2009 MODIFICATION REQUEST FOR THE TSA IS UNITS PART A PERMIT APPLICATION

This document contains a Modification Request for the *Advanced Mixed Waste Treatment Project (AMWTP) Hazardous Waste Management Act (HWMA)/Resource Conservation and Recovery Act (RCRA) Part A Permit Application for the Transuranic Storage Area (TSA) Interim Status (IS) Units at the Idaho National Laboratory (INL), Environmental Protection Agency (EPA) Identification Number ID48900008952*, hereinafter referred to as the TSA IS Units Part A Permit Application. This document also contains the Part B HWMA/RCRA IS Sections, which are being submitted as information only, as the Part B HWMA/RCRA IS Sections are not subject to the changes during interim status requirements found at the Idaho Administrative Procedures Act (IDAPA) 58.01.05.012 [Title 40 of the Code of Federal Regulations (CFR), Part 270.72]. The Part B HWMA/RCRA IS Sections are being submitted as part of this document to reflect the changes being proposed in the TSA IS Units Part A Permit Application Modification Request.

The TSA IS Units are comprised of pads TSA-1/TSA-R, TSA-2, and the Retrieval Modification Facility (RMF). TSA-1/TSA-R and TSA-2 are located inside the TSA-Retrieval Enclosure (TSA-RE), commonly known as the Waste Management Facility (WMF) – 636. The TSA-RE RMF is a container storage unit which has not yet been constructed.

This document is being submitted by BBWI (i.e., the operator) and the U.S. Department of Energy, Idaho Operations Office (DOE-ID) (i.e., the owner), collectively referred to as the Permittee, in accordance with IDAPA 58.01.05.012 [40 CFR, Part 270.72(a)(1) and (a)(3)]. This Modification Request addresses proposed revisions to the TSA IS Units Part A Permit Application by removal of Pad-2 as an IS container storage unit. On July 25, 2008, a Class 3 Permit Modification Request (PMR) to the AMWTP HWMA/RCRA Permit including a Request for Temporary Authorization (RTA) was submitted to the State of Idaho Department of Environmental Quality (DEQ) in accordance with IDAPA 58.01.05.012 (40 CFR 270.42). As part of the Class 3 PMR/RTA, the Permittee requested that Pad-2 be allowed to be permitted under IDAPA 58.01.05.008 (40 CFR 264 Subpart I) as a container storage unit. On October 30, 2008, the DEQ approved the RTA allowing Pad-2 to be permitted as an IDAPA 58.01.05.008 (40 CFR 264 Subpart I) container storage unit. Therefore, the TSA IS Units Part A Permit Application must be revised to remove Pad-2 as a container storage unit regulated under IDAPA 58.01.05.009 (40 CFR 265 Subpart I).

This Modification also addresses a revision to the TSA IS Units Part A Permit Application by removal of the TSA-RE RMF as an IS container storage unit. As mentioned previously, the TSA-RE RMF has not yet been constructed, and there are no plans by the Permittee to construct the TSA-RE RMF. Consequently, the TSA IS Units Part A Permit Application must be revised to remove the TSA-RE RMF as an IS container storage unit.

This Modification Request also addresses the addition of EPA Hazardous Waste Number (HWN) P099 to the TSA-1/TSA-R IS Unit. In order to maximize operational efficiency at the AMWTP, it is necessary to have consistency with the EPA HWNs listed on the Part A Permit Applications for the TSA IS Units and the AMWTP HWMA/RCRA Permit, that are currently not already listed on the TSA IS Units Part A Permit Application. No EPA HWNs are being removed from the TSA IS Units Part A Permit Application.

Proposed modifications to the TSA IS Units Part A Permit Application and the Part B HWMA/RCRA IS Sections are provided in Attachment A of this document. The currently approved TSA IS Units Part A Permit Application is also included in Attachment A.

This Modification Request is being submitted to support AMWTP objectives and Idaho Settlement Agreement [i.e., Public Service Co. of Colorado v. Batt, No CV-91-0035-S-EJL (D. Id.) and the United States v. Batt, No. CV-91-0054-S-EJL (D. Id.)] related milestones.

Within 45 days after the DEQ approval of this Modification Request, a clean copy of the revised TSA IS Units Part A Permit Application will be provided to the DEQ and to all persons assigned a controlled copy [per the AMWTP Document Control System] of the HWMA/RCRA TSA IS Document. The proposed changes to the TSA IS Units Part A Permit Application do not reduce the capacity of the Permittee to provide continued protection of human health and the environment.

Attachment A

- Part A Permit Application (Modified)**
- Part A Permit Application (Approved)**
- Acronyms and Abbreviations (Strikethrough)**
- Section B (Strikethrough)**
- Section C (Strikethrough)**
- Section D (Strikethrough)**
- Section F (Strikethrough)**
- Section G (Strikethrough)**
- Section H (Strikethrough)**
- Section I (Strikethrough)**

SEND COMPLETED FORM TO: The appropriate EPA Regional or State Office.	United States Environmental Protection Agency RCRA SUBTITLE C SITE IDENTIFICATION FORM						
1. Reason for Submittal (See instructions on page 14) MARK ALL BOX(ES) THAT APPLY	Reason for Submittal: <input type="checkbox"/> To provide Initial Notification of Regulated Waste Activity (to obtain an EPA ID Number for hazardous waste, universal waste, or used oil activities) <input type="checkbox"/> To provide Subsequent Notification of Regulated Waste Activity (to update site identification information) <input type="checkbox"/> As a component of a First RCRA Hazardous Waste Part A Permit Application <input checked="" type="checkbox"/> As a component of a Revised RCRA Hazardous Waste Part A Permit Application (Amendment # Volume 1a - Revision January 2009) <input type="checkbox"/> As a component of the Hazardous Waste Report						
2. Site EPA ID Number (page 15)	EPA ID Number: ID4890008952						
3. Site Name (page 15)	Name: IDAHO NATIONAL LABORATORY						
4. Site Location Information (page 15)	Street Address: <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%;">City, Town, or Village: SCOVILLE</td> <td style="width: 30%;">State: ID</td> </tr> <tr> <td>County Name: BUTTE, CLARK, JEFFERSON, BONNEVILLE, BINGHAM</td> <td>Zip Code: 83415</td> </tr> </table>			City, Town, or Village: SCOVILLE	State: ID	County Name: BUTTE, CLARK, JEFFERSON, BONNEVILLE, BINGHAM	Zip Code: 83415
City, Town, or Village: SCOVILLE	State: ID						
County Name: BUTTE, CLARK, JEFFERSON, BONNEVILLE, BINGHAM	Zip Code: 83415						
5. Site Land Type (page 15)	Site Land Type: <input type="checkbox"/> Private <input type="checkbox"/> County <input type="checkbox"/> District <input checked="" type="checkbox"/> Federal <input type="checkbox"/> Indian <input type="checkbox"/> Municipal <input type="checkbox"/> State <input type="checkbox"/> Other						
6. North American Industry Classification System (NAICS) Code(s) for the Site (page 15)	A. 92411	B. 54171	C. 336992				
7. Site Mailing Address (page 16)	Street or P. O. Box: 1955 FREMONT AVENUE, IDAHO FALLS City, Town, or Village: IDAHO FALLS State: ID Country: USA <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%;">Zip Code: 83415</td> </tr> </table>			Zip Code: 83415			
Zip Code: 83415							
8. Site Contact Person (page 16)	First Name: DONALD	MI: N	Last Name: RASCH				
9. Operator and Legal Owner of the Site (pages 16 and 17)	A. Name of Site's Operator: BECHTEL BWXT IDAHO, LLC.		Date Became Operator (mm/dd/yyyy): 05/01/2005				
	Operator Type: <input checked="" type="checkbox"/> Private <input type="checkbox"/> County <input type="checkbox"/> District <input type="checkbox"/> Federal <input type="checkbox"/> Indian <input type="checkbox"/> Municipal <input type="checkbox"/> State <input type="checkbox"/> Other						
	B. Name of Site's Legal Owner: US DEPARTMENT OF ENERGY IDAHO OPERATIONS OFFICE		Date Became Owner (mm/dd/yyyy): 01/01/1952				
	Owner Type: <input type="checkbox"/> Private <input type="checkbox"/> County <input type="checkbox"/> District <input checked="" type="checkbox"/> Federal <input type="checkbox"/> Indian <input type="checkbox"/> Municipal <input type="checkbox"/> State <input type="checkbox"/> Other						

9. Legal Owner (Continued) Address	Street or P. O. Box: 1955 FREMONT AVENUE, IDAHO FALLS	
	City, Town, or Village: IDAHO FALLS	
	State: ID	
	Country: USA	Zip Code: 83415

10. Type of Regulated Waste Activity
Mark "Yes" or "No" for all activities; complete any additional boxes as instructed. (See instructions on pages 18 to 21.)

A. Hazardous Waste Activities
Complete all parts for 1 through 6.

Y N 1. Generator of Hazardous Waste

If "Yes", choose only one of the following - a, b, or c.

- a. LQG: Greater than 1,000 kg/mo (2,200 lbs./mo.) of non-acute hazardous waste; or
- b. SQG: 100 to 1,000 kg/mo (220 - 2,200 lbs./mo.) of non-acute hazardous waste; or
- c. CESQG: Less than 100 kg/mo (220 lbs./mo.) of non-acute hazardous waste

In addition, indicate other generator activities.

- N d. United States Importer of Hazardous Waste
- N e. Mixed Waste (hazardous and radioactive) Generator

Y N 2. Transporter of Hazardous Waste

Y N 3. Treater, Storer, or Disposer of Hazardous Waste (at your site) Note: A hazardous waste permit is required for this activity.

Y N 4. Recycler of Hazardous Waste (at your site)

Y N 5. Exempt Boiler and/or Industrial Furnace

If "Yes", mark each that applies.

- a. Small Quantity On-site Burner Exemption
- b. Smelting, Melting, and Refining Furnace Exemption

Y N 6. Underground Injection Control

B. Universal Waste Activities

Y N 1. Large Quantity Handler of Universal Waste (accumulate 5,000 kg or more) [refer to your State regulations to determine what is regulated]. Indicate types of universal waste generated and/or accumulated at your site. If "Yes", mark all boxes that apply:

	<u>Generated</u>	<u>Accumulated</u>
a. Batteries	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
b. Pesticides	<input type="checkbox"/>	<input type="checkbox"/>
c. Thermostats	<input type="checkbox"/>	<input type="checkbox"/>
d. Lamps	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
e. Other (specify) _____	<input type="checkbox"/>	<input type="checkbox"/>
f. Other (specify) _____	<input type="checkbox"/>	<input type="checkbox"/>
g. Other (specify) _____	<input type="checkbox"/>	<input type="checkbox"/>

Y N 2. Destination Facility for Universal Waste
Note: A hazardous waste permit may be required for this activity.

C. Used Oil Activities
Mark all boxes that apply.

Y N 1. Used Oil Transporter
If "Yes", mark each that applies.

- a. Transporter
- b. Transfer Facility

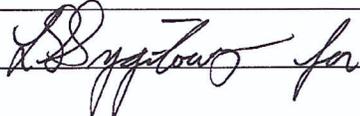
Y N 2. Used Oil Processor and/or Re-refiner
If "Yes", mark each that applies.

- a. Processor
- b. Re-refiner

Y N 3. Off-Specification Used Oil Burner

Y N 4. Used Oil Fuel Marketer
If "Yes", mark each that applies.

- a. Marketer Who Directs Shipment of Off-Specification Used Oil to Off-Specification Used Oil Burner
- b. Marketer Who First Claims the Used Oil Meets the Specifications

11. Description of Hazardous Wastes (See instructions on page 33)						
<p>A. Waste Codes for Federally Regulated Hazardous Wastes. Please list the waste codes of the Federal hazardous wastes handled at your site. List them in the order they are presented in the regulations (e.g., D001, D003, F007, U112). Use an additional page if more spaces are needed.</p>						
See Item 10 on the Hazardous Waste Permit Information Form OMB #2050-0034						
<p>B. Waste Codes for State-Regulated (i.e., non-Federal) Hazardous Wastes. Please list the waste codes of the State-regulated hazardous wastes handled at your site. List them in the order they are presented in the regulations. Use an additional page if more spaces are needed for waste codes.</p>						
<p>The AMWTP may receive manifested state hazardous waste from states other than Idaho. All such waste will be managed in Permitted HWMA/RCRA waste management units at the AMWTP and not within the AMWTP TSA Interim Status Units.</p>						
12. Comments (See instructions on page 22)						
<p>13. Certification. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. For the RCRA Hazardous Waste Part A Permit Application, all operator(s) and owner(s) must sign (see 40 CFR 270.10 (b) and 270.11). (See instructions on page 22)</p>						
Signature of operator, owner, or an authorized representative		Name and Official Title (type or print)			Date Signed (mm/dd/yyyy)	
		Elizabeth D. Sellers, Manager, Department of Energy Idaho Operations Office			1/22/09	
		Jeffery D. Mousseau, AMWTP President and General Manager, Bechtel BWXT Idaho, LLC.			12/18/2008	

**United States Environmental Protection Agency
HAZARDOUS WASTE PERMIT INFORMATION FORM**

1. Facility Permit Contact (See instructions on page 23)	First Name: DONALD	MI: N	Last Name: RASCH												
	Phone Number: (208) 526-1511		Phone Number Extension: Not Applicable												
2. Facility Permit Contact Mailing Address (See instructions on page 23)	Street or P.O. Box: 1955 FREMONT AVENUE														
	City, Town, or Village: IDAHO FALLS														
	State: ID														
	Country: USA		Zip Code: 83415												
3. Operator Mailing Address and Telephone Number (See instructions on page 23)	Street or P.O. Box: 850 Energy Dr. Suite #200														
	City, Town, or Village: IDAHO FALLS														
	State: ID														
	Country: USA		Zip Code: 83401	Phone Number: (208) 557-7014											
4. Legal Owner Mailing Address and Telephone Number (See instructions on page 23)	Street or P.O. Box: 1955 FREMONT AVENUE														
	City, Town, or Village: IDAHO FALLS														
	State: ID														
	Country: USA		Zip Code: 83415	Phone Number: (208) 526-8556											
5. Facility Existence Date (See instructions on page 24)	Facility Existence Date (mm/dd/yyyy): 06/01/1949														
6. Other Environmental Permits (See instructions on page 24)															
A. Permit Type (Enter code)	B. Permit Number											C. Description			
R	I	D	4	8	9	0	0	0	8	9	5	2	AMWTP HWMA/RCRA Permit		
P	P	T	C		0	2	3		0	0	0	0	1	AMWTF Permit to Construct (Air Pollution Source)	
P	P	T	C		0	2	3		0	0	0	0	1	TSA-RE Permit to Construct (Air Pollution Source)	
P	T	I							0	3	0	5	2	0	Title V Operation Permit
P							P	-	0	3	0	5	4	2	AMWTP Permit to Construct (Air Pollution Source) for Standby Generator
7. Nature of Business (Provide a brief description; see instructions on page 24)															
<p>The Transuranic Storage Area (TSA) is a 56-acre area in the southern part of the Idaho National Laboratory (INL) dedicated to the temporary storage of radioactive-only and mixed wastes. Advanced Mixed Waste Treatment Project (AMWTP) HWMA/RCRA units at the TSA store, treat, and characterize waste pending further disposition, such as treatment at WMF-676 and/or transport to a disposal facility. Specific information per IDAPA 58.01.05.012 [40 CFR 270.13 (a) and (m)] is presented in Attachment 1 of the AMWTP HWMA/RCRA Permit.</p>															

8. Process Codes and Design Capacities (See instructions on page 24) - Enter information in the sections on Form Page 3.

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Fifteen lines are provided for entering codes. If more lines are needed, attach a separate sheet of paper with the additional information. For "other" processes (i.e., D99, S99, T04 and X99), enter the process information in Item 9 (including a description).

B. PROCESS DESIGN CAPACITY- For each code entered in Section A, enter the capacity of the process.

1. AMOUNT - Enter the amount. In a case where design capacity is not applicable (such as in a closure/post-closure or enforcement action) enter the total amount of waste for that process.

2. UNIT OF MEASURE - For each amount entered in Section B(1), enter the code in Section B(2) from the list of unit of measure codes below that describes the unit of measure used. Select only from the units of measure in this list.

C. PROCESS TOTAL NUMBER OF UNITS - Enter the total number of units for each corresponding process code.

PROCESS CODE	PROCESS	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
<u>Disposal:</u>		
D79	Underground Injection Well Disposal	Gallons; Liters; Gallons Per Day; or Liters Per Day
D80	Landfill	Acre-feet; Hectare-meter; Acres; Cubic Meters; Hectares; Cubic Yards
D81	Land Treatment	Acres or Hectares
D82	Ocean Disposal	Gallons Per Day or Liters Per Day
D83	Surface Impoundment Disposal	Gallons; Liters; Cubic Meters; or Cubic Yards
D99	Other Disposal	Any Unit of Measure in Code Table Below
<u>Storage:</u>		
S01	Container	Gallons; Liters; Cubic Meters; or Cubic Yards
S02	Tank Storage	Gallons; Liters; Cubic Meters; or Cubic Yards
S03	Waste Pile	Cubic Yards or Cubic Meters
S04	Surface Impoundment Storage	Gallons; Liters; Cubic Meters; or Cubic Yards
S05	Drip Pad	Gallons; Liters; Acres; Cubic Meters; Hectares; or Cubic Yards
S06	Containment Building Storage	Cubic Yards or Cubic Meters
S99	Other Storage	Any Unit of Measure in Code Table Below
<u>Treatment:</u>		
T01	Tank Treatment	Gallons Per Day; Liters Per Day
T02	Surface Impoundment Treatment	Gallons Per Day; Liters Per Day
T03	Incinerator	Short Tons Per Hour; Metric Tons Per Hour; Gallons Per Hour; Liters Per Hour; Btu Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Gallons Per Day; Liters Per Day; Metric Tons Per Hour; or Million Btu Per Hour
T04	Other Treatment	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; Gallons Per Day; Liters Per Hour; or Million Btu Per Hour
T80	Boiler	Gallons; Liters; Gallons Per Hour; Liters Per Hour; Btu Per Hour; or Million Btu Per Hour

PROCESS CODE	PROCESS	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
<u>Treatment (continued):</u>		
T81	Cement Kiln	For T81-T93:
T82	Lime Kiln	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; Liters Per Hour; Kilograms Per Hour; or Million Btu Per Hour
T83	Aggregate Kiln	
T84	Phosphate Kiln	
T85	Coke Oven	
T86	Blast Furnace	
T87	Smelting, Melting, or Refining Furnace	
T88	Titanium Oxide Chloride Oxidation Reactor	
T89	Methane Reforming Furnace	
T90	Pulping Liquor Recovery Furnace	
T91	Combustion Device Used In The Recovery Of Sulfur Values From Spent Sulfuric Acid	
T92	Halogen Acid Furnaces	
T93	Other Industrial Furnaces Listed In 40 CFR §260.10	
T94	Containment Building - Treatment	Cubic Yards; Cubic Meters; Short Tons Per Hour; Gallons Per Hour; Liters Per Hour; Btu Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Metric Tons Per Day; Gallons Per Day; Liters Per Day; Metric Tons Per Hour; or Million Btu Per Hour
<u>Miscellaneous (Subpart X):</u>		
X01	Open Burning/Open Detonation	Any Unit of Measure in Code Table Below
X02	Mechanical Processing	Short Tons Per Day; Metric Tons Per Day; Pounds Per Hour; Kilograms Per Hour; Gallons Per Hour; Liters Per Hour; or Gallons Per Day
X03	Thermal Unit	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; or Million Btu Per Hour
X04	Geologic Repository	Cubic Yards; Cubic Meters; Acre-feet; Hectare-meter; Gallons; or Liters
X99	Other Subpart X	Any Unit of Measure Listed Below

Unit of Measure	Unit of Measure Code
Gallons	G
Gallons Per Hour	E
Gallons Per Day	U
Liters	L
Liters Per Hour	H
Liters Per Day	Y

Unit of Measure	Unit of Measure Code
Short Tons Per Hour	D
Metric tons Per Hour	W
Short Tons Per Day	N
Metric Tons Per Day	S
Pounds Per Hour	J
Kilograms Per Hour	R
Million Btu Per Hour	X

Unit of Measure	Unit of Measure Code
Cubic Yards	Y
Cubic Meters	C
Acres	B
Acre-feet	A
Hectares	Q
Hectare-meter	F
Btu Per Hour	I

8. Process Codes and Design Capacities (Continued)

EXAMPLE FOR COMPLETING Item 8 (shown in line number X-1 below): A facility has a storage tank, which can hold 533.788 gallons.

Line Number	A. Process Code (From list above)				B. PROCESS DESIGN CAPACITY		C. Process Total Number of Units	For Official Use Only											
	(1) Amount (Specify)				(2) Unit of Measure (Enter code)														
X 1	S	0	2	5	3	3	.788	G	0	0	1								
1	S	0	1	2	0	2	3	7	7	2	0								
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
1 0																			
1 1																			
1 2																			
1 3																			
1 4																			
1 5																			

NOTE: If you need to list more than 15 process codes, attach an additional sheet(s) with the information in the same format as above. Number the lines sequentially, taking into account any lines that will be used for "other" processes (i.e., D99, S99, T04 and X99) in Item 9.

9. Other Processes (See instructions on page 25 and follow instructions from Item 8 for D99, S99, T04 and X99 process codes)

Line Number (Enter #s in sequence with Item 8)	A. Process Code (From list above)				B. PROCESS DESIGN CAPACITY		C. Process Total Number of Units	D. Description of Process						
	(1) Amount (Specify)				(2) Unit of Measure (Enter code)									
X 2	T	0	4	1	0	0	0	0	0	0	0	U	1	In-situ Vitrification
1														
2														
3														
4														
5														

**Supplement to Item 8.
Process Codes and Design Capacities**

LINE NUMBER	PROCESS TYPE UNIT NAME		PROCESS DESIGN CAPACITY
1	S01 – TSA-RE Interim Status Container Storage:		
	- TSA-1/TSA-R		20,237,720 gallons
		LINE 1 TOTAL:	20,237,720 gallons

10. Description of Hazardous Wastes (See instructions on page 25) - Enter information in the Sections on Form Page 5.

A. EPA HAZARDOUS WASTE NUMBER - Enter the four-digit number from 40 CFR, Part 261 Subpart D of each listed hazardous waste you will handle. For hazardous wastes which are not listed in 40 CFR, Part 261 Subpart D, enter the four-digit number(s) from 40 CFR Part 261, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in Section A, estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in Section A, estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B, enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure, taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed hazardous waste: For each listed hazardous waste entered in Section A, select the code(s) from the list of process codes contained in Items 8A and 9A on page 3 to indicate all the processes that will be used to store, treat, and/or dispose of all the listed hazardous wastes.

For non-listed hazardous waste: For each characteristic or toxic contaminant entered in Section A, select the code(s) from the list of process codes contained in Items 8A and 9A on page 3 to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.

NOTE: THREE SPACES ARE PROVIDED FOR ENTERING PROCESS CODES. IF MORE ARE NEEDED:

1. Enter the first two as described above.
2. Enter "000" in the extreme right box of Item 10.D(1).
3. Use additional sheet, enter line number from previous sheet, and enter additional code(s) in Item 10.E.

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in Item 10.D(2) or in Item 10.E(2).

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER - Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. Select one of the EPA Hazardous Waste Numbers and enter it in Section A. On the same line complete Sections B, C and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In Section A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In Section D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING Item 10 (shown in line numbers X-1, X-2, X-3, and X-4 below) - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operations. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

Line Number	A. EPA Hazardous Waste No. (Enter Code)			B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES																
	(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in D(1))																				
X	1	K	0 5 4	900	P	T	0	3	D	8	0											
X	2	D	0 0 2	400	P	T	0	3	D	8	0											
X	3	D	0 0 1	100	P	T	0	3	D	8	0											
X	4	D	0 0 2																			Included With Above

Supplement to Item 10

Description of Hazardous Wastes

Container storage of waste in the TSA-1/TSA-R is listed under Item 10, along with the EPA hazardous waste numbers (HWNs) associated with the wastes that are expected to be handled in the units.

<u>Page Numbers</u>	<u>Process</u>
5 (B-1) of 6 to 5 (B-5) of 6	Wastes stored in TSA-1/TSA-R.

Calculations of Estimated Annual Quantity for TSA-1/TSA-R

1. Estimated Maximum Volume Waste per Trailer

Trailers can ship three boxes/shipment, sixteen 55-gallon drums/shipment, or fourteen 100-gallon drums/shipment.

Boxes:
 Quantity/trailer = 3
 Volume/box = 3.17 m^3
 Volume/trailer = (3 boxes/trailer)($3.17 \text{ m}^3/\text{box}$)
 Volume/trailer = $9.51 \text{ m}^3/\text{trailer}$

55-gallon Drums:
 Quantity/trailer = 16
 Volume/drum = 0.208 m^3
 Volume/trailer = (16 drum/trailer)($0.208 \text{ m}^3/\text{drum}$)
 Volume/trailer = $3.33 \text{ m}^3/\text{trailer}$

100-gallon Puck Drums:
 Quantity/trailer = 14
 Volume/drum = 0.379 m^3
 Volume/trailer = (14 drum/trailer)($0.379 \text{ m}^3/\text{drum}$)
 Volume/trailer = $5.3 \text{ m}^3/\text{trailer}$

Maximum waste volume/trailer = 9.51 m^3

It was determined that the largest volume of waste could be moved in boxes; therefore, it was assumed that all transport trailer shipments contained the volume of waste that could be shipped in boxes. This was done to keep calculations conservative.

Waste Volume/Trailer Shipment = 9.51 m^3

Average Waste Density = 1.1023 tons/m^3

2. Estimated Annual Quantity for Storage (Process Code S01)

The estimated annual quantity for the TSA-1/TSA-R container storage unit is assumed to be a sum of the amount of waste moved into and out of the unit. In order to determine the estimated annual quantity, the amount of waste moved into and out of TSA-1/TSA-R was first determined by taking the values from the waste transfer traffic table from the AMWTP traffic flow exhibit. See Exhibit II-1 in Appendix II of the AMWTP HWMA/RCRA Permit. The higher of the two values (waste moved in, waste moved out) was then taken and multiplied by two in order to produce a conservative estimate for the estimated annual quantity.

A. TSA-1/TSA-R Estimated Annual Quantity Calculations

Number of transport trailer shipments into the building = 7.5 trailers/day

Number of transport trailer shipments out of the building = 7.5 trailers/day

Waste Shipments per Day = (7.5 trailers/day)(2) = 15 trailers/day

Daily Quantity = (15 trailers/day)(9.51 m³/trailer)(1.1023 tons/m³)

Daily Quantity = 157.24 tons/day

Max. Waste Quantity per Year = (157.24 tons/day)(365 days/year)

Max. Waste Quantity per Year = 57,393 tons/year

The above number is then multiplied by ten to account for extra movement of waste throughout the year.

TSA-1/TSA-R Estimated Annual Quantity = 573,393 tons/year

10. Description of Hazardous Wastes (Continued. Use Additional Sheet(s) as necessary; number pages as 5 a, etc.)

Line Number	A. EPA Hazardous Waste No. (Enter code)			B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES															
	(1) PROCESS CODES (Enter code)										(2) PROCESS DESCRIPTION (If a code is not entered in D(1))										
1	D	0	0	1	573,393	T	S	0	1												TSA-1/TSA-R
2	D	0	0	2																	Included with above
3	D	0	0	4																	Included with above
4	D	0	0	5																	Included with above
5	D	0	0	6																	Included with above
6	D	0	0	7																	Included with above
7	D	0	0	8																	Included with above
8	D	0	0	9																	Included with above
9	D	0	1	0																	Included with above
10	D	0	1	1																	Included with above
11	D	0	1	8																	Included with above
12	D	0	1	9																	Included with above
13	D	0	2	0																	Included with above
14	D	0	2	1																	Included with above
15	D	0	2	2																	Included with above
16	D	0	2	3																	Included with above
17	D	0	2	4																	Included with above
18	D	0	2	5																	Included with above
19	D	0	2	6																	Included with above
20	D	0	2	7																	Included with above
21	D	0	2	8																	Included with above
22	D	0	2	9																	Included with above
23	D	0	3	0																	Included with above
24	D	0	3	1																	Included with above
25	D	0	3	2																	Included with above
26	D	0	3	3																	Included with above
27	D	0	3	4																	Included with above
28	D	0	3	5																	Included with above
29	D	0	3	6																	Included with above
30	D	0	3	7																	Included with above
31	D	0	3	8																	Included with above
32	D	0	3	9																	Included with above
33	D	0	4	0																	Included with above

10. Description of Hazardous Wastes (Continued. Use Additional Sheet(s) as necessary; number pages as 5 a, etc.)

Line Number	A. EPA Hazardous Waste No. (Enter code)					B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES				(2) PROCESS DESCRIPTION (If a code is not entered in D(1))
	(1) PROCESS CODES (Enter code)											
1	D	0	4	1								Included with TSA-1/TSA-R, Page 5 (B-1) of 6, line 1
2	D	0	4	2								Included with above
3	D	0	4	3								Included with above
4	F	0	0	1								Included with above
5	F	0	0	2								Included with above
6	F	0	0	3								Included with above
7	F	0	0	4								Included with above
8	F	0	0	5								Included with above
9	F	0	0	6								Included with above
1 0	F	0	0	7								Included with above
1 1	F	0	0	9								Included with above
1 2	F	0	3	9								Included with above
1 3	P	0	0	5								Included with above
1 4	P	0	1	2								Included with above
1 5	P	0	1	5								Included with above
1 6	P	0	2	2								Included with above
1 7	P	0	2	4								Included with above
1 8	P	0	2	7								Included with above
1 9	P	0	2	8								Included with above
2 0	P	0	3	0								Included with above
2 1	P	0	3	1								Included with above
2 2	P	0	5	6								Included with above
2 3	P	0	7	3								Included with above
2 4	P	0	7	5								Included with above
2 5	P	0	7	7								Included with above
2 6	P	0	9	8								Included with above
2 7	P	0	9	9								Included with above
2 8	P	1	0	4								Included with above
2 9	P	1	0	5								Included with above
3 0	P	1	0	6								Included with above
3 1	P	1	1	3								Included with above
3 2	P	1	1	6								Included with above
3 3	P	1	1	9								Included with above

10. Description of Hazardous Wastes (Continued. Use Additional Sheet(s) as necessary; number pages as 5 a, etc.)

Line Number	A. EPA Hazardous Waste No. (Enter code)			B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
						(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in D(1))
1	P	1	2	0			Included with TSA-1/TSA-R, Page 5 (B-1) of 6, line 1
2	U	0	0	2			Included with above
3	U	0	0	3			Included with above
4	U	0	0	4			Included with above
5	U	0	0	7			Included with above
6	U	0	0	9			Included with above
7	U	0	1	2			Included with above
8	U	0	1	4			Included with above
9	U	0	1	9			Included with above
1 0	U	0	2	0			Included with above
1 1	U	0	3	2			Included with above
1 2	U	0	3	7			Included with above
1 3	U	0	4	3			Included with above
1 4	U	0	4	4			Included with above
1 5	U	0	4	8			Included with above
1 6	U	0	5	2			Included with above
1 7	U	0	6	9			Included with above
1 8	U	0	7	0			Included with above
1 9	U	0	7	2			Included with above
2 0	U	0	7	8			Included with above
2 1	U	0	7	9			Included with above
2 2	U	0	8	0			Included with above
2 3	U	0	8	1			Included with above
2 4	U	0	8	3			Included with above
2 5	U	0	8	4			Included with above
2 6	U	1	0	2			Included with above
2 7	U	1	0	3			Included with above
2 8	U	1	0	5			Included with above
2 9	U	1	0	8			Included with above
3 0	U	1	1	6			Included with above
3 1	U	1	1	8			Included with above
3 2	U	1	2	0			Included with above
3 3	U	1	2	2			Included with above

10. Description of Hazardous Wastes (Continued. Use Additional Sheet(s) as necessary; number pages as 5 a, etc.)

Line Number	A. EPA Hazardous Waste No. (Enter code)			B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES				(2) PROCESS DESCRIPTION (If a code is not entered in D(1))
						(1) PROCESS CODES (Enter code)				
1	U	1	2	3						Included with TSA-1/TSA-R, Page 5 (B-1) of 6, line 1
2	U	1	2	7						Included with above
3	U	1	2	8						Included with above
4	U	1	3	1						Included with above
5	U	1	3	3						Included with above
6	U	1	3	4						Included with above
7	U	1	3	5						Included with above
8	U	1	3	8						Included with above
9	U	1	4	0						Included with above
1 0	U	1	4	4						Included with above
1 1	U	1	4	5						Included with above
1 2	U	1	4	7						Included with above
1 3	U	1	5	1						Included with above
1 4	U	1	5	4						Included with above
1 5	U	1	5	9						Included with above
1 6	U	1	6	2						Included with above
1 7	U	1	6	5						Included with above
1 8	U	1	6	9						Included with above
1 9	U	1	7	0						Included with above
2 0	U	1	7	1						Included with above
2 1	U	1	8	2						Included with above
2 2	U	1	8	8						Included with above
2 3	U	1	9	0						Included with above
2 4	U	1	9	1						Included with above
2 5	U	1	9	6						Included with above
2 6	U	2	0	1						Included with above
2 7	U	2	0	4						Included with above
2 8	U	2	0	7						Included with above
2 9	U	2	0	8						Included with above
3 0	U	2	0	9						Included with above
3 1	U	2	1	0						Included with above
3 2	U	2	1	1						Included with above
3 3	U	2	1	5						Included with above

10. Description of Hazardous Wastes (Continued. Use Additional Sheet(s) as necessary; number pages as 5 a, etc.)

Line Number	A. EPA Hazardous Waste No. (Enter code)					B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES				(2) PROCESS DESCRIPTION (If a code is not entered in D(1))
								(1) PROCESS CODES (Enter code)				
1	U	2	1	7								Included with TSA-1/TSA-R, Page 5 (B-1) of 6, line 1
2	U	2	1	8								Included with above
3	U	2	1	9								Included with above
4	U	2	2	0								Included with above
5	U	2	2	5								Included with above
6	U	2	2	6								Included with above
7	U	2	2	7								Included with above
8	U	2	2	8								Included with above
9	U	2	3	9								Included with above
1 0	U	3	2	8								Included with above
1 1												
1 2												
1 3												
1 4												
1 5												
1 6												
1 7												
1 8												
1 9												
2 0												
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2 8												
2 9												
3 0												
3 1												
3 2												
3 3												

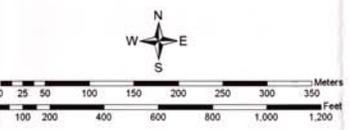
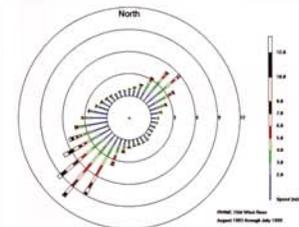
Supplement to Item 11. RWMC/AMWTP Topographic Map
(in sheet protector following)

RWMC/AMWTP

Legend

- Catchment Area I
- Catchment Area II
- Catchment Area III
- Catchment Area IV
- Catchment Area V
- Catchment Area VI
- Catchment Area VII
- Catchment Area VIII
- Loading/Unloading Areas
- Fire Water Line
- Sewer Line
- flow_arrows arc
- Trailer/TRUPACK Storage Areas
- 2-ft Contours
- 10-ft Index Contours
- Roads
- Railroad Tracks
- Fences
- Radiation Fences
- Culverts
- Sewage Lagoons
- RCRA Permitted Treatment and Storage Areas
- Buildings
- Tanks
- Channel to Big Lost River
- Groundwater Monitoring Wells
- Perch Water Monitoring Wells
- VVE Extraction Wells
- OCVZ Vapor Monitoring Wells
- Lysimeters (Soil Moisture) Wells
- Potable Water Well

NOTES:
 Landmarks: RWMC facility boundaries are surrounded by restricted access federal lands.
 Legal Description: RWMC facility boundaries are located in Township 2 North, Range 20 East, Sections 17 and 18.
 100-year floodplain: Portions of the RWMC facility boundaries are located within the 100-year floodplain. The AMWTP, VMEF-420, and VMEF-420 through 420B boundaries are not located within the 100-year floodplain. If a 100-year flood were to occur the existing surface water storage control system would prevent withdrawal of any of the RWMC, TSD, or AMWTP regulated units.



Project: AMWTP
 Date: 10/10/2010
 Drawn: [Name]
 Checked: [Name]
 Scale: 1" = 1000'
 File Name: RWMC_AMWTP_10/10/2010.dwg

Supplement to Item 13. Photographs

Photo Number	Photo Description – Unit Process Code(s)	Page Number
Photo 1	Aerial View of the RWMC with WMF-676 Graphically Superimposed	6b of 6
Photo 2	Interior of TSA-1/TSA-R (showing stored containers of waste)	6c of 6
Photo 3	View of Northwest corner of TSA-RE (TSA-1/TSA-R within)	6c of 6
Photo 4	View of Southeast corner of TSA-RE (TSA-R within)	6d of 6



Photo 1. Aerial View of the RWMC with WMF-676 Graphically Superimposed



Photo 1. Interior of TSA-1/TSA-R (Showing stored containers of waste)



Photo 2. View of Northwest corner of TSA-RE (TSA-1/TSA-R within)



Photo 3. View of Southeast corner of TSA-RE (TSA-R within)

Supplement to Item 14. Additional Information**HAZARDOUS WASTE DEBRIS CATEGORIES**

IDAPA 58.01.05.012 [40 CFR 270.13(n)] requires a description of the debris categories to be treated, stored, or disposed of at a facility, to be submitted in the Part A Permit Application. Debris defined by 40 CFR 268.2 means a solid material exceeding a 60-mm particle size that is intended for disposal and that is: 1) a manufactured object; 2) plant or animal matter; 3) natural geologic material. Debris storage at the RWMC includes waste in all three general categories. The following is a list of examples in each debris category that may be stored at the TSA-1/TSA-R container storage unit.

Category I - Manufactured Objects

- Glass
- Concrete
- Masonry and refractory bricks
- Paper
- Plastic
- Rubber
- Cloth
- Pavement
- Metal Debris
 - Pipes
 - Valves
 - Scrap Metal
- Other Heterogeneous Debris
 - Non-intact containers
 - Tanks
 - Appliances
 - Industrial Equipment

Category II - Plant and Animal Matter

- Biological Debris
 - Animal carcasses
 - Other plant matter
- Wood Debris
 - Wood
 - Plant stumps

Category III - Natural Geologic Material

- Rock
- Cobbles
- Boulders
- Asbestos

<p>MAIL THE COMPLETED FORM TO: The appropriate EPA Regional or State Office.</p>	<p align="center">United States Environmental Protection Agency RCRA SUBTITLE C SITE IDENTIFICATION FORM</p>						
<p>1. Reason for Submittal (See instructions on page 25) CHECK CORRECT BOX(ES)</p>	<p>Reason for Submittal:</p> <p><input type="checkbox"/> To provide initial notification (to obtain an EPA ID Number for hazardous waste, universal waste, or used oil activities).</p> <p><input type="checkbox"/> To provide subsequent notification (to update site identification information).</p> <p><input type="checkbox"/> As a component of a First RCRA Hazardous Waste Part A Permit Application.</p> <p><input checked="" type="checkbox"/> As a component of a Revised RCRA Hazardous Waste Part A Permit Application (Amendment #: Volume 1a - Revision May 2005).</p> <p><input type="checkbox"/> As a component of the Hazardous Waste Report.</p>						
<p>2. Site EPA ID Number (See instructions on page 26)</p>	<p>EPA ID Number: ID4890008952</p>						
<p>3. Site Name (See instructions on page 26)</p>	<p>Name: IDAHO NATIONAL LABORATORY</p>						
<p>4. Site Location Information (See instructions on page 26)</p>	<p>Street Address:</p> <table border="1" data-bbox="444 779 1537 900"> <tr> <td>City, Town, or Village: SCOVILLE</td> <td>State: ID</td> </tr> <tr> <td>County Name: BUTTE, CLARK, JEFFERSON, BONNEVILLE, BINGHAM</td> <td>Zip Code: 83415</td> </tr> </table>			City, Town, or Village: SCOVILLE	State: ID	County Name: BUTTE, CLARK, JEFFERSON, BONNEVILLE, BINGHAM	Zip Code: 83415
City, Town, or Village: SCOVILLE	State: ID						
County Name: BUTTE, CLARK, JEFFERSON, BONNEVILLE, BINGHAM	Zip Code: 83415						
<p>5. Site Land Type (See instructions on page 26)</p>	<p>Site Land Type: <input type="checkbox"/> Private <input type="checkbox"/> County <input type="checkbox"/> District <input checked="" type="checkbox"/> Federal <input type="checkbox"/> Indian <input type="checkbox"/> Municipal <input type="checkbox"/> State <input type="checkbox"/> Other</p>						
<p>6. North American Industry Classification System (NAICS) Code(s) for the Site (See instructions on page 26)</p>	<p>A. 92411</p>	<p>B. 54171</p>	<p>C. 336992</p>	<p>D. Not Applicable</p>			
<p>7. Site Mailing Address (See instructions on page 27)</p>	<p>Street or P. O. Box: 1955 FREMONT AVENUE, IDAHO FALLS</p> <p>State: ID</p> <p>Country: USA</p> <p>Zip Code: 83401</p>						
<p>8. Site Contact Person (See instructions on pages 27)</p>	<p>First Name: DONALD</p>	<p>MI: N</p>	<p>Last Name: RASCH</p>	<p>Phone Number: (208) 526-1511</p> <p>Phone Number Extension: Not Applicable</p>			
<p>9. Legal Owner and Operator of the Site (See instructions on pages 27 and 28)</p>	<p>A. Name of Site's Legal Owner: US DEPARTMENT OF ENERGY IDAHO OPERATIONS OFFICE</p>		<p>Date Became Owner (mm/dd/yyyy): 01/01/1952</p>	<p>Owner Type: <input type="checkbox"/> Private <input type="checkbox"/> County <input type="checkbox"/> District <input checked="" type="checkbox"/> Federal <input type="checkbox"/> Indian <input type="checkbox"/> Municipal <input type="checkbox"/> State <input type="checkbox"/> Other</p>			
	<p>B. Name of Site's Operator: BECHTEL BWXT IDAHO, LLC.</p>		<p>Date Became Operator (mm/dd/yyyy): 05/01/2005</p>	<p>Operator Type: <input checked="" type="checkbox"/> Private <input type="checkbox"/> County <input type="checkbox"/> District <input type="checkbox"/> Federal <input type="checkbox"/> Indian <input type="checkbox"/> Municipal <input type="checkbox"/> State <input type="checkbox"/> Other</p>			

10. Type of Regulated Waste Activity (Mark 'X' in the appropriate boxes. See instructions on pages 28 to 32)

A. Hazardous Waste Activities

1. Generator of Hazardous Waste

(choose only one of the following three categories)

- a. LQG: Greater than 1,000 kg/mo (2,200 lbs./mo.) of non-acute hazardous waste; or
- b. SQG: 100 to 1,000 kg/mo (220 - 2,200 lbs./mo.) of non-acute hazardous waste; or
- c. CESQG: Less than 100 kg/mo (220 lbs./mo.) of non-acute hazardous waste

In addition, indicate other generator activities (check all that apply)

- d. United States Importer of Hazardous Waste
- e. Mixed Waste (hazardous and radioactive) Generator

For items 2 through 6, check all that apply:

- 2. Transporter of Hazardous Waste**
- 3. Treater, Storer, or Disposer of Hazardous Waste (at your site)** Note: A hazardous waste permit is required for this activity.
- 4. Recycler of Hazardous Waste (at your site)** Note: A hazardous waste permit is required for this activity.
- 5. Exempt Boiler and/or Industrial Furnace**
 - a. Small Quantity On-site Burner Exemption
 - b. Smelting, Melting, and Refining Furnace Exemption
- 6. Underground Injection Control**

B. Universal Waste Activities

1. Large Quantity Handler of Universal Waste

(accumulate 5,000 kg or more) [refer to your State regulations to determine what is regulated].

Indicate types of universal waste generated and/or accumulated at your site. (check all boxes that apply):

	Generated	Accumulated
a. Batteries	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
b. Pesticides	<input type="checkbox"/>	<input type="checkbox"/>
c. Thermostats	<input type="checkbox"/>	<input type="checkbox"/>
d. Lamps	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
e. Other (specify) _____	<input type="checkbox"/>	<input type="checkbox"/>
f. Other (specify) _____	<input type="checkbox"/>	<input type="checkbox"/>
g. Other (specify) _____	<input type="checkbox"/>	<input type="checkbox"/>

2. Destination Facility for Universal Waste

Note: A hazardous waste permit may be required for this activity.

C. Used Oil Activities

1. Used Oil Transporter - Indicate Type(s) of Activity(ies)

- a. Transporter
- b. Transfer Facility

2. Used Oil Processor and/or Re-refiner - Indicate Type(s) of Activity(ies)

- a. Processor
- b. Re-refiner

3. Off-Specification Used Oil Burner

4. Used Oil Fuel Marketer - Indicate Type(s) of Activity(ies)

- a. Marketer Who Directs Shipment of Off-Specification Used Oil to Off-Specification Used Oil Burner
- b. Marketer Who First Claims the Used Oil Meets the Specifications

11. Description of Hazardous Wastes (See instructions on page 33)

A. Waste Codes for Federally Regulated Hazardous Wastes. Please list the waste codes of the Federal hazardous wastes handled at your site. List them in the order they are presented in the regulations (e.g., D001, D003, F007, U112). Use an additional page if more spaces are needed.

See Item 10 on the Hazardous Waste Permit Information Form (OMB #: 2050-0034)

United States Environmental Protection Agency
HAZARDOUS WASTE PERMIT INFORMATION FORM

1. Facility Permit Contact (See instructions on page 35)	First Name: DONALD	MI: N	Last Name: RASCH
	Phone Number: (208) 526-1511		Phone Number Extension: Not Applicable
2. Facility Permit Contact Mailing Address (See instructions on page 35)	Street or P.O. Box: 1955 FREMONT AVENUE		
	City, Town, or Village: IDAHO FALLS		
	State: ID		
	Country: USA		Zip Code: 83401
3. Legal Owner Mailing Address and Telephone Number (See instructions on page 36)	Street or P.O. Box: 1955 FREMONT AVENUE		
	City, Town, or Village: IDAHO FALLS		
	State: ID		
	Country: USA	Zip Code: 83401	Phone Number: (208) 526-5665
4. Operator Mailing Address and Telephone Number (See instructions on page 36)	Street or P.O. Box: P.O. BOX 1625		
	City, Town, or Village: IDAHO FALLS		
	State: ID		
	Country: USA	Zip Code: 83415	Phone Number: (208) 526-8556
5. Facility Existence Date (See instructions on page 36)	Facility Existence Date (mm/dd/yyyy): 06/01/1949		

6. Other Environmental Permits (See instructions on page 36)

A. Permit Type (Enter code)	B. Permit Number												C. Description		
R	I	D	4	8	9	0	0	0	8	9	5	2	Final AMWTP HWMA/RCRA Storage Permit		
R	I	D	4	8	9	0	0	0	8	9	5	2	Final AMWTP HWMA/RCRA Treatment Permit		
P	P	T	C			0	2	3		0	0	0	1	AMWTF Permit to Construct (Air Pollution Source)	
P	P	T	C			0	2	3		0	0	0	1	TSA-RE Permit to Construct (Air Pollution Source)	
P													Title V Operation Permit Application (Permit Pending)		
P							P	-	0	3	0	5	4	2	AMWTP Permit to Construct (Air Pollution Source) for Standby Generator

7. Nature of Business (Provide a brief description; see instructions on page 37)

The Transuranic Storage Area (TSA) is a 56-acre area in the southern part of the Idaho National Laboratory (INL) dedicated to the temporary storage of contact-handled radioactive-only and mixed wastes. Advanced Mixed Waste Treatment Project (AMWTP) HWMA/RCRA units at the TSA store, treat, and characterize waste pending further disposition, such as treatment at WMF-676 and/or transport to a disposal facility. Specific information per IDAPA 58.01.05.012 [40 CFR 270.13(a) and (m)] is presented in Attachment 1 of the AMWTP HWMA/RCRA Storage Permit.

8. Process Codes and Design Capacities (See instructions on page 37)

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility.

Thirteen lines are provided for entering codes. If more lines are needed, attach a separate sheet of paper with the additional information. For "other" processes (i.e., D99, S99, T04 and X99), describe the process (including its design capacity) in the space provided in Item 9.

B. PROCESS DESIGN CAPACITY - For each code entered in column A, enter the capacity of the process.

1. **AMOUNT** - Enter the amount. In a case where design capacity is not applicable (such as in a closure/post-closure or enforcement action) enter the total amount of waste for that process.
2. **UNIT OF MEASURE** - For each amount entered in column B(1), enter the code in column B(2) from the list of unit of measure codes below that describes the unit of measure used. Select only from the units of measure in this list.

C. PROCESS TOTAL NUMBER OF UNITS - Enter the total number of units for each corresponding process code.

PROCESS CODE	PROCESS	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
	Disposal:	
D79	Underground Injection Well Disposal	Gallons; Liters; Gallons Per Day; or Liters Per Day
D80	Landfill	Acre-feet; Hectare-meter; Acres; Cubic Meters; Hectares; Cubic Yards
D81	Land Treatment	Acres or Hectares
D82	Ocean Disposal	Gallons Per Day or Liters Per Day
D83	Surface Impoundment Disposal	Gallons; Liters; Cubic Meters; or Cubic Yards
D99	Other Disposal	Any Unit of Measure Listed Below
	Storage:	
S01	Container	Gallons; Liters; Cubic Meters; or Cubic Yards
S02	Tank Storage	Gallons; Liters; Cubic Meters; or Cubic Yards
S03	Waste Pile	Cubic Yards or Cubic Meters
S04	Surface Impoundment Storage	Gallons; Liters; Cubic Meters; or Cubic Yards
S05	Drip Pad	Gallons; Liters; Acres; Cubic Meters; Hectares; or Cubic Yards
S06	Containment Building Storage	Cubic Yards or Cubic Meters
S99	Other Storage	Any Unit of Measure Listed Below
	Treatment:	
T01	Tank Treatment	Gallons Per Day; Liters Per Day; Short Tons Per Hour; Gallons Per Hour; Liters Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Metric Tons Per Day; or Metric Tons Per Hour
T02	Surface Impoundment Treatment	Gallons Per Day; Liters Per Day; Short Tons Per Hour; Gallons Per Hour; Liters Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Metric Tons Per Day; or Metric Tons Per Hour
T03	Incinerator	Short Tons Per Hour; Metric Tons Per Hour; Gallons Per Hour; Liters Per Hour; Btu Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Gallons Per Day; Liters Per Day; Metric Tons Per Hour; or Million Btu Per Hour
T04	Other Treatment	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; Gallons Per Day; Liters Per Hour; or Million Btu Per Hour
T80	Boiler	Gallons; Liters; Gallons Per Hour; Liters Per Hour; Btu Per Hour; or Million Btu Per Hour

PROCESS CODE	PROCESS	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
T81	Cement Kiln	Gallons Per Day; Liters Per Day; Pounds
T82	Lime Kiln	Per Hour; Short Tons Per Hour; Kilograms
T-83	Aggregate Kiln	Per Hour; Metric tons Per Day; Metric
T-84	Coke Over	Tons Per Hour; Short Tons Per Day; Btu Per
T-85	Phosphate Kiln	Hour; Kilograms Per
T-86	Blast Furnace	Hour; or Million Btu Per Hour
T-87	Smelting, Melting, or Refining Furnace	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms
T-88	Titanium Oxide Chloride Oxidation Reactor	Per Hour; Metric Tons Per Day; Metric
T-89	Methane Reforming Furnace	Tons Per Hour; Short Tons Per Day; Btu Per
T-90	Pulping Liquor Recovery Furnace	Hour; Gallons Per Hour; Liters Per Hour; or Million Btu Per Hour
T-91	Combustion Device Used In The Recovery Of Sulfur Values From Spent Sulfuric Acid	
T-92	Halogen Acid Furnaces	
T-93	Other Industrial Furnaces Listed In 40 CFR §260.10	
T-94	Containment Building - Treatment	Cubic Yards; Cubic Meters; Short Tons Per Hour; Gallons Per Hour; Liters Per Hour; Btu Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Metric Tons Per Day; Gallons Per Day; Liters Per Day; Metric Tons Per Hour; or Million Btu Per Hour
	Miscellaneous (Subpart X):	
X01	Open Burning/Open Detonation	Any Unit of Measure Listed Below
X02	Mechanical Processing	Short Tons Per Hour; Metric Tons Per Hour; Short Tons Per Day; Metric Tons Per Day; Pounds Per Hour; Kilograms Per Hour; Gallons Per Hour; Liters Per Hour; or Gallons Per Day
X03	Thermal Unit	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; or Million Btu Per Hour
X04	Geologic Repository	Cubic Yards; Cubic Meters; Acre-feet; Hectare-meter; Gallons; or Liters
X99	Other Subpart X	Any Unit of Measure Listed Below

Unit of Measure	Unit of Measure Code
Gallons	G
Gallons Per Hour	E
Gallons Per Day	U
Liters	L
Liters Per Hour	H
Liters Per Day	V

Unit of Measure	Unit of Measure Code
Short Tons Per Hour	D
Metric tons Per Hour	W
Short Tons Per Day	N
Metric Tons Per Day	S
Pounds Per Hour	J
Kilograms Per Hour	R
Million Btu Per Hour	X

Unit of Measure	Unit of Measure Code
Cubic Yards	Y
Cubic Meters	C
Acres	B
Acre-feet	A
Hectares	Q
Hectare-meter	F
Btu Per Hour	I

8. Process Codes and Design Capacities (continued)										
EXAMPLE FOR COMPLETING Item 8 (shown in line number X-1 below): A facility has a storage tank, which can hold 533.788 gallons.										
Line Number	A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY			C. Process Total Number of Units	For Official Use Only		
				(1) Amount (Specify)	(2) Unit of Measure (Enter code)					
X	1	S	0	2	533.788	G	001			
	1	S	0	1	** 24,678,658	G	003			
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									
1	0									
1	1									
1	2									

NOTE: If you need to list more than 13 process codes, attach an additional sheet(s) with the information in the same format as above. Number the lines sequentially, taking into account any lines that will be used for "other" processes (i.e., D99, S99, T04 and X99) in Item 9.

9. Other Processes (See instructions on page 37 and follow instructions from Item 8 for D99, S99, T04 and X99 process codes)										
Line Number (Enter #s in sequence with Item 8)	A. Process Code (From List Above)			B. PROCESS DESIGN CAPACITY			C. Process Total Number of Units	D. Description of Process		
				(1) Amount (Specify)	(2) Unit of Measure (Enter code)					
X	1	T	0	4						In-situ Vitrification
	1									
	2									
	3									
	4									

** Radioactive Mixed Waste

**Supplement A to Item 8.
'Process Codes and Design Capacities'**

LINE NUMBER	PROCESS TYPE UNIT NAME		PROCESS DESIGN CAPACITY
1	S01 – RWMC CONTAINER STORAGE includes:		
	- TSA-1/TSA-R		*20,237,720 gallons
	- TSA-2		*4,440,938 gallons
	- TSA-RE RMF		**24,678,658 gallons
		LINE 1 TOTAL:	24,678,658 gallons

* The capacity for these units will be incorporated into the capacity of the TSA-RE RMF.

** The TSA-RE RMF – this unit includes the capacities for the TSA-1/TSA-R and TSA-2 storage units.

10. Description of Hazardous Wastes (See instructions on page 37)

A. EPA HAZARDOUS WASTE NUMBER - Enter the four-digit number from 40 CFR, Part 261 Subpart D of each listed hazardous waste you will handle. For hazardous wastes which are not listed in 40 CFR, Part 261 Subpart D, enter the four-digit number(s) from 40 CFR Part 261, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A, estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A, estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B, enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure, taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed hazardous waste: For each listed hazardous waste entered in column A select the code(s) from the list of process codes contained in Items 8A and 9A on page 3 to indicate the waste will be stored, treated, and/or disposed at the facility.

For non-listed hazardous waste: For each characteristic or toxic contaminant entered in column A, select the code(s) from the list of process codes contained in Items 8A and 9A on page 3 to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.

NOTE: THREE SPACES ARE PROVIDED FOR ENTERING PROCESS CODES. IF MORE ARE NEEDED:

1. Enter the first two as described above.
2. Enter "000" in the extreme right box of Item 10.D(1).
3. Use additional sheet, enter line number from previous sheet, and enter additional code(s) in Item 10.E.

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in Item 10.D(2) or in Item 10.E(2).

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER - Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B, C and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING Item 10 (shown in line numbers X-1, X-2, X-3, and X-4 below) - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operations. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

Line Number	A. EPA Hazardous Waste No. (Enter Code)						B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES													
	(1) PROCESS CODES (Enter code)								(2) PROCESS DESCRIPTION (If a code is not entered in D(1))													
	T	0	3	D	8	0																
X	1	K	0	5	4	900	P	T	0	3	D	8	0									
X	2	D	0	0	2	400	P	T	0	3	D	8	0									
X	3	D	0	0	1	100	P	T	0	3	D	8	0									
X	4	D	0	0	2																	Included With Above

Item 10. 'Description of Hazardous Wastes' CONTENTS

Facility Area and Unit Name

1		
2	RADIOACTIVE WASTE MANAGEMENT COMPLEX	
3		
4	Transuranic Storage Area (TSA)-1/TSA-R	5 (B-1) of 6 through 5 (B-5) of 6
5	TSA-2	5 (C-1) of 6 through 5 (C-5) of 6
6	TSA-Retrieval Enclosure (RE) Retrieval Modification Facility (RMF)	5 (D-1) of 6 through 5 (D-5) of 6

10. Description of Hazardous Wastes (Continued; use additional sheets as necessary)

Line Number	A. EPA Waste No. (Enter code)					B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES					
								(1) PROCESS CODES (Enter code)			(2) PROCESS DESCRIPTION (If a code is not entered in D(1))		
1	D	0	0	1		83,978	T	S	0	1			TSA-1/TSA-R
2	D	0	0	2									Included with above
3	D	0	0	4									Included with above
4	D	0	0	5									Included with above
5	D	0	0	6									Included with above
6	D	0	0	7									Included with above
7	D	0	0	8									Included with above
8	D	0	0	9									Included with above
9	D	0	1	0									Included with above
10	D	0	1	1									Included with above
11	D	0	1	8									Included with above
12	D	0	1	9									Included with above
13	D	0	2	0									Included with above
14	D	0	2	1									Included with above
15	D	0	2	2									Included with above
16	D	0	2	3									Included with above
17	D	0	2	4									Included with above
18	D	0	2	5									Included with above
19	D	0	2	6									Included with above
20	D	0	2	7									Included with above
21	D	0	2	8									Included with above
22	D	0	2	9									Included with above
23	D	0	3	0									Included with above
24	D	0	3	1									Included with above
25	D	0	3	2									Included with above
26	D	0	3	3									Included with above
27	D	0	3	4									Included with above
28	D	0	3	5									Included with above
29	D	0	3	6									Included with above
30	D	0	3	7									Included with above
31	D	0	3	8									Included with above
32	D	0	3	9									Included with above
33	D	0	4	0									Included with above

10. Description of Hazardous Wastes (Continued; use additional sheets as necessary)

Line Number	A. EPA Waste No. (Enter code)					B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES				(2) PROCESS DESCRIPTION (If a code is not entered in D(1))
					(1) PROCESS CODES (Enter code)							
1	D	0	4	1								Included with TSA-1/TSA-R, Page 5 (B-1) of 6, line 1
2	D	0	4	2								Included with above
3	D	0	4	3								Included with above
4	F	0	0	1								Included with above
5	F	0	0	2								Included with above
6	F	0	0	3								Included with above
7	F	0	0	4								Included with above
8	F	0	0	5								Included with above
9	F	0	0	6								Included with above
1 0	F	0	0	7								Included with above
1 1	F	0	0	9								Included with above
1 2	F	0	3	9								Included with above
1 3	P	0	0	5								Included with above
1 4	P	0	1	2								Included with above
1 5	P	0	1	5								Included with above
1 6	P	0	2	2								Included with above
1 7	P	0	2	4								Included with above
1 8	P	0	2	7								Included with above
1 9	P	0	2	8								Included with above
2 0	P	0	3	0								Included with above
2 1	P	0	3	1								Included with above
2 2	P	0	5	6								Included with above
2 3	P	0	7	3								Included with above
2 4	P	0	7	5								Included with above
2 5	P	0	7	7								Included with above
2 6	P	0	9	8								Included with above
2 7	P	1	0	4								Included with above
2 8	P	1	0	5								Included with above
2 9	P	1	0	6								Included with above
3 0	P	1	1	3								Included with above
3 1	P	1	1	6								Included with above
3 2	P	1	1	9								Included with above
3 3	P	1	2	0								Included with above

10. Description of Hazardous Wastes (Continued; use additional sheets as necessary)										
Line Number	A. EPA Waste No. (Enter code)				B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES			
							(1) PROCESS CODES (Enter code)			(2) PROCESS DESCRIPTION (If a code is not entered in D(1))
1	U	0	0	2						Included with TSA-1/TSA-R, Page 5 (B-1) of 6, line 1
2	U	0	0	3						Included with above
3	U	0	0	4						Included with above
4	U	0	0	7						Included with above
5	U	0	0	9						Included with above
6	U	0	1	2						Included with above
7	U	0	1	4						Included with above
8	U	0	1	9						Included with above
9	U	0	2	0						Included with above
1 0	U	0	3	2						Included with above
1 1	U	0	3	7						Included with above
1 2	U	0	4	3						Included with above
1 3	U	0	4	4						Included with above
1 4	U	0	4	8						Included with above
1 5	U	0	5	2						Included with above
1 6	U	0	6	9						Included with above
1 7	U	0	7	0						Included with above
1 8	U	0	7	2						Included with above
1 9	U	0	7	8						Included with above
2 0	U	0	7	9						Included with above
2 1	U	0	8	0						Included with above
2 2	U	0	8	1						Included with above
2 3	U	0	8	3						Included with above
2 4	U	0	8	4						Included with above
2 5	U	1	0	2						Included with above
2 6	U	1	0	3						Included with above
2 7	U	1	0	5						Included with above
2 8	U	1	0	8						Included with above
2 9	U	1	1	6						Included with above
3 0	U	1	1	8						Included with above
3 1	U	1	2	0						Included with above
3 2	U	1	2	2						Included with above
3 3	U	1	2	3						Included with above

10. Description of Hazardous Wastes (Continued; use additional sheets as necessary)

Line Number	A. EPA Waste No. (Enter code)					B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
	(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in D(1))							
1	U	1	2	7					Included with TSA-1/TSA-R, Page 5 (B-1) of 6, line 1
2	U	1	2	8					Included with above
3	U	1	3	1					Included with above
4	U	1	3	3					Included with above
5	U	1	3	4					Included with above
6	U	1	3	5					Included with above
7	U	1	3	8					Included with above
8	U	1	4	0					Included with above
9	U	1	4	4					Included with above
10	U	1	4	5					Included with above
11	U	1	4	7					Included with above
12	U	1	5	1					Included with above
13	U	1	5	4					Included with above
14	U	1	5	9					Included with above
15	U	1	6	2					Included with above
16	U	1	6	5					Included with above
17	U	1	6	9					Included with above
18	U	1	7	0					Included with above
19	U	1	7	1					Included with above
20	U	1	8	2					Included with above
21	U	1	8	8					Included with above
22	U	1	9	0					Included with above
23	U	1	9	1					Included with above
24	U	1	9	6					Included with above
25	U	2	0	1					Included with above
26	U	2	0	4					Included with above
27	U	2	0	7					Included with above
28	U	2	0	8					Included with above
29	U	2	0	9					Included with above
30	U	2	1	0					Included with above
31	U	2	1	1					Included with above
32	U	2	1	5					Included with above
33	U	2	1	7					Included with above

10. Description of Hazardous Wastes (Continued; use additional sheets as necessary)

Line Number	A. EPA Waste No. (Enter code)					B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
	(1) PROCESS CODES (Enter code)							(2) PROCESS DESCRIPTION (If a code is not entered in D(1))	
1	U	2	1	8					Included with TSA-1/TSA-R, Page 5 (B-1) of 6, line 1
2	U	2	1	9					Included with the above
3	U	2	2	0					Included with the above
4	U	2	2	5					Included with the above
5	U	2	2	6					Included with the above
6	U	2	2	7					Included with the above
7	U	2	2	8					Included with the above
8	U	2	3	9					Included with the above
9	U	3	2	8					Included with the above
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33									

10. Description of Hazardous Wastes (Continued; use additional sheets as necessary)

Line Number	A. EPA Waste No. (Enter code)					B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES					(2) PROCESS DESCRIPTION (If a code is not entered in D(1))	
								(1) PROCESS CODES (Enter code)						
1	D	0	0	1		15,955	T	S	0	1				TSA-2 (Earthen Covered)
2	D	0	0	2										Included with above
3	D	0	0	4										Included with above
4	D	0	0	5										Included with above
5	D	0	0	6										Included with above
6	D	0	0	7										Included with above
7	D	0	0	8										Included with above
8	D	0	0	9										Included with above
9	D	0	1	0										Included with above
1 0	D	0	1	1										Included with above
1 1	D	0	1	8										Included with above
1 2	D	0	1	9										Included with above
1 3	D	0	2	0										Included with above
1 4	D	0	2	1										Included with above
1 5	D	0	2	2										Included with above
1 6	D	0	2	3										Included with above
1 7	D	0	2	4										Included with above
1 8	D	0	2	5										Included with above
1 9	D	0	2	6										Included with above
2 0	D	0	2	7										Included with above
2 1	D	0	2	8										Included with above
2 2	D	0	2	9										Included with above
2 3	D	0	3	0										Included with above
2 4	D	0	3	1										Included with above
2 5	D	0	3	2										Included with above
2 6	D	0	3	3										Included with above
2 7	D	0	3	4										Included with above
2 8	D	0	3	5										Included with above
2 9	D	0	3	6										Included with above
3 0	D	0	3	7										Included with above
3 1	D	0	3	8										Included with above
3 2	D	0	3	9										Included with above
3 3	D	0	4	0										Included with above

10. Description of Hazardous Wastes (Continued; use additional sheets as necessary)

Line Number	A. EPA Waste No. (Enter code)					B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
								(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in D(1))
1	D	0	4	1					Included with TSA-2, Page 5 (C-1) of 6, line 1
2	D	0	4	2					Included with above
3	D	0	4	3					Included with above
4	F	0	0	1					Included with above
5	F	0	0	2					Included with above
6	F	0	0	3					Included with above
7	F	0	0	4					Included with above
8	F	0	0	5					Included with above
9	F	0	0	6					Included with above
1 0	F	0	0	7					Included with above
1 1	F	0	0	9					Included with above
1 2	F	0	3	9					Included with above
1 3	P	0	0	5					Included with above
1 4	P	0	1	2					Included with above
1 5	P	0	1	5					Included with above
1 6	P	0	2	2					Included with above
1 7	P	0	2	4					Included with above
1 8	P	0	2	7					Included with above
1 9	P	0	2	8					Included with above
2 0	P	0	3	0					Included with above
2 1	P	0	3	1					Included with above
2 2	P	0	5	6					Included with above
2 3	P	0	7	3					Included with above
2 4	P	0	7	5					Included with above
2 5	P	0	7	7					Included with above
2 6	P	0	9	8					Included with above
2 7	P	1	0	4					Included with above
2 8	P	1	0	5					Included with above
2 9	P	1	0	6					Included with above
3 0	P	1	1	3					Included with above
3 1	P	1	1	6					Included with above
3 2	P	1	1	9					Included with above
3 3	P	1	2	0					Included with above

10. Description of Hazardous Wastes (Continued; use additional sheets as necessary)										
Line Number	A. EPA Waste No. (Enter code)				B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES			
							(1) PROCESS CODES (Enter code)			(2) PROCESS DESCRIPTION (If a code is not entered in D(1))
1	U	0	0	2						Included with TSA-2, Page 5 (C-1) of 6, line 1
2	U	0	0	3						Included with above
3	U	0	0	4						Included with above
4	U	0	0	7						Included with above
5	U	0	0	9						Included with above
6	U	0	1	2						Included with above
7	U	0	1	4						Included with above
8	U	0	1	9						Included with above
9	U	0	2	0						Included with above
1 0	U	0	3	2						Included with above
1 1	U	0	3	7						Included with above
1 2	U	0	4	3						Included with above
1 3	U	0	4	4						Included with above
1 4	U	0	4	8						Included with above
1 5	U	0	5	2						Included with above
1 6	U	0	6	9						Included with above
1 7	U	0	7	0						Included with above
1 8	U	0	7	2						Included with above
1 9	U	0	7	8						Included with above
2 0	U	0	7	9						Included with above
2 1	U	0	8	0						Included with above
2 2	U	0	8	1						Included with above
2 3	U	0	8	3						Included with above
2 4	U	0	8	4						Included with above
2 5	U	1	0	2						Included with above
2 6	U	1	0	3						Included with above
2 7	U	1	0	5						Included with above
2 8	U	1	0	8						Included with above
2 9	U	1	1	6						Included with above
3 0	U	1	1	8						Included with above
3 1	U	1	2	0						Included with above
3 2	U	1	2	2						Included with above
3 3	U	1	2	3						Included with above

10. Description of Hazardous Wastes (Continued; use additional sheets as necessary)									
Line Number	A. EPA Waste No. (Enter code)			B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES			
						(1) PROCESS CODES (Enter code)			(2) PROCESS DESCRIPTION (If a code is not entered in D(1))
1	U	1	2	7					Included with TSA-2, Page 5 (C-1) of 6, line 1
2	U	1	2	8					Included with above
3	U	1	3	1					Included with above
4	U	1	3	3					Included with above
5	U	1	3	4					Included with above
6	U	1	3	5					Included with above
7	U	1	3	8					Included with above
8	U	1	4	0					Included with above
9	U	1	4	4					Included with above
10	U	1	4	5					Included with above
11	U	1	4	7					Included with above
12	U	1	5	1					Included with above
13	U	1	5	4					Included with above
14	U	1	5	9					Included with above
15	U	1	6	2					Included with above
16	U	1	6	5					Included with above
17	U	1	6	9					Included with above
18	U	1	7	0					Included with above
19	U	1	7	1					Included with above
20	U	1	8	2					Included with above
21	U	1	8	8					Included with above
22	U	1	9	0					Included with above
23	U	1	9	1					Included with above
24	U	1	9	6					Included with above
25	U	2	0	1					Included with above
26	U	2	0	4					Included with above
27	U	2	0	7					Included with above
28	U	2	0	8					Included with above
29	U	2	0	9					Included with above
30	U	2	1	0					Included with above
31	U	2	1	1					Included with above
32	U	2	1	5					Included with above
33	U	2	1	7					Included with above

10. Description of Hazardous Wastes (Continued; use additional sheets as necessary)										
Line Number	A. EPA Waste No. (Enter code)					B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES		
								(1) PROCESS CODES (Enter code)		
1	U	2	1	8						Included with TSA-2, Page 5 (C-1) of 6, line 1
2	U	2	1	9						Included with the above
3	U	2	2	0						Included with the above
4	U	2	2	5						Included with the above
5	U	2	2	6						Included with the above
6	U	2	2	7						Included with the above
7	U	2	2	8						Included with the above
8	U	2	3	9						Included with the above
9	U	3	2	8						Included with the above
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10. Description of Hazardous Wastes (Continued; use additional sheets as necessary)

Line Number	A. EPA Waste No. (Enter code)					B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES		(2) PROCESS DESCRIPTION (If a code is not entered in D(1))
	(1) PROCESS CODES (Enter code)									
1	D	0	0	1	6,006	T	S	0 1		Retrieval Modification Facility (RMF)
2	D	0	0	2						Included with above
3	D	0	0	4						Included with above
4	D	0	0	5						Included with above
5	D	0	0	6						Included with above
6	D	0	0	7						Included with above
7	D	0	0	8						Included with above
8	D	0	0	9						Included with above
9	D	0	1	0						Included with above
1 0	D	0	1	1						Included with above
1 1	D	0	1	8						Included with above
1 2	D	0	1	9						Included with above
1 3	D	0	2	0						Included with above
1 4	D	0	2	1						Included with above
1 5	D	0	2	2						Included with above
1 6	D	0	2	3						Included with above
1 7	D	0	2	4						Included with above
1 8	D	0	2	5						Included with above
1 9	D	0	2	6						Included with above
2 0	D	0	2	7						Included with above
2 1	D	0	2	8						Included with above
2 2	D	0	2	9						Included with above
2 3	D	0	3	0						Included with above
2 4	D	0	3	1						Included with above
2 5	D	0	3	2						Included with above
2 6	D	0	3	3						Included with above
2 7	D	0	3	4						Included with above
2 8	D	0	3	5						Included with above
2 9	D	0	3	6						Included with above
3 0	D	0	3	7						Included with above
3 1	D	0	3	8						Included with above
3 2	D	0	3	9						Included with above
3 3	D	0	4	0						Included with above

10. Description of Hazardous Wastes (Continued; use additional sheets as necessary)

Line Number	A. EPA Waste No. (Enter code)					B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
	(1) PROCESS CODES (Enter code)		(2) PROCESS DESCRIPTION (If a code is not entered in D(1))						
1	D	0	4	1					Included with RMF, Page 5 (D-1) of 6, line 1
2	D	0	4	2					Included with above
3	D	0	4	3					Included with above
4	F	0	0	1					Included with above
5	F	0	0	2					Included with above
6	F	0	0	3					Included with above
7	F	0	0	4					Included with above
8	F	0	0	5					Included with above
9	F	0	0	6					Included with above
1 0	F	0	0	7					Included with above
1 1	F	0	0	9					Included with above
1 2	F	0	3	9					Included with above
1 3	P	0	0	5					Included with above
1 4	P	0	1	2					Included with above
1 5	P	0	1	5					Included with above
1 6	P	0	2	2					Included with above
1 7	P	0	2	4					Included with above
1 8	P	0	2	7					Included with above
1 9	P	0	2	8					Included with above
2 0	P	0	3	0					Included with above
2 1	P	0	3	1					Included with above
2 2	P	0	5	6					Included with above
2 3	P	0	7	3					Included with above
2 4	P	0	7	5					Included with above
2 5	P	0	7	7					Included with above
2 6	P	0	9	8					Included with above
2 7	P	1	0	4					Included with above
2 8	P	1	0	5					Included with above
2 9	P	1	0	6					Included with above
3 0	P	1	1	3					Included with above
3 1	P	1	1	6					Included with above
3 2	P	1	1	9					Included with above
3 3	P	1	2	0					Included with above

10. Description of Hazardous Wastes (Continued; use additional sheets as necessary)

Line Number	A. EPA Waste No. (Enter code)				B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
	(1) PROCESS CODES (Enter code)		(2) PROCESS DESCRIPTION (If a code is not entered in D(1))					
1	U	0	0	2				Included with RMF, Page 5 (D-1) of 6, line 1
2	U	0	0	3				Included with above
3	U	0	0	4				Included with above
4	U	0	0	7				Included with above
5	U	0	0	9				Included with above
6	U	0	1	2				Included with above
7	U	0	1	4				Included with above
8	U	0	1	9				Included with above
9	U	0	2	0				Included with above
1 0	U	0	3	2				Included with above
1 1	U	0	3	7				Included with above
1 2	U	0	4	3				Included with above
1 3	U	0	4	4				Included with above
1 4	U	0	4	8				Included with above
1 5	U	0	5	2				Included with above
1 6	U	0	6	9				Included with above
1 7	U	0	7	0				Included with above
1 8	U	0	7	2				Included with above
1 9	U	0	7	8				Included with above
2 0	U	0	7	9				Included with above
2 1	U	0	8	0				Included with above
2 2	U	0	8	1				Included with above
2 3	U	0	8	3				Included with above
2 4	U	0	8	4				Included with above
2 5	U	1	0	2				Included with above
2 6	U	1	0	3				Included with above
2 7	U	1	0	5				Included with above
2 8	U	1	0	8				Included with above
2 9	U	1	1	6				Included with above
3 0	U	1	1	8				Included with above
3 1	U	1	2	0				Included with above
3 2	U	1	2	2				Included with above
3 3	U	1	2	3				Included with above

10. Description of Hazardous Wastes (Continued; use additional sheets as necessary)									
Line Number	A. EPA Waste No. (Enter code)			B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES			
						(1) PROCESS CODES (Enter code)			(2) PROCESS DESCRIPTION (If a code is not entered in D(1))
1	U	1	2	7					Included with RMF, Page 5 (D-1) of 6, line 1
2	U	1	2	8					Included with above
3	U	1	3	1					Included with above
4	U	1	3	3					Included with above
5	U	1	3	4					Included with above
6	U	1	3	5					Included with above
7	U	1	3	8					Included with above
8	U	1	4	0					Included with above
9	U	1	4	4					Included with above
10	U	1	4	5					Included with above
11	U	1	4	7					Included with above
12	U	1	5	1					Included with above
13	U	1	5	4					Included with above
14	U	1	5	9					Included with above
15	U	1	6	2					Included with above
16	U	1	6	5					Included with above
17	U	1	6	9					Included with above
18	U	1	7	0					Included with above
19	U	1	7	1					Included with above
20	U	1	8	2					Included with above
21	U	1	8	8					Included with above
22	U	1	9	0					Included with above
23	U	1	9	1					Included with above
24	U	1	9	6					Included with above
25	U	2	0	1					Included with above
26	U	2	0	4					Included with above
27	U	2	0	7					Included with above
28	U	2	0	8					Included with above
29	U	2	0	9					Included with above
30	U	2	1	0					Included with above
31	U	2	1	1					Included with above
32	U	2	1	5					Included with above
33	U	2	1	7					Included with above

10. Description of Hazardous Wastes (Continued; use additional sheets as necessary)											
Line Number	A. EPA Waste No. (Enter code)					B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES			
								(1) PROCESS CODES (Enter code)			(2) PROCESS DESCRIPTION (If a code is not entered in D(1))
1	U	2	1	8							Included with RMF, Page 5 (D-1) of 6, line 1
2	U	2	1	9							Included with the above
3	U	2	2	0							Included with the above
4	U	2	2	5							Included with the above
5	U	2	2	6							Included with the above
6	U	2	2	7							Included with the above
7	U	2	2	8							Included with the above
8	U	2	3	9							Included with the above
9	U	3	2	8							Included with the above
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11. Map (See instructions on page 38)

Attach to this application a topographic map, or other equivalent map, of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in this map area. See instructions for precise requirements.

12. Facility Drawing (See instructions on page 39)

All existing facilities must include a scale drawing of the facility (see instructions for more detail).

13. Photographs (See instructions on page 39)

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail).

14. Comments (See instructions on page 39)

ITEM 11. RWMC TOPOGRAPHIC MAP

(in sheet protector following)



LEGEND

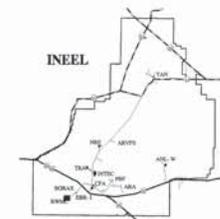
- Ranch and Buildings
- Primary Canals (10'-R. Intervals)
- Intermediate Canals (2'-R. Intervals)
- Fences and Gates
- New Fences and/or Proposed Building Areas (Aggravation Status, Survey has not been completed)
- Radiation Boundary Fence
- Channel Thresholds on Big Lost River System (Including Barriers for Debris or Flood Control)
- Streams and Ditches
- Proposed Road Changes
- Culverts
- Flow Path
- Estimated/Calculated Drainage Order System
- Setback Secret Line
- Fire Water Line
- Vapor Vacuum Extraction Wells
- Monitoring Wells
- Injection Wells
- Withdrawal Wells
- Landfill/Unloading Areas
- RCRA Permitted Treatment and Storage Areas

NOTES: Landuse: RWMC facility boundaries are surrounded by restricted-access federal lands.

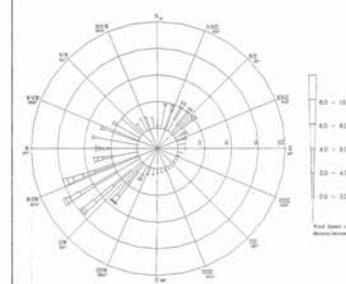
Legal Description: RWMC facility boundaries are located in Township 2 North, Range 20 East, Sections 17 and 18.

100-year floodplains: Portions of the RWMC facility boundaries are located within the 100-year floodplains. The AMWTP and WMP-629 through -634 boundaries are not located within the 100-year floodplain. If a 100-year flood were to occur the existing surface water drainage control systems would prevent washout of any of the RWMC TSS/PMMA-regulated units.

Map Projection: STATE PLANE
Zone: IDAHO EAST (7301)
Units: U.S. SURVEY FEET
Horizontal Datum: NAD-27

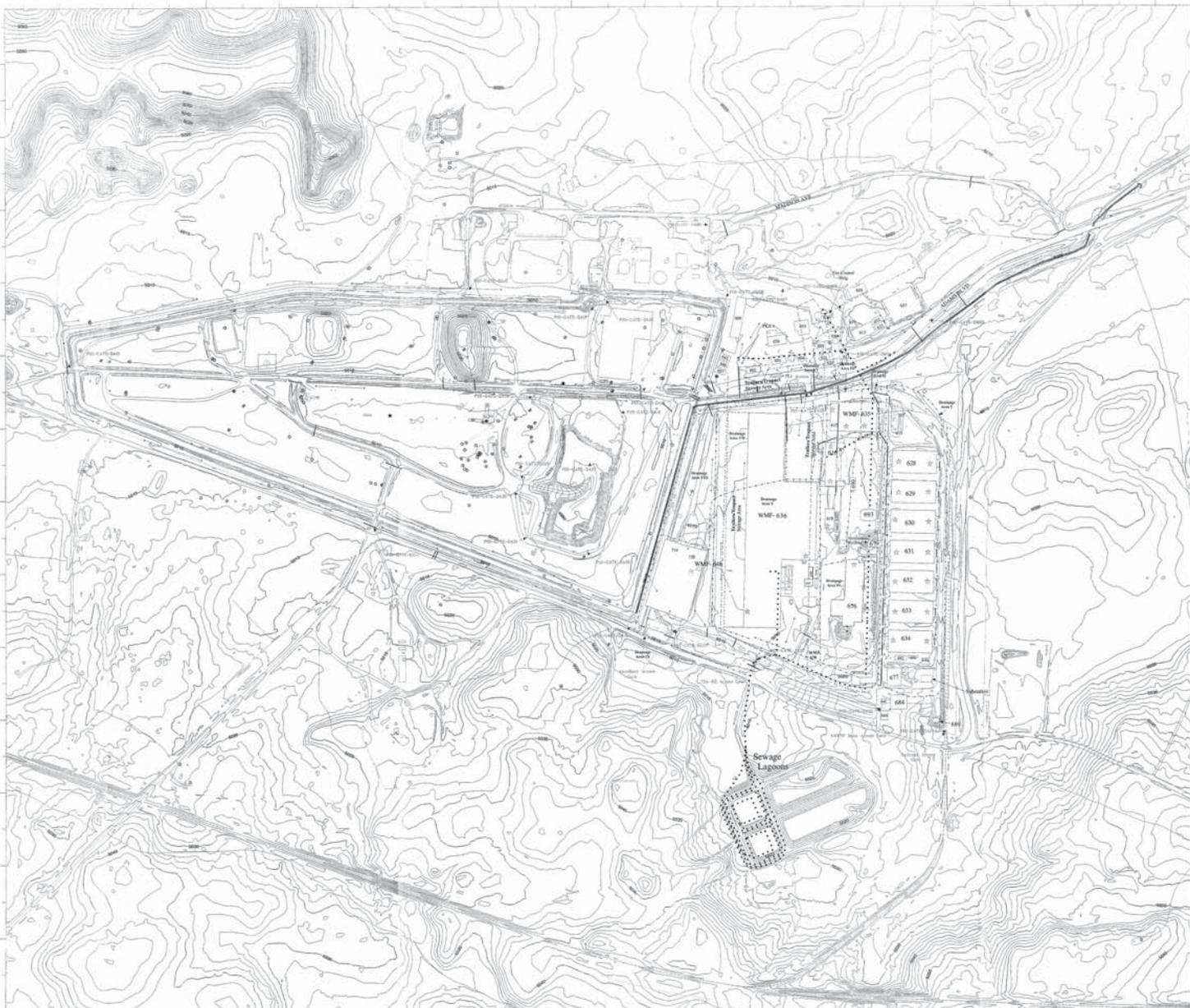


Vicinity Map



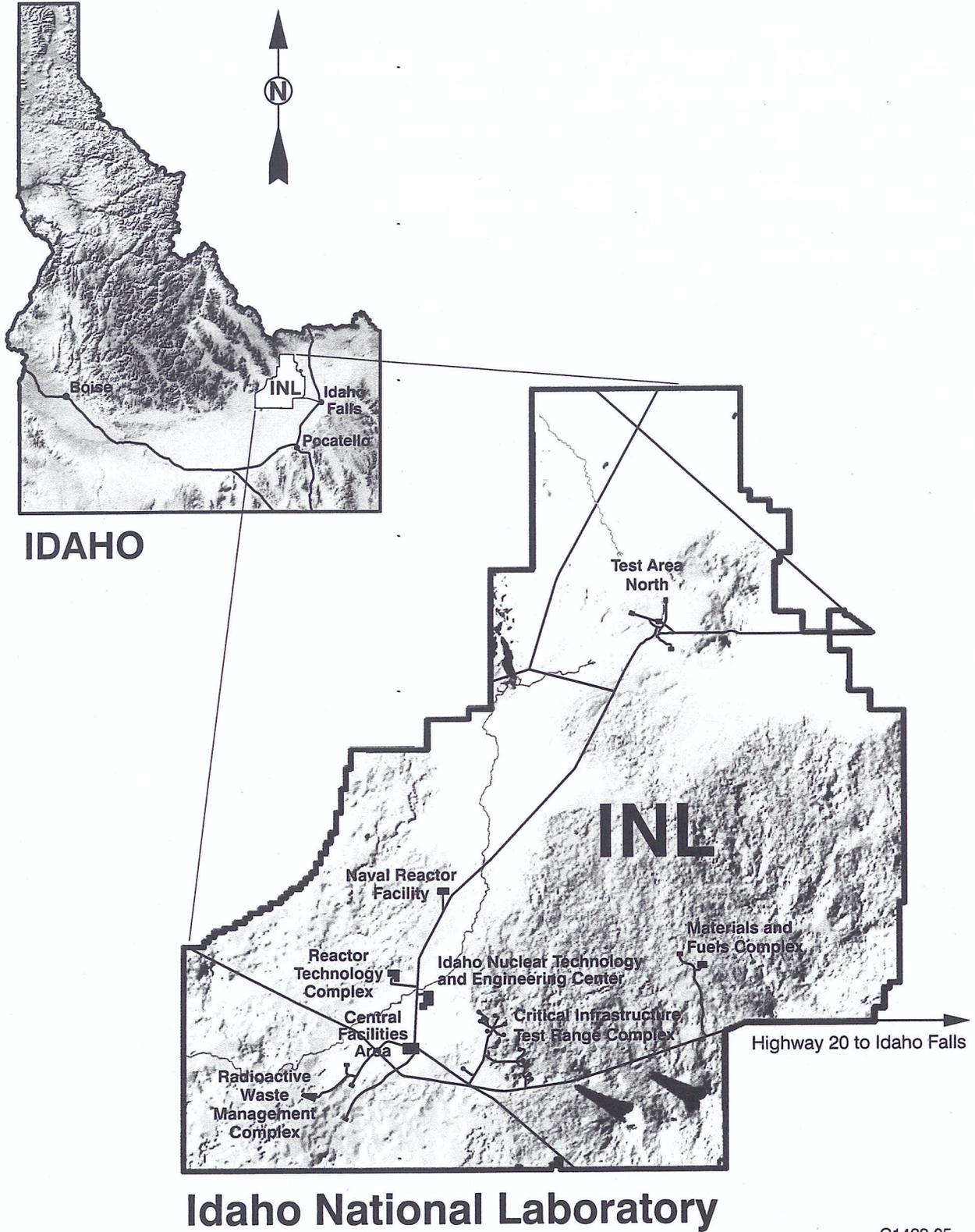
RWMC Wind Rose

Project: AMWTP
Map Requester: Christian T. Mangin (SMC)
Date Drawn: July 1, 2003
Disclaimer: Plansheets and 2-D, contour lines derived from 200 ft. fly-over imagery collected by Aero-Engines, Inc. on 08/12/00.
Contact: P. 704

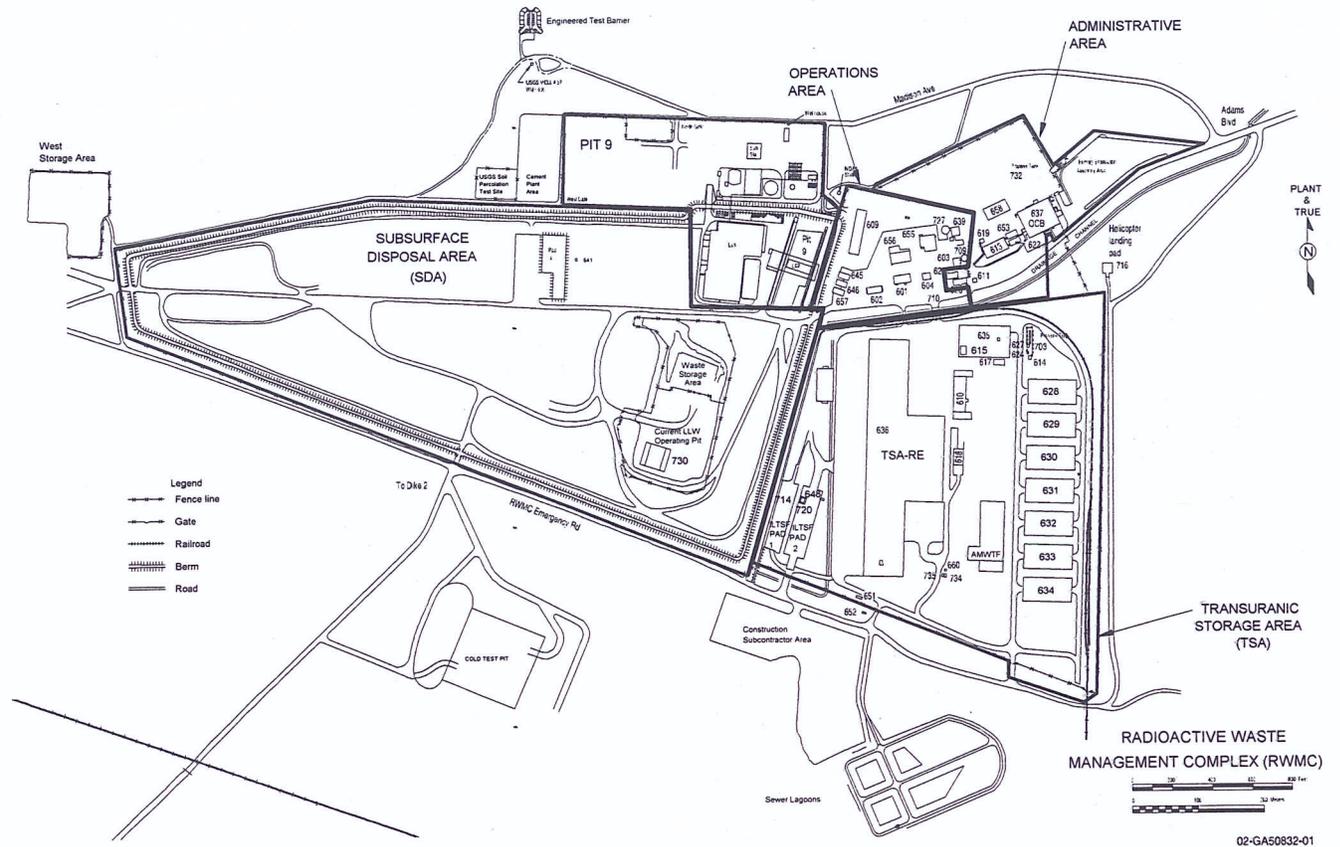


ITEM 12. RWMC FACILITY DRAWINGS

<u>Drawing Number</u>	<u>Drawing Description</u>	<u>Page Number</u>
G1422-05	Map of the INL showing major facility locations	Page 6c of 6
02-GA-50832-01	RWMC Facility Drawing	Page 6d of 6



G1422-05



Item 13. RWMC Photographs

Photo Number	Photo Description – Unit Process Code(s)	Date of Photo	Page Number
Photo 1	Interior of TSA-1/TSA-R (showing stored containers of waste) – S01	6/99	6f of 6
Photo 2	View of Northwest corner of TSA-RE (TSA-1/TSA-R within) – S01	6/99	6f of 6
Photo 3	View of Southeast corner of TSA-RE (TSA-2 and TSA-R within) – S01	6/99	6g of 6
Photo 4	View of South Interior of TSA-2 (showing retrieval equipment) – S01	Not available	6g of 6
Photo 5	View of top of waste stack of TSA-2 (showing soil conveying equipment) – S01	6/99	6h of 6
Photo 6	Aerial View of the RWMC with WMF-676 Graphically Superimposed	Not available	6i of 6



Photo 1. Interior of TSA-1/TSA-R (Showing stored containers of waste)



Photo 2. View of Northwest corner of TSA-RE (TSA-1/TSA-R within)



Photo 3. View of Southeast corner of TSA-RE (TSA-2 and TSA-R within)



Photo 4. View of South Interior of TSA-2 (showing retrieval equipment)



Photo 5. View of top of waste stack of TSA-2 (showing soil conveying equipment)



Photo 6. Aerial View of the RWMC with WMF-676 Superimposed

ITEM 14. ADDITIONAL INFORMATION

HAZARDOUS WASTE DEBRIS CATEGORIES

IDAPA 58.01.05.012 [40 CFR 270.13(n)] requires a description of the debris categories to be treated, stored, or disposed of at a facility, to be submitted in the Part A Permit Application. Debris defined by 40 CFR 268.2 means a solid material exceeding a 60-mm particle size that is intended for disposal and that is: 1) a manufactured object; 2) plant or animal matter; 3) natural geologic material. Debris storage at the INL includes waste in all three general categories. The following is a list of examples in each debris category that may be stored at the INL.

Category I - Manufactured Objects

- Glass
- Concrete
- Masonry and refractory bricks
- Paper
- Plastic
- Rubber
- Cloth
- Pavement
- Metal Debris
 - Pipes
 - Valves
 - Scrap Metal
- Other Heterogeneous Debris
 - Non-intact containers
 - Tanks
 - Appliances
 - Industrial Equipment

Category II - Plant and Animal Matter

- Biological Debris
 - Animal carcasses
 - Other plant matter
- Wood Debris
 - Wood
 - Plant stumps

Category III - Natural Geologic Material

- Rock
- Cobbles
- Boulders
- Asbestos

ACRONYMS and ABBREVIATIONS

%	percent
α LLW	alpha low-level waste
AEA	Atomic Energy Act
AMWTF	Advanced Mixed Waste Treatment Facility
AMWTP	Advanced Mixed Waste Treatment Project
ANL-E	Argonne National Laboratory - East
ASB	air support building
ASTM	American Society for Testing and Materials
BBWI	Bechtel BWXT, Idaho, LLC
CFR	Code of Federal Regulations
CMMS	computerized maintenance management system
CO	<i>carbon monoxide</i>
CPR	cardiopulmonary resuscitation
CW	<i>combustible waste</i>
DCSRS	Drum Core Sample Retrieval System
DEQ	Department of Environmental Quality
DMS	Data Management System
DOE	Department of Energy
DOE-ID	Department of Energy-Idaho Operations Office
DOT	Department of Transportation
DVS	drum venting system
EAL	emergency action limits
EAM	<i>Emergency Action Manager</i>
EC	Emergency Coordinator
EOC	Emergency Operations Center
EMT	Emergency Medical Technician
EPA	Environmental Protection Agency
ERO	emergency response organization
ERPGs	Emergency Response Planning Guide
F	<i>filters</i>
FACP	fire alarm control panel

FRP	fiberglass reinforced plywood
ft	foot or feet
ft ²	square feet
<i>G</i>	<i>graphite</i>
gal	gallon
GFI	ground fault interrupter
HAZMAT	Hazardous Material
HAZWOPER	hazardous waste operator
<i>HD</i>	<i>heterogeneous debris</i>
HDPE	high-density polyethylene
HEPA	high efficiency particulate air
hr	hour
HVAC	heating, ventilation, and air conditioning
HW	hazardous waste
HWD	hazardous waste determination
HWMA	Hazardous Waste Management Act of 1983, as amended
HWN	EPA hazardous waste number
IDAPA	Idaho Administrative Procedures Act
IDC	item description code
INM	inorganic nonmetallic waste
in.	inch or inches
INL	Idaho National Laboratory
IS	Interim Status
LCM	lead/cadmium metal
LDR	Land Disposal Restrictions
LLD	Lower limit of detection
LLW	low-level waste
m ³	cubic meters
M&O	management and operations
mg/m ³	milligram per cubic meter
<i>mil</i>	<i>millimeter</i>
MW	mixed waste
MWMU(s)	mixed waste management unit(s)

nCi/g	nanocuries per gram
NFPA	National Fire Protection Association
OJT	on-the-job training
OSC	On-scene Commander
PAGs	Protective Action Guide
<i>PCB</i>	<i>polychlorinated biphenyl</i>
PM	preventative maintenance
PPE	personal protective equipment
ppm	parts per million
psi	pounds per square inch
PVC	polyvinyl chloride
<i>QAPP</i>	<i>quality assurance project plan</i>
RCRA	Resource Conservation and Recovery Act
RFETS	Rocky Flats Environmental Technology Site
RGN	reactivity group numbers
RGW	retrieval generated waste
RMF	Retrieval Modification Facility
ROW	radioactive only waste
RSSC	Recycled Shielded Storage Container
RTR	real time radiography
RWMC	Radioactive Waste Management Complex
RWSA	retrieved waste storage area
S	soil
<i>SCW</i>	<i>special case waste</i>
SI	solidified inorganic(s)
SO	solidified organic(s)
SW	salt waste
SW-846	The EPA manual titled "Test Methods for Evaluating Solid Waste: Physical/Chemical methods," current edition
SWB	Standard Waste Box
SWEPP	Stored Waste Examination Pilot Plant
TCLP	Toxicity Characteristic Leaching Procedure
TDOP	Ten-Drum Overpack

TRU	transuranic
TRUPACT	transuranic package transporter
TSD	treatment, storage, or disposal
TSA	Transuranic Storage Area
TSA-RE	Transuranic Storage Area-Retrieval Enclosure
TSCA	Toxic Substances Control Act
UHCs	underlying hazardous constituents
UL	Underwriters Laboratory
UM	uncategorized metal
U.S.	United States
<i>VE</i>	<i>visual examination</i>
WAC	waste acceptance criteria
WAP	Waste Analysis Plan
WCC	Warning Communications Center
WG	waste group
WIPP	Waste Isolation Pilot Plant
WMF	Waste Management Facility
WSF	Waste Storage Facility

SECTION B

FACILITY DESCRIPTION

(For Information Only)

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1 **B. FACILITY DESCRIPTION**

2 **B-1 General Description [Idaho Administrative Procedures Act (IDAPA) 58.01.05.009;**
3 **Title 40 Code of Federal Regulations (CFR) 265]**

4 The Advanced Mixed Waste Treatment Project (AMWTP) Transuranic Storage Area
5 (TSA)-Retrieval Enclosure (TSA-RE), commonly known as Waste Management Facility (WMF)-636, is
6 located at the Radioactive Waste Management Complex (RWMC) on the Idaho National Laboratory
7 (INL). Exhibit B-1 is a map of the INL showing the major area locations and buildings. The TSA-RE,
8 ~~which is not regulated per the Hazardous Waste Management Act (HWMA) of 1983, as amended or the~~
9 ~~Resource Conservation and Recovery Act (RCRA),~~ is a metal structure that encloses asphalt pads, which
10 are regulated ~~under the per-Hazardous Waste Management Act (HWMA)/Resource Conservation and~~
11 ~~Recovery Act (RCRA)~~ Interim Status (IS) regulations in IDAPA 58.01.05.009 (40 CFR Part 265) ~~and the~~
12 ~~HWMA/RCRA container storage unit regulations in IDAPA 58.01.05.008 (40 CFR 264 Subpart I). This~~
13 ~~HWMA/RCRA IS Document covers only those units regulated under the IS regulations (i.e., Pad 1 and R).~~
14 ~~For information on the Pad 2 container storage unit, refer to the AMWTP HWMA/RCRA Permit.~~

15 These IS asphalt pads contain covered stacks of retrievably stored transuranic (TRU) and alpha
16 low-level waste (α LLW), which may be mixed waste (MW) or radioactive only waste (ROW). ~~Exhibit~~
17 ~~B-2 is a diagram that defines the waste types managed at the TSA IS Units.~~ The TSA-RE contains ~~two~~
18 ~~one~~ IS container storage units (i.e., TSA-1/TSA-R ~~and TSA-2~~). ~~These units, along with the TSA-RE~~
19 ~~Retrieval Modification Facility (RMF), make up the TSA IS Units.~~ The TSA IS Units ~~are~~ operated by
20 Bechtel BWXT, Idaho, LLC (BBWI) under contract with the United States (U.S.) Department of Energy-
21 Idaho Operations Office (DOE-ID).

22 Because the HWMA/RCRA-regulated wastes managed at the TSA are MW, references to
23 radiological and radiochemical data are made throughout the TSA IS Document. Information on
24 radiological and radiochemical characteristics is provided for informational purposes only, as
25 HWMA/RCRA applies only to the hazardous waste constituents of the MW. A portion of the waste also
26 contains polychlorinated biphenyls (PCBs), which may be regulated by the Toxic Substances Control Act
27 (TSCA). Discussion of TSCA-regulated waste is for informational purposes only, as PCBs are not
28 subject to HWMA/RCRA.

29 Unless otherwise noted, sections referenced in this document refer to sections of this document.
30 Tables and exhibits cited herein refer to portions of the section in which they are cited, unless otherwise
31 noted.

AMWTP Process Description

The TSA stored waste slated for storage, characterization, and treatment at the AMWTP mixed waste management units (MWMUs) [i.e., the Advanced Mixed Waste Treatment Facility (AMWTF), Type II Modules (WMF-628 through 633), Waste Characterization Facility (WMF-634), the Stored Waste Examination Pilot Plant (SWEPP), Type I Module (WMF-635), *WMF-636 Pad 2*, and the TSA IS Units] is retrieved from storage, characterized for storage and treatment or direct shipment, stored in preparation for treatment or shipment, pretreated (if necessary), treated (as required), then sent for packaging and certification (as required) for shipment to the Waste Isolation Pilot Plant (WIPP) or to another waste management unit. Containers are transported/transferred to, from, and within the AMWTP MWMUs using forklifts, trucks, trucks with trailers, conveyors, hand trucks, and other transport vehicles/devices. A schematic flow diagram of the processes for the AMWTP is shown in the process flow sheets, Exhibits I-1 and I-2, which are located in Appendix I of the AMWTP HWMA/RCRA Storage-Permit. The process flow sheets represent the majority of the anticipated processes for the AMWTP and are based on design estimates.

Retrieval

Waste requiring retrieval is enclosed by an earthen-covered berm, which is located in the TSA-RE. The TSA-RE provides confinement and weather protection for retrieval operations. The locations of the MWMUs are shown on the RWMC/AMWTP Topographic Map, which is located in the Part A Permit Application for the TSA IS Unit. ~~Of the estimated 65,000 cubic meters (m³) of waste stored at the TSA, approximately 11,700 m³ of waste is stored in the MWMUs that are regulated under IDAPA 58.01.05.008 (40 CFR 264). A protective structure has been constructed over the remaining of waste located on the TSA IS Units, much of which is covered by an earthen berm. This structure, the TSA RE, provides confinement and weather protection for retrieval operations. The locations of the MWMUs are shown on the RWMC/AMWTP Topographic Map, which is located in the Part A Permit Application for the TSA IS Units.~~

Retrieval operations, in part, may involve sampling soil within the TSA-RE; removing the soil, sheeting, and wood components from the container stacks; removing the waste containers from the stacks; inspecting, monitoring, and barcoding containers; overpacking or repairing containers, as necessary; then transporting containers to other AMWTP-MWMUs.

Preliminary Characterization

Characterization typically occurs within WMF-634, but may also occur in WMF-628, WMF-610, or WMF-635. WMF-634 houses real time radiography (RTR) units, drum assay units, a box assay unit, a

1 combined drum venting system (DVS) and headspace gas sampling unit, portable headspace gas sampling
2 units, a unit for the treatment (via addition of absorbent to containers with liquids, decanting liquids,
3 neutralization of liquids, repackaging of waste, the sizing of waste, or by the mechanical vibration of
4 waste) and visual examination of containers, ~~and~~ a drum core sample retrieval system (DCSRS), *and an*
5 *area for performing macroencapsulation*. Containers are received at WMF-634 for characterization
6 and/or treatment. Waste is stored in WMF-634 while awaiting characterization, treatment (as required),
7 and transport to the *Type I Module, the Type II Modules* (~~e.g., WMF-628 through WMF-633~~), or the TSA
8 IS Units for storage, pending disposition. Select drums pass through the DVS and DCSRS in WMF-634
9 prior to routing for further disposition.

10 Typically, retrieved containers undergo RTR examination to determine physical waste parameters
11 (e.g., metals, cellulose, rubber, plastics, soil, sludge) and to detect prohibited items (e.g., liquids,
12 elemental mercury, etc.). The visual ~~examination~~ *review* of RTR images also validates existing
13 characterization data, or, in the case of containers with unknown contents, helps to correlate the contents
14 of the container with known waste types. Characterization activities are described in more detail in the
15 AMWTP HWMA/RCRA ~~Storage~~ Permit.

16 **Storage**

17 After preliminary characterization, containers are usually taken to the *Type I Module, the Type II*
18 *Modules, or WMF-636 Pad 2*, where the containers are stored by parameters such as ~~waste group (WG)~~
19 *item description code (IDC)*, container type, and fissile material content. The purpose of this storage is to
20 decouple treatment from retrieval and characterization operations and to build up an inventory of waste to
21 facilitate efficient treatment *and direct sequencing/shipment* strategies.

22 **Direct Shipment**

23 Once characterized, certain waste containers may be determined suitable for direct shipment to
24 the WIPP [e.g., meets the WIPP waste acceptance criteria (WAC)] or another waste management unit.

25 **Pretreatment**

26 Waste containers to be treated in WMF-676 (~~primarily debris waste~~) are transported from storage
27 to the waste receiving and storage areas of WMF-676. The containers are then transferred within
28 WMF-676 to the pretreatment areas, or directly to treatment. See the AMWTP HWMA/RCRA ~~Treatment~~
29 Permit for further information on the *pretreatment* processes in WMF-676.

1 **Treatment in the Storage-AMWTP MWMUs**

2 ~~Six~~ Various methods of treatment are Permitted in WMF-628 through WMF-635, ~~and~~ WMF-610,
3 ~~and~~ WMF-676. These methods of treatment are absorption, decanting, neutralization, repackaging of
4 waste, sizing of waste, ~~and~~ the mechanical vibration of waste, ~~and the macroencapsulation of waste~~,
5 which are performed individually or in conjunction with each other to treat the waste in the most effective
6 manner possible. A brief description of each treatment activity is provided below. See the AMWTP
7 HWMA/RCRA ~~Storage~~ Permit for further information on the treatment methods.

8 **Absorption.** Liquid waste is absorbed with a compatible absorbent. Absorption of liquids in
9 containers may occur after decanting (*if performed*), to absorb any liquids that have not been decanted.
10 *Absorption may also occur during decanting by decanting into a container with absorbent.* Absorption of
11 liquids that have previously been decanted (and potentially co-mingled) or neutralized may also occur.
12 Co-mingling only occurs after compatibility of the wastes has been addressed.

13 **Decanting.** Liquid wastes are decanted from ~~a~~ container(s) ~~into another container(s), sumps, or~~
14 ~~troughs into containers.~~ The decanted wastes are then neutralized and/or absorbed. Co-mingling of
15 decanted liquids or absorbed wastes may occur, as applicable, after compatibility of the wastes has been
16 addressed.

17 **Neutralization.** Corrosive liquids are neutralized either prior to absorption or absorbed with a
18 neutralizing absorbent. Co-mingling of neutralized liquids or the absorbed neutralized liquids may occur,
19 as applicable, after compatibility of the wastes has been addressed.

20 **Repackaging.** Waste from a container may be repackaged either into another container, or into
21 multiple containers. Waste from multiple containers may be collected in a single container after
22 compatibility of the wastes has been addressed. While repackaging the waste, items that are prohibited
23 for disposal at a waste management unit or prohibited for processing in the various AMWTP waste
24 management units (e.g., supercompactor) may be removed. Repackaging may also be utilized to aid in
25 the characterization of waste (e.g., visual examination to confirm container contents, etc.).

26 **Sizing.** Waste from a container may be sized for repackaging into the original container or into
27 another container. Co-mingling of wastes will occur after the compatibility of the wastes has been
28 addressed. An item that may be used for the sizing of waste includes, but is not limited to, shears,
29 nibblers, scrapers, etc.

30 **Mechanical Vibration.** Containers of waste are mechanically vibrated in an effort to consolidate
31 free liquids located within the void space of solidified waste so that the liquid may *be* absorbed or
32 decanted. Mechanical vibration is not intended to separate absorbed liquid from the waste matrix.

1 Equipment that may be used for mechanically vibrating waste includes a vibrating table or similar
2 equipment.

3 ***Macroencapsulation.** A container(s) of waste may be repackaged into either a stainless steel
4 container or a container with a stainless steel liner. After loading the stainless steel container/liner with
5 waste, the stainless steel container/liner is welded closed to meet the macroencapsulation standard of
6 IDAPA 58.01.05.011 (40 CFR 268.45). Co-mingling of wastes will occur only after the compatibility of
7 the wastes has been addressed.*

8 ***Supercompaction.** The supercompaction process receives lidded drums of sorted waste from the
9 box line or drum repack system areas in WMF-676 or direct feed drums from the waste receiving and
10 storage areas via the WMF-676 material transfer system. The drums of waste are punctured within a
11 glovebox environment and then compacted by a hydraulic press that controls the shape of the resultant
12 supercompacted puck through the use of a mold. The volume reduction for each drum is dependent on
13 the drum contents and packing fraction, but is expected to average about 80 percent (%).*

14 ***Special Case Waste (SCW) Glovebox System.** SCW includes waste that may require additional
15 characterization and/or pretreatment (e.g., decanting, neutralization, absorption) prior to processing or
16 final treatment prior to disposal. Some examples of SCW that may be managed in the WMF-676 SCW
17 glovebox system are listed below:*

- 18 • *Containers of liquids and pressurized containers removed from the original waste*
19 *containers;*
- 20 • *Small inner containers (i.e., container removed from another container) of solidified*
21 *inorganics (SI) or solidified organics (SO);*
- 22 • *Free liquids removed from the original waste containers and containerized prior to*
23 *treatment;*
- 24 • *Residual liquids accumulated in the waste sort troughs in WMF-676 treatment areas (e.g.,*
25 *box line waste sort troughs, sumps, etc.) that are removed and containerized prior to*
26 *treatment;*
- 27 • *Elemental mercury, in the form of containerized liquid, free liquid, or residual liquid; and*
28 • *Waste streams that warrant further evaluation prior to treatment.*

29 **TSA IS Units Description**

30 The TSA-RE is an existing engineered metal building encompassing approximately 313,000
31 square feet (ft²) that encloses the TSA IS Units and WMF-636 Pad 2. ~~Each of the~~The TSA-1/TSA-R IS
32 asphalt pads ~~is~~are made up of a number of storage cells. See Exhibit B-3-2 for the location of the TSA

1 ~~ISTSA-1/TSA-R asphalt pads in reference to the floor plan of the TSA-RE. Over 100,000 containers are~~
2 ~~stored on these asphalt pads; it is estimated that approximately 90 percent (%) of these containers are~~
3 ~~drums. The majority of the waste stacks are covered with wood, plastic or polyvinyl sheeting, and soil.~~

4 **TSA-1/TSA-R Storage Pads**

5 TSA-1 was the first pad constructed at the TSA. Initially, the pad was 150-feet (ft) wide by
6 400-ft long and surfaced with an asphalt pad. The length of TSA-1 was extended to approximately 730 ft
7 in 1972. The pad is divided into cells of varying lengths separated by soil firewalls. The first waste was
8 placed onto TSA-1 in November 1970, and the last waste was received for storage at TSA-1 in October
9 1975.

10 TSA-R was built in December 1976 to provide storage of waste that was removed from earthen
11 covered storage at the RWMC and repackaged in drums, steel bins, or metal cargo containers. The
12 TSA-R pad is composed of an asphalt pad over a compacted base, approximately 150-ft wide by 435-ft
13 long, and is divided into three storage cells. Cell 1 is covered with wood, tarp, and soil, and Cells 2 and 3
14 are covered only with tarps. Waste was received for storage on Pad R until 1989.

15 **TSA-2 Storage Pad**

16 ~~TSA-2 is of similar construction as TSA-1; it is approximately 150 ft wide by 400 ft long with an~~
17 ~~asphalt layer over a gravel base. Each of the four cells that make up TSA-2 are paved with asphalt and~~
18 ~~isolated from the adjacent cell by a soil firewall. An air support building (ASB) was erected over the~~
19 ~~asphalt pad, on the first storage cell at the southern end of TSA-2, to permit all weather operations. After~~
20 ~~a cell was filled, the ASB was moved to the north to a new empty cell. Using this method, three storage~~
21 ~~cells (1, 1A, and 2) were filled with waste and subsequently covered with wood, tarp, and soil. In 1981,~~
22 ~~the ASB was moved to a position over Cell 3 of the TSA-2 area. Cell 3 of TSA-2 (i.e., ASB II) contained~~
23 ~~HWMA/RCRA regulated waste up until 1997 when the waste was transferred to the RWMC Waste~~
24 ~~Storage Facility (WSF). After removal of the HWMA/RCRA regulated waste, Cell 3 of TSA-2 was used~~
25 ~~for storage of vehicles and equipment until its closure in 1999.~~

26 **TSA-RE Retrieval Modification Facility**

27 ~~The TSA-RE RMF has IS for container storage, but has not yet been constructed. The unit was~~
28 ~~planned as an area to store waste retrieved from the TSA IS Units, pending transfer to other waste~~
29 ~~management units. When containers in a portion of the TSA IS Units were removed, the area would be~~
30 ~~surveyed, sampled, and decontaminated. The structures, asphalt pads, and contiguous underlying soils~~
31 ~~would then be checked for radiological contamination. Areas to be modified for container storage would~~
32 ~~have the asphalt pad removed, the area regraded, and a concrete floor slab installed for interior storage.~~

1 ~~Two storage areas, each 200 ft wide by 150 ft long, were initially planned. Up to six additional storage~~
2 ~~areas of similar size were to be added in the future, for a total of eight. AMWTP operational needs will~~
3 ~~determine if the TSA RE RMF will be constructed in the future.~~

- ARA = Auxiliary Reactor Area
- CFA = Central Facilities Area
- CTF = Containment Test Facility
- EBR-I = Experimental Breeder Reactor I
(Historical Monument)
- INTEC = Idaho Nuclear Technology and Engineering
Center
- IET = Initial Engine Test
- MFC = Materials & Fuels Complex
- NRF = Naval Reactors Facility
- PBF = Power Burst Facility
- RTC = Reactor Technologies Complex
- RWMC = Radioactive Waste Management Complex
- TAN = Test Area North
- TSF = Technical Support Facility
- WRRTF = Water Reactor Research Test Facility

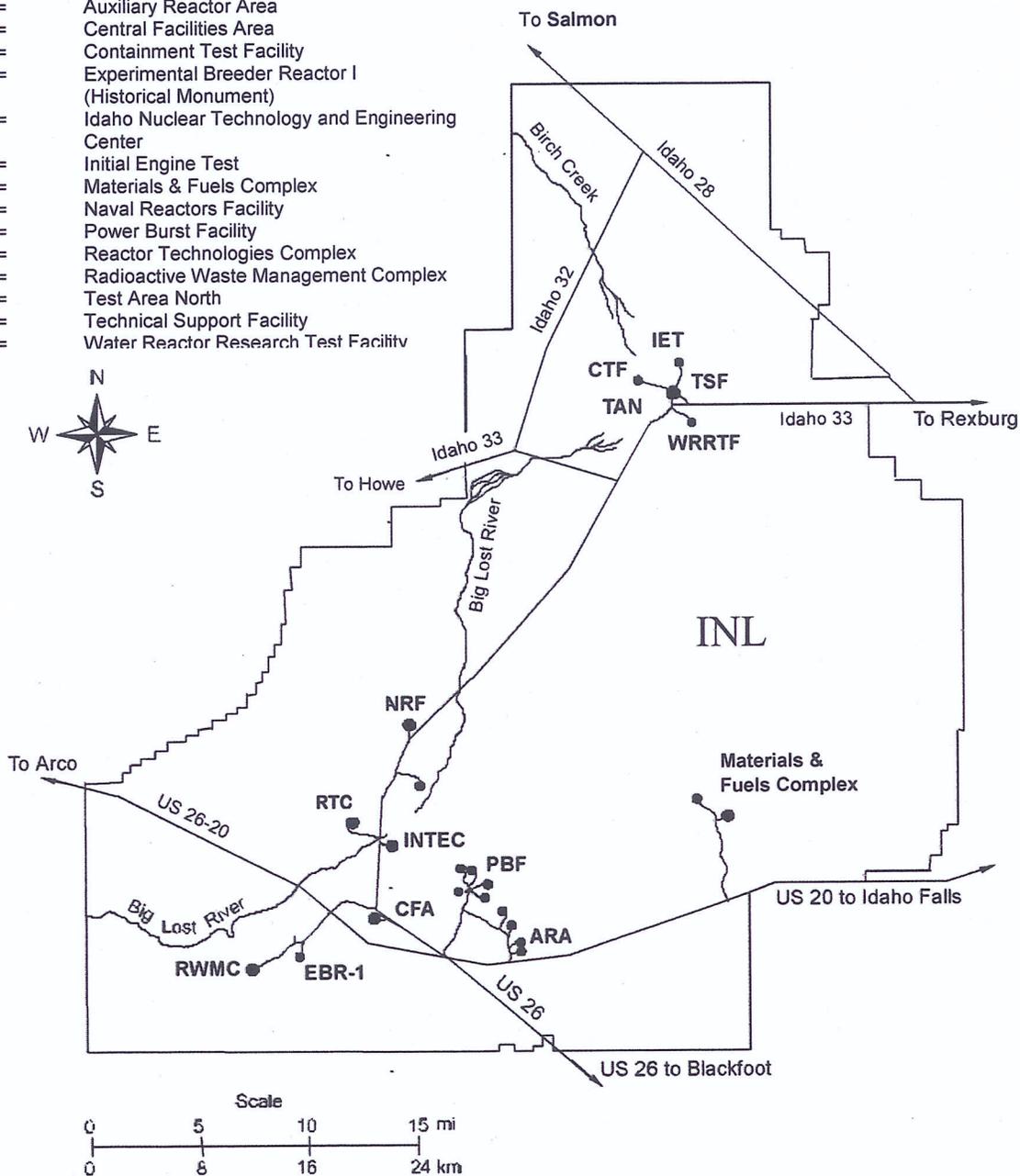
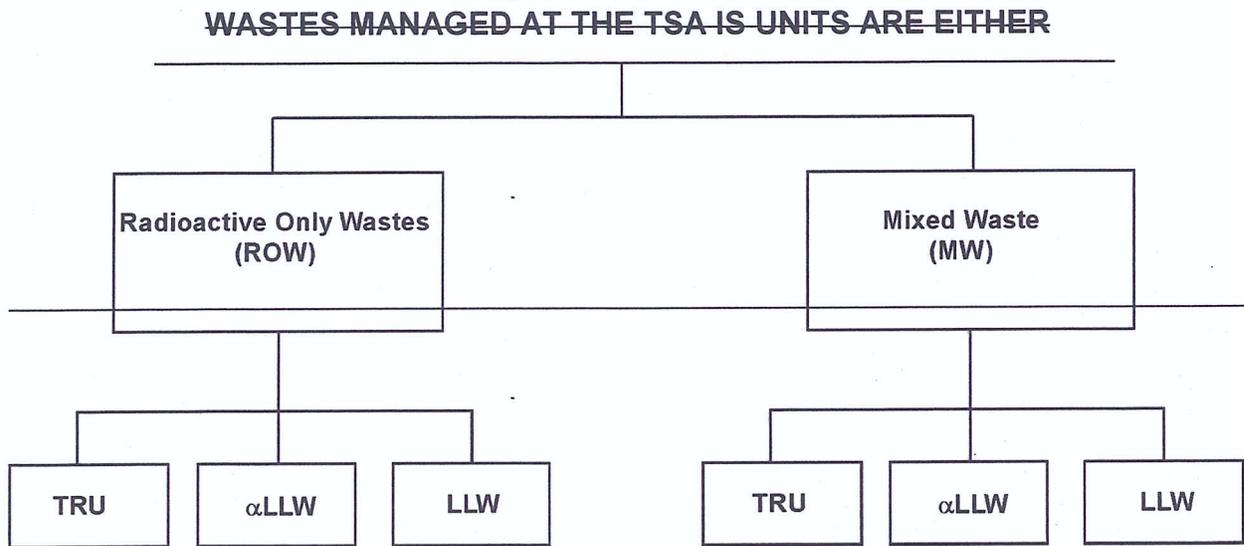


Exhibit B-1. Map of INL Showing Major Area Locations



~~ROW~~ Radioactive only wastes are wastes that are not HWMA/RCRA regulated as defined by IDAPA 58.01.05.005 (40 CFR 261). ROW may also be co-mingled with TSCA regulated PCB wastes.

~~MW~~ Mixed wastes are wastes that are radiologically contaminated as defined by IDAPA 58.01.05.005 (40 CFR 261). MW may be co-mingled with TSCA regulated PCB wastes.

~~TRU~~ Transuranic wastes contain TRU nuclides that are eligible to be shipped to WIPP.

~~LLW~~ Low level wastes (LLW) contain less than 10 nanocuries per gram (nCi/g) of TRU nuclides.

~~αLLW~~ Alpha-contaminated LLW contains greater than 10 nCi/g but less than 100 nCi/g of TRU nuclides.

~~LLD~~ Lower limit of detection (LLD) waste, which includes both LLW and αLLW.

~~Exhibit B-2. TSA IS Units Waste Types~~

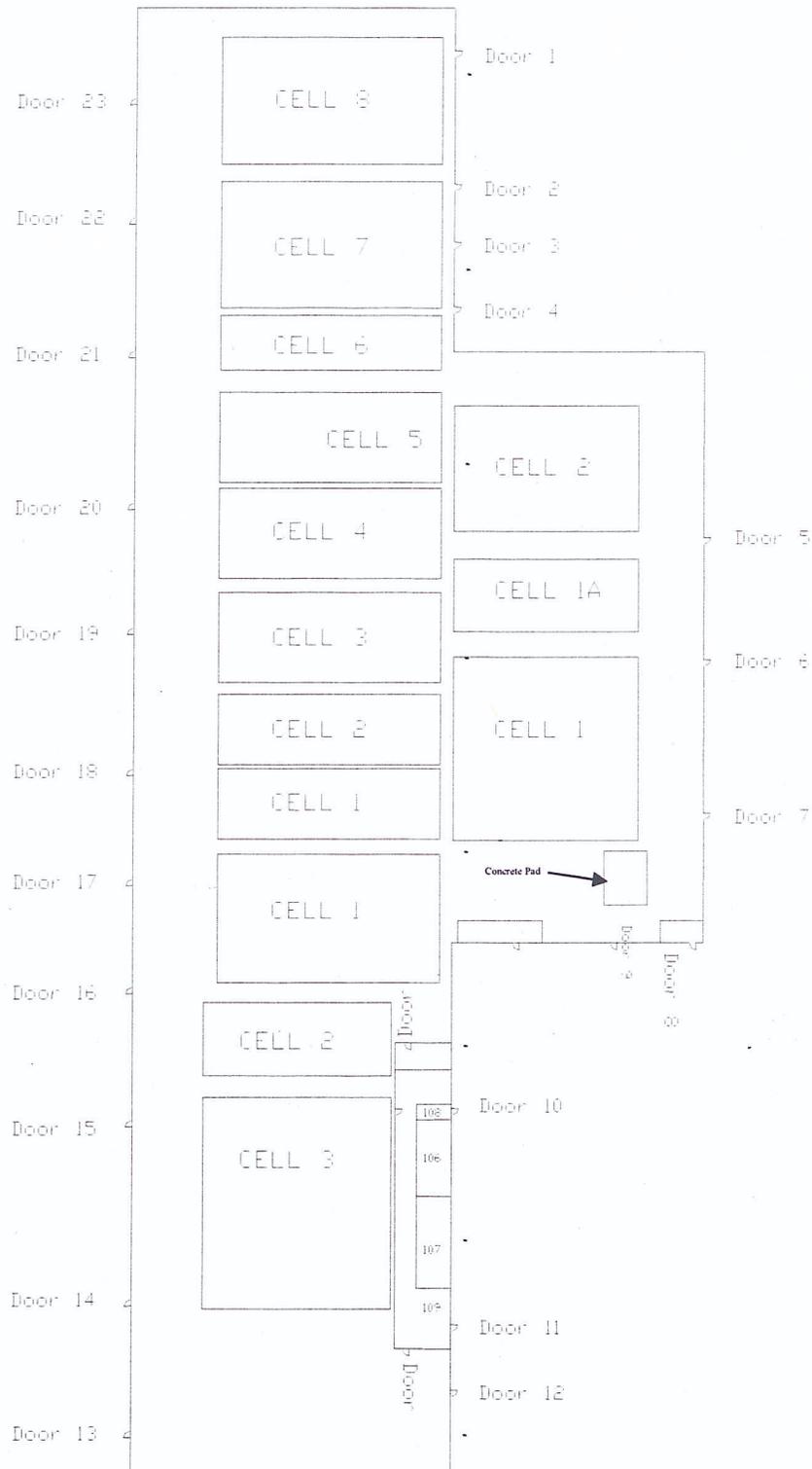


Exhibit B-32. Retrieval Enclosure Floor Plan

SECTION C

WASTE CHARACTERISTICS

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C. WASTE CHARACTERISTICS

This section describes the overall waste characteristics of the MW stored in the TSA IS Units. The bulk of the waste that is stored at the TSA IS Units is MW. The TSA IS Units ~~were~~ originally established at the RWMC to provide storage of TRU wastes. Table C-1 lists the ~~item description codes (IDCs)~~ that are stored within the TSA IS Units and their associated Environmental Protection Agency (EPA) hazardous waste numbers (HWNs). *HWNs* have been assigned based on "Advanced Mixed Waste Treatment Project Waste Stream Designations," AMWTP-5232-RPT-TRUW-12, (RPT-TRUW-12). The individual IDCs have been grouped into seven debris *waste groups (WGs)* and four non-debris WGs. The debris WGs are lead/cadmium metal (LCM), uncategorized metal (UM), inorganic nonmetallic waste (INM), graphite (G), filters (F), combustible waste (CW), and heterogeneous debris (HD). The non-debris WGs are ~~solidified inorganic (SI), solidified organic (SO),~~ salt waste (SW), and soils.

General WAC

Only MW with HWNs listed in the TSA IS Units Part A Permit Application is accepted for storage in the TSA IS Units. Waste accepted for storage at the TSA IS Units must meet the following WAC:

- Containers must be numbered or coded for tracking purposes with a unique barcode identifier linked to the appropriate IDC and container-specific information maintained within with the Operating Record, to the extent known.
- Waste must not contain known:
 - Explosive or pyrophoric material, except for pyrophoric forms of radionuclides,
 - Department of Transportation (DOT) Class 1 explosives, or
 - Reactive metals or forbidden materials per 49 CFR 173.21.
- Containers with known TSCA-regulated waste (regulated under 40 CFR 761) must be identified and marked appropriately.
- The process knowledge, to the extent known, regarding the waste stream is documented in the operating record.
- For each container received at the TSA IS Units, the following information is included in the Operating Record:
 - An IDC (may be 000 for unknown wastes, 00A for unknown sludge or other non-debris waste, or 00B for unknown debris waste),
 - Known HWNs (may be designated as undetermined), and
 - Known retrieval and storage history.

Table C-1. Waste Stored at the TSA IS Units ^{a,b,c,d,e,f,g,h}

Generator	IDC	Description	EPA HWNs	55-gal Drums	83-gal Drums	Boxes	Bins	WG ^{ce}
ANL-E	100	General Plant Waste	D001, F003			1	312401	HD
ANL-E	101	Cut Up Gloveboxes	D008				56	HD
ANL-E	102	Absorbed Liquids	D001, F003				11	SI
ANL-E	104	Alpha Hot Cell Waste	ROW				1	HD
Battelle	201	Noncombustible Solids	D008 D005-D009, D011, F001, F002, F005	42			127	HD
Battelle	202	Combustible Solids, Paper, Cloth	<i>None Identified</i> D005-D009, D011, F001, F002, F005				25	HD
Battelle	203	Paper, Cloth, Metals, Glass	<i>None Identified</i> D005-D009, D011, F001, F002, F005	26			14	HD
Battelle	204	Solidified Solutions	<i>None Identified</i> D005-D009, D011, F001, F002, F005	5				SI
Bettis	010	Combustibles (Rags, Gloves, Poly)	F002	763744	52			CW
Bettis	020	Noncompressible, Noncombustible ^f	D002, F002	794				HD
Bettis	030	Solidified Grinding Sludge, etc.	F002	38				SI
Bettis	040	Solid Binary Scrap Powder, etc.	<i>None Identified</i> ROW (lead for shielding only)	23	11			NoneUNK
INL	155	TRU Scrap	<i>None Identified</i> ROW (lead for shielding only)	5		1		HD
INL	156	Chem Cell Rip-Out	None Identified			9		HD
Mound	824	Equipment Boxes, Noncombustible	D005-D011, D022, D029, F001, F002, F005, F007, F009			259180		HD
Mound	838	<10 nCi/g Noncombustible	None Identified	1				HD
Mound	842	Contaminated Soil ^g	D002, D006-D011			3525		S
Mound	848	LSA <100 nCi/g Noncombustible	D001, D002, D005 D004-D011, D022, D029, F001, F002, F005, F007, F009	29				HD
RFETS	002	Second Stage Sludge	D002, D004-D011, D022, F001-F003, F005-F007, F009	1	1			SI
RFETS	003	Organic Setups, Oil Solids	D005, D011, D022, D029 D026-D030, D032, D034, D036, D037, F001-F003, F005	2307323 1				SO
RFETS	004	Special Setups (Cement)	D001, D006-D008, D011, D022 D029, F001-F003, F002, F005-F007, F009	1		1		SI
RFETS	005	Evaporated Salts	D001	2322				SW
RFETS	090	Dirt	F001-F004	304305				S
RFETS	095	Sludge	None Identified	42	2			SI
RFETS	290	Sludge, Filter ^g	D002, D006, D008, F001-F003	5				SI
RFETS	300	Graphite Molds	D008, D029, D040 , F001, F002, F005	667	4137			G
RFETS	301	Graphite Cores	D008, D029, D040 , F001, F002, F005	184				G
RFETS	302	Benelex and Plexiglas	D005, D008, F001			91		CW
RFETS	310	Graphite Scarfings	ROW D008, D029, F001, F002, F005	3015				G
RFETS	330	Paper and Rags-Dry	D006-D009, D004-D011, D022, D028, D029, F001-F003, F005-F007, F009	3414422 8	155157	8421220		CW

Generator	IDC	Description	EPA HWNs	55-gal Drums	83-gal Drums	Boxes	Bins	WG ^{cef}
RFETS	336	Paper and Rags-Moist ^{fe}	D001, D002, D006-D009, D004-D011, D022, D028, D029, F001-F003, F005-F007, F009	6958743 7	203209	1		CW
RFETS	337	Plastic, Teflon, Wash, PVC	D006-D009, D004-D011, D022, D029, F001-F003, F005-F007, F009	898341	5956	21		CW
RFETS	338	Insulation and CWS Filter Media	D001, D005, D007, D009, D004-D011, D022, D028, D029, F001, F002, F005-F007, F009			5935		F
RFETS	360	Insulation	D005, D007, D009, D004-D011, D022, D028, D029, F001, F002, F005-F007, F009	474421	11	4		F
RFETS	370	Crucible, LECO	ROW None Identified	131				INM
RFETS	371	Brick, Fire	D004-D011, D022, D028, D029, F001-F003, F005	1277445 4	409	2826		INM
RFETS	374	Blacktop, Concrete, Dirt, & Sand	D004-D011, D018, F001, F003, F005-F007, F009			4913		S&HD ^h
RFETS	376	Cemented Insulation and Filter Media	D005, D007, D009, D004-D011, D022, D028, D029, F001-F003, F002, F005-F007, F009			1		F
RFETS	392	Sand, Slag, and Crucibles	ROW None Identified	11	4			INM
RFETS	420	Ash, Incinerator (Virgin)	D004-D011, D029, F001-F003, F005	4				SI
RFETS	430	Resin, Ion Column - Unleached	D001, D022, D028, D029	4336	42			CW
RFETS	431	Resin, Leached	ROW D022, D028, D029	12				CW
RFETS	440	Glass ^{fe}	D001, D002, D005, D008, D009, D022, D028, D029, F001, F002, F005	1	7748	3		INM
RFETS	463	Leaded Rubber Gloves and Aprons	D008, D022, D028, D029, F001, F002, F005-F007, F009		45			CW
RFETS	480	Metal, Scrap (Nonspecial Source)	D001, D006-D009, D004-D011, D022, D028, D029, F001-F003, F005-F007, F009	3	423113	2208285 6		LCM
RFETS	481	Metal, Leached (Nonspecial Source)	D006-D009, D004-D011, D022, D028, D029, F001-F003, F005-F007, F009			2014		LCM
RFETS	490	Filters, CWS	D001, D005, D007, D009, D004-D011, D022, D028, D029, F001-F003, F002, F005-F007, F009		7	441189		F
RFETS	900	LSA Paper, Plastic, etc.	D004-D011, D029, F001-F003, F005	746741		65		CW
RFETS	950	LSA Metal, Glass, etc.	D004-D011, F001, F002, F005	390286		40307		LCM
RFETS	960	Concrete, Asphalt, etc.	D004-D011, F001, F002, F005	9234097	2024	156494		HD
RFETS	970	Wood	D008, F001-F003, F005			7054		CW
RFETS	976	Bldg. 776 Process Sludge	D006-D009, D022, F001-F003			2019		SI
RFETS	980	Equipment (May Contain Sludge)	D008, F001, F002	2				UNK
RFETS	990	Dirt	F001-F004	713694	7			S
RFETS	995	Sludge	ROW None Identified	362		14		SI
Various	000 ^{lv}	Not Recorded	Unidentified	8026420 3	2671234 2	830	1847	UNK

ANL-E = Argonne National Laboratory - East

<i>nCi/g</i>	= nanocuries per gram
RFETS	= Rocky Flats Environmental Technology Site
S	= Soil
UNK	= Unknown

- a. The number and type of containers listed in this table are based on data as of ~~October 01, 2006~~ December 31, 2007.
- b. Only two of the IDCs are currently identified as TSCA-regulated waste in RPT-TRUW-12: RFETS 003 and Battelle 203.
- c. *Based upon additional characterization information obtained, the WG may change.*
- e-d. The number of containers may change, based upon actual waste retrieved.
- e. *The WG may be determined from RTR results.*
- f. *Potential corrosives if liquids exceed 1%.*
- g. *Blanks in the table indicate zero containers present in the inventory.*
- h. *This table is included in this document for information only. Changes required to the table are administrative in nature and are not subject to the requirements of IDAPA 58.01.05.012 (40 CFR 270.42). This table will be updated once each calendar year.*
- ~~d. Blanks in the table indicate zero containers present in the inventory.~~
- ~~e. Based upon additional characterization information obtained, the WG may change.~~
- ~~f. The WG may be determined from RTR results.~~
- ~~g. Potential corrosives if liquids exceed 1%.~~
- h.i. RFETS 374, Blacktop, Concrete, Dirt, and Sand, has two WGs that can be assigned to drums, based on the majority of the waste in the container [$>50\%$ dirt or sand is Soil, $> 50\%$ debris (concrete, blacktop, metal, combustibles, plastics, gloves, etc.) is HD].
- ij. Following RTR, drums with the 000 IDC are typically assigned the 00A or 00B IDC for unknown sludge/~~non-debris or other non-debris waste~~ and unknown debris, respectively.

1 **C-1 Chemical and Physical Analyses [IDAPA 58.01.05.009; 40 CFR 265.13(a)]**

2 This section provides data on chemical and physical characteristics of waste stored in the TSA IS
3 Units. The AMWTP waste characterization program extensively uses generator-supplied process
4 information. Verification of generator-supplied data for existing waste stored at the TSA IS Units has
5 been an ongoing activity since 1980. Activities previously conducted for waste verification included:

- 6 1. Visits to generator sites, completion of questionnaires, review of generator records, and
7 generator personnel interviews to confirm potential hazards associated with the wastes;
- 8 2. Waste sampling and gas generation studies of waste to verify compliance with the WIPP
9 WAC;
- 10 3. Detailed characterization using information obtained from waste shipment records, and
11 observing waste-generating processes to verify for each IDC: the waste form, the generation
12 source of the waste, waste packaging and handling practices, waste container preparation,
13 assay methods, and waste constituents;
- 14 4. Examination of more than 17,000 containers via RTR; and
- 15 5. Return of more than 260 containers to the Rocky Flats Environmental Technology Site
16 (RFETS), formerly the Rocky Flats Plant, to be reopened and visually examined for free
17 liquids (presence and volume), sludges, particulate quantities, presence of pyrophoric, toxic,
18 or corrosive materials, correspondence of contents with previous documentation, and physical
19 description of the waste form.

20 The results from these studies are documented and serve as the basis for the HWNs assigned in
21 RPT-TRUW-12. The majority of the waste presently stored at the TSA IS Units was generated off-Site at
22 other Department of Energy (DOE) operated facilities. Most of the waste has been received from the
23 RFETS in Colorado. Other sources of waste include the Mound Facility in Ohio, the Argonne National
24 Laboratory-East (ANL-E) in Illinois, the Battelle Columbus Laboratory in Ohio, and the Bettis Atomic
25 Power Laboratory in Pennsylvania, while a portion of the waste was generated on-Site at INL facilities.

26 Descriptions of containers used for storing waste at the TSA IS Units are provided in
27 Section D-1a(1). Except for some overpacking and repackaging of retrieved containers that are damaged
28 and for containerizing contaminated soil/wood/plastic/tarps from retrieval operations, waste is primarily
29 packaged by non-AMWTP generators. Characterization of the physical forms and chemical compositions
30 of wastes are further detailed in Sections C-2 and C-3.

1 The following sections summarize the characterization strategy for existing waste. Section C-1a
2 focuses on the characterization of the MW. Section C-2 presents the specifics of the planned waste
3 characterization activities. Additional analyses pertaining to Land Disposal Restrictions (LDR) for final
4 waste forms are discussed in Section C-3.

5 The sampling and analysis frequencies specified below and in Sections C-2 and C-3 are the
6 frequencies that are implemented when operations first begin. These initial frequencies are statistically
7 re-evaluated to determine whether the sampling frequencies need to be increased or decreased. The
8 statistical method for determining the analytical frequency is done in accordance with the WAC of the
9 facility that will be accepting the waste for final disposal.

10 **C-1a Containerized Wastes [IDAPA 58.01.05.009; 40 CFR 265, Subpart I]**

11 Table C-1 lists the waste that is expected to be retrieved from the TSA IS Units by WG, generator
12 name, and IDC. The HWNs shown for each IDC have been assigned based on a combination of process
13 knowledge gathered from waste generators, waste-generator supplied data, and results of waste sampling
14 and analysis. These data sources and the basis for assigning the HWNs are described in RPT-TRUW-12.
15 See ~~Appendix X~~ of the AMWTP HWMA/RCRA ~~Storage~~ Permit for additional information.

16 Retrieved waste is characterized using process knowledge, where available, non-intrusive
17 techniques, and/or sampling and analysis. Further information on characterization activities is available
18 in Attachment 2 of the AMWTP HWMA/RCRA ~~Storage~~ Permit. All determinations involved in
19 assigning WGs, IDCs, and/or HWNs are documented in the Operating Record, typically via the Data
20 Management System (DMS).

1 **C-2 Waste Analysis Plan [IDAPA 58.01.05.009; 40 CFR 265.13(b) and (c)]**

2 This waste analysis plan (WAP) describes the methods for conducting characterization of the
3 TSA IS Units waste. The characterization of secondary waste generated during retrieval and other
4 operations conducted in the TSA IS Units is conducted in accordance with this WAP. The objectives of
5 this WAP are to:

- 6 • Ensure that sufficient information is available for safe and compliant handling, storage,
7 treatment, and disposition of wastes and residues;
- 8 • Establish uniform and comparable waste characterization requirements;
- 9 • Generate information regarding the waste (from waste characterization, process knowledge,
10 and waste profiles) in the Operating Record for all wastes stored at the AMWTP MWMUs;
- 11 • Ensure AMWTP-generated wastes are characterized in accordance with regulatory
12 requirements; and
- 13 • Ensure that waste is characterized to meet the disposal waste management unit's WAP.

14 **C-2a Parameters and Rationale [IDAPA 58.01.05.009; 40 CFR 265.13(b)(1)]**

15 Table C-2 summarizes the general parameters evaluated for the AMWTP secondary waste and
16 the rationale for their selection. The general parameters in Table C-2 are selected to ensure that adequate
17 characterization is available to satisfy the requirements of HWMA/RCRA. Waste information is updated
18 based upon waste characterization analysis performed.

19 The primary method used to characterize waste from the TSA IS Units is process knowledge,
20 which serves as the basis for the HWNs assigned to IDCs. Materials used in the waste stacks (e.g.,
21 plywood and tarps) are characterized utilizing process knowledge of the surrounding waste. If process
22 knowledge is not acceptable, then sampling and analysis may be performed. MW generated from normal
23 operations, leaks or spills, and/or closure processes are characterized by the methods described in this
24 section. Leaks and spills are characterized utilizing process knowledge based upon the source of the leak
25 or spill. For example, the same HWNs that are assigned to the source of the leak or spill are assigned to
26 the waste generated during the clean up activities, as applicable. In the event that the source is unknown,
27 or the HWNs are not known for the source, sampling and analysis may be used. All determinations
28 involved in assigning IDCs, WGs, and/or HWNs are documented in the Operating Record, typically via
29 the DMS.

1 **C-2b Test Methods [IDAPA 58.01.05.009; 40 CFR 265.13(b)(2)]**

2 Table C-3 summarizes the minimum characterization parameters, sampling methods, and
3 frequencies used for stored waste and secondary waste. Table C-4 summarizes the
4 characterization/analytical methods that may be used to analyze the secondary waste. These analyses are
5 performed in accordance with the methods specified in the EPA manual "Test Methods for Evaluating
6 Solid Waste: Physical/Chemical Methods," current edition (SW-846), American Society for Testing and
7 Materials (ASTM) analytical methods, or other EPA-approved methods. Typically, the analyses are
8 performed at a contracted analytical laboratory.

9 **C-2c Sampling Methods [IDAPA 58.01.05.005 and 58.01.05.009; 40 CFR**
10 **Part 261, Appendix I and 265.13(b)(3)]**

11 As described earlier, waste generated from normal operations and/or closure processes [e.g.,
12 personal protective equipment (PPE), floor sweepings, rags/wipes from routine
13 maintenance/decontamination activities, and equipment] is normally characterized based on the process
14 knowledge of the original waste that comes into contact with the generated waste (see Table C-3). When
15 this is not possible, the waste may be physically sampled (see Table C-5 for sampling equipment and
16 strategies) and analyzed.

17 Contaminated disposable sampling equipment is managed in the same manner as the waste
18 sampled. Reusable equipment is thoroughly decontaminated prior to reuse. Waste generated from
19 decontamination activities is managed appropriately depending on either process knowledge,
20 characterization, or the contaminant levels identified through the sampling and analysis.

21 **C-2d Frequency of Analysis [IDAPA 58.01.05.009; 40 CFR 265.13(b)(4)]**

22 The expected frequency of analysis is included in Table C-3. The frequencies listed are those
23 established when operation begins. However, these frequencies may be adjusted up or down, based upon
24 operational experience and the consistency of analytical results, as required to maintain operational
25 efficiencies. A statistical evaluation for determining the frequency of analysis is done in accordance with
26 the WAC of the facility that will be accepting the waste for final disposal. New waste characterization
27 data or more frequent analyses are required when:

- 28 • A new waste stream is generated by AMWTP operations, or
- 29 • Analytical data show that a waste stream that was expected to have a consistent composition
30 is actually highly variable.

1 The statistical method for re-determining analytical frequencies for waste is based upon methods
2 described in SW-846, Volume II, Chapter 9.

3 **C-2e Additional Requirements for Waste Generated Off-Site [IDAPA**
4 **58.01.05.009; 40 CFR 265.13(c)]**

5 Waste generated off-Site is not received at the TSA IS Units; therefore, this section is not
6 applicable. Any waste received by the AMWTP from off-Site is received at the WSP or WMF 610 ~~perin~~
7 *accordance with* Attachment 2 of the AMWTP HWMA/RCRA ~~Storage~~ Permit.

8 **C-2f Additional Requirements for Ignitable, Reactive, or Incompatible Wastes**
9 **[IDAPA 58.01.05.009; 40 CFR 265.13(b)(6) and 265.17]**

10 No waste in the existing TSA inventory is assigned HWN D003 by RPT-TRUW-12.
11 Historically, IDCs RFETS-480 and -481 were the only wastes for which small amounts of pyrophoric,
12 unoxidized plutonium were identified as potential problems. Further examination of the documented
13 process knowledge (Report No. WM-F1-82-021, "Content Code Assessments for INEL Contact-Handled
14 Stored Transuranic Wastes") revealed that this was a concern only for RFETS-481. However, the
15 referenced report states that any pyrophoric plutonium fines present in the waste were washed off the
16 metal debris prior to packaging. Thus, no wastes are currently identified as containing pyrophoric
17 radionuclides. Any IDCs that are determined to contain pyrophoric radionuclides are addressed under the
18 Atomic Energy Act (AEA) and procedures for their management are implemented. However, any such
19 wastes are not designated as HWN D003 reactive wastes since the pyrophoric/reactive characteristic is
20 associated strictly with the AEA-regulated portion of the waste.

21 A waste compatibility evaluation was performed for the AMWTP using the EPA guidance
22 manual "A Method for Determining the Compatibility of Hazardous Wastes," EPA-600/2-80-076, April
23 1980. The methodology involves classifying IDCs into 41 reactivity group numbers (RGNs) and then,
24 using a chemical compatibility chart, determining the compatibility of each potential binary combination
25 of reactivity groups. The compatibility evaluation covered the waste IDCs identified in RPT-TRUW-12,
26 and the results are presented in "Chemical Compatibility Evaluation of ~~Transuranic~~ Wastes for the
27 AMWTP," AMWTP-5232-RPT-ESH-014 (RPT-ESH-14). RPT-ESH-014 is maintained in the Operating
28 Record and updated as new characterization information becomes available, as required. This evaluation
29 determines the incompatibilities for the storage and treatment (e.g., co-mingling) of the waste IDCs
30 identified in RPT-TRUW-12.

1 Extensive waste data have been developed for each IDC documenting the existing
2 characterization information and the results of the compatibility evaluations. As the waste
3 characterization efforts progress, the compatibility evaluations are updated and the wastes are
4 re-categorized into the 41 RGNs to identify any new incompatible binary combinations. If additional
5 incompatibilities are identified or data validation/waste characterization eliminates potential
6 incompatibilities, additional precautions may be implemented or certain practices may be relaxed, as
7 warranted.

Table C-2. Summary of General Parameters for Wastes and the Rationale for Selection

Waste Parameter(s)	Media Type	Rationale for Selection
IDC/WG	Debris and non-debris	Determine if HWNs can be assigned based on RPT-TRUW-12.
HWNs and hazardous constituents	Debris and non-debris	Verify HWNs are included in the TSA IS Units Part A Permit Application.
Reactivity, ignitability, and compatibility evaluations	Debris and non-debris	Identify potential reactivity and health and safety precautions prior to retrieval/storage.

Table C-3. Minimum Characterization Parameters for Newly-Generated Waste

Waste Stream	Sampling Method	Sampling Frequency	Analytes and Analytical Methods
Used PPE, rags, decon debris, etc.	NA	NA	PK – cleanup debris characterization and treatment identical to waste being handled; PCB-contaminated rags are managed per TSCA regulations.
Wood and tarps	NA	NA	PK – characterization identical to waste being handled.
Leaks and spills	NA	NA	PK – characterization identical to waste being handled.
Sample Residues	NA	NA	PK – characterization identical to waste being handled.
Contracted analytical lab absorbed liquid residues	NA	NA	PK – characterization prior to direct ship, identical to waste being handled.

Note: Sampling and analysis may be used if PK is not available and/or adequate.

NA = not applicable

PK = process knowledge

Table C-4. Potential Waste Characterization Methods

Parameters	Analyte	Characterization/Analytical Method ^{a,b}
IDC/WG	NA	PK; RTR/VE
HWNs	NA	PK; headspace gas sampling; and/or drum core sampling
HWMA/RCRA listed wastes, waste constituents, composition	Volatile organics	PK; 8015, 8021, 8260
	Semi-volatile organics	PK; 8100, 8270, 8275, 8410
	Metals	PK; 6010, 7060/7061, 7080/7081, 7130/7131, 7190/7191, 7195/7196/7197/7198, 7420/7421, 7470/7471, 7740/7741, 7760/7761, 7840/7841
Toxicity characteristic constituents (TCLP may be used for final waste form LDR status determinations)	TCLP metals	PK; TCLP 1311 and:
	-Arsenic	PK; 6010, 7060/7061
	-Barium	PK; 6010, 7080
	-Cadmium	PK; 6010, 7130/7131
	-Chromium	PK; 6010, 7190/7191, 7195/7196/7197/7198
	-Lead	PK; 6010, 7420/7421
	-Mercury	PK; 6010, 7470/7471
	-Selenium	PK; 6010, 7740/7741
	-Silver	PK; 6010, 7760/7761
Other parameters	TCLP organics	PK; 1311 (solids only), 8260, 8270
	Free liquids	PK; RTR/VE
	Cyanide, total & amenable	PK; 9010/9012
	Thallium	PK; 6010, 7840/7841
	Antimony	PK; 6010, 7040/7041
	Beryllium	PK; 6010, 7090/7091
	Nickel	PK; 6010, 7520/7521
	Vanadium	PK; 6010, 7910/7911
Zinc	PK; 6010, 7950/7951	
Debris/non-debris	Physical Matrix	PK; RTR/VE
Compatibility ^c	Compatibility	PK; waste characterization results, compatibility evaluations; ASTM D5058-90 Test Method A
Ignitability	Ignitability	RTR/VE; PK; 1010, 1020, 1030; ASTM D93, D3828
Corrosivity	Corrosivity	RTR/VE; PK; 9040, 9041

- Methods are from SW-846 unless otherwise stated. In addition to the methods specified, other EPA-approved methods may be used to obtain the desired analytical information. Instances where alternative analytical methods are used are documented in the Operating Record.
- For further information on the specified characterization/analytical method, refer to Attachment 2 of the AMWTP HWMA/RCRA Storage-Permit.
- Compatibility determinations are made by a combination of process knowledge; analysis; compatibility evaluations per "A Method for Determining the Compatibility of Hazardous Wastes" (EPA-600/2-80-076), compatibility groupings in 40 CFR 265, Appendix VI, compatibility by hazard class in accordance with DOT; and/or waste-to-waste compatibility testing.

NA = not applicable
 PK = process knowledge
 VE = visual examination
 TCLP = toxicity characteristic leaching procedure

Table C-5. Methods and Strategies for Sampling Debris/Secondary Waste

Waste Composition	Sampling Equipment	Sampling Strategies
Soils and interstitial media	Shredder, scissors, shears, scoop, spoon Rotating coring device	Shredding, cutting, or size-reducing an appropriately-sized sample. Size-reduced composite sample, where applicable.
Plastic bags, PPE	Shredder, scissors, shears, scoop, spoon	Shredding, cutting, or size-reducing an appropriately-sized sample (size-reduced composite sample, where applicable).
Wood and tarps	Shredder, scissors, shears, scoop, spoon Rotating coring device	Shredding, cutting, or size-reducing an appropriately-sized sample. Size-reduced composite sample, where applicable.
Paper, cloth	Shredder, scissors, shears, scoop, spoon	Shredding, cutting, or size-reducing an appropriately-sized sample (size-reduced composite sample, where applicable).
Drums, cans, furniture, motors/pumps, construction hardware (nails, screws, etc.)	Drill, rotating coring device, surface swipes, grab sample	Size-reduced composite sample, grab sample, or swipe analysis.

1 **C-3 Waste Analysis Requirements Pertaining to Land Disposal Restrictions**
2 **[IDAPA 58.01.05.009 and 58.01.05.011; 40 CFR 265.13 and 268.7]**

3 MW managed at the TSA IS Units that is destined for disposal at waste management units other
4 than the WIPP is assumed to be restricted waste subject to LDR requirements. Information presented in
5 this section describes how the AMWTP characterizes, documents, and certifies LDR subject wastes.

6 In cases where the AMWTP determines that an LDR waste does not meet the applicable
7 treatment standards set forth in IDAPA 58.01.05.011 (40 CFR 268, Subpart D), or exceeds the applicable
8 prohibition levels set forth in IDAPA 58.01.05.011 (40 CFR 268, Subpart C), the AMWTP provides a
9 one-time written notice with the initial shipment. The following information is included with the initial
10 waste shipment:

- 11 • HWNs and shipping information;
- 12 • Notification that the waste is subject to LDRs and listing the constituents of concern for
13 HWNs F001-F005, and F039, and underlying hazardous constituents (UHCs), unless the
14 waste is treated and monitored for all constituents. If all constituents are treated and
15 monitored, there is no requirement to list those constituents on the LDR notice;
- 16 • The notice must include the applicable wastewater/non-wastewater category {see IDAPA
17 58.01.05.011 [40 CFR 268.2(d) and (f)]} and subdivisions made within a HWN based on
18 waste-specific criteria (such as HWN D003 reactive cyanide);
- 19 • Waste analysis data when available;
- 20 • Notification for hazardous debris, indicating that the hazardous contaminants are being
21 treated to comply with 268.45; and
- 22 • For contaminated soil subject to LDRs as provided in 268.49(a), the constituents subject to
23 treatment as described in 268.49(d), and the following statement:

24 “This contaminated soil [does/does not] contain listed hazardous waste and [does/does
25 not] exhibit a characteristic of hazardous waste and [is subject to/complies with] soil
26 treatment standards as provided by 268.49(c) or the universal treatment standards.”

27 Copies of all LDR-required notices are retained as part of the Operating Record per IDAPA
28 58.01.05.009 (40 CFR 265.73).

1 **C-3a Waste Characterization [IDAPA 58.01.05.009 and 58.01.05.011; 40 CFR**
2 **265.13 and 268.7]**

3 For the characterization of secondary wastes generated at the TSA IS Units, existing process
4 knowledge/waste characterization information supplemented by waste verification and analysis
5 information are used to make LDR determinations. The supporting data used to make LDR
6 determinations are maintained in the Operating Record, as described earlier.

7 **C-3b Sampling and Analytical Procedures [IDAPA 58.01.05.009 and**
8 **58.01.05.011; 40 CFR 265.13(b)(2) and (3), and 268.7]**

9 LDR waste forms generated by the AMWTP are sampled and analyzed (Tables C-4 and C-5)
10 using only EPA-approved methods, as stated in Sections C-2b and C-2c

11 **C-3c Frequency of Analysis [IDAPA 58.01.05.009 and 58.01.05.011; 40 CFR**
12 **265.13(b)(4) and 268.7]**

13 LDR wastes are characterized at frequencies specified in, or designed to meet, the selected waste
14 management unit's WAP. In accordance with IDAPA 58.01.05.009 (40 CFR 265.13), wastes treated at
15 the AMWTP are subjected to a full characterization whenever:

- 16 • A new waste stream is generated or received,
- 17 • A generating process changes, or
- 18 • Waste characteristics exhibit temporal variations.

19 Analytical frequencies for LDR purposes are re-evaluated in accordance with the WAC of the
20 facility that will be accepting the waste for final disposal.

SECTION D

PROCESS DESCRIPTION

(For Information Only)

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D. PROCESS DESCRIPTION

D Process Information and Building Design

Process Information

Generally, the TSA-1/TSA-R waste stack appears as a mound of soil on the north end and tarp covered containers on the south end. The soil mound is relatively flat across the top, and then slopes down. ~~The TSA-2 soil mound merges with the east side of the TSA-1 mound.~~ The waste containers on TSA-1 and TSA-2 consist primarily of 55-gallon (gal) drums and fiberglass reinforced plywood (FRP) boxes, while the waste containers on TSA-R consist primarily of 55-gal drums, metal and FRP boxes, and metal bins.

During the initial storage of waste on TSA-1, waste drums were stacked horizontally with approximately nine drums high at the centerline of the pad and to a lesser height near the east/west edges of the pad. In addition, boxes were used to outline the sides of each cell on the asphalt pad. Beginning with Cell 5, the drums were stacked vertically. These containers were stacked about 16-ft high up to a point within about 30 ft of the asphalt pad east/west edges, where the stack height was limited to about 12 ft. Typically, a sheet of wood was placed between the layers of vertical drums in order to stabilize the stacking surface and increase overall stack rigidity. As the TSA-1 pad was filled, the waste containers were covered with wood, a tarp or plastic sheeting, other miscellaneous materials, and 3 to 4 ft of soil on top with sloped side burden soils. Side burden soil was originally placed along the sides of each cell and between adjacent cells to act as a firebreak. Side burden soil averages around 16-ft thick to the top edge of the cells, although some areas have nearly vertical slopes held in place by wooden retaining walls. The soil in the area between cells is about 4-ft thick.

~~Waste stored on the TSA-2 pad was configured in a similar manner.~~ See Exhibit D-1 for an example waste stack configuration.

TSA-R Cell 1 is a unique configuration in that it contains primarily cargo containers stacked two high that are loaded with 55-gal drums. Metal bins *are* stacked two high from the perimeter of this cell. Also, Cell 1 is the only cell on TSA-R covered with wood, tarp, and soil; Cells 2 and 3 are covered only with plastic or a tarp.

Soil Removal

The retrieval process starts with the removal of overburden soil (i.e., the soil on top of the waste cells) in order to gain access to a given section of waste containers. Before removal, a portion of the soil

1 is sampled for analysis of contaminants (e.g., organics, PCBs, heavy metals, and radionuclides) and
2 surveyed for radiological contamination. The majority of the soil is expected to be uncontaminated
3 (estimated at 95% of the total volume of the overburden). Soil identified as uncontaminated is removed
4 in two phases. Initially, the bulk of the uncontaminated soil overburden is removed with equipment on
5 top of the waste stacks. The equipment is used to transport soil from the top of the waste stack and into a
6 transport vehicle. Soil is managed appropriately, depending upon soil sampling results and as directed by
7 DOE. Dust suppression within the TSA-RE is achieved by using water spray and/or a surfactant.

8 The final 6 to 12 inches (in.) of uncontaminated overburden soil, side burden soil, and interstitial
9 soil may be removed using various vacuum systems or other equipment. Occasionally, during soil
10 removal operations, contaminated soil may be encountered. Contaminated soil may be removed and
11 deposited into a container using designated soil vacuum systems or other equipment.

12 **Removal of Plastic, Tarp, Wood, and Miscellaneous Materials**

13 Once the overburden soil has been removed, the plastic, tarp, and wood may be removed. In
14 addition, miscellaneous materials (e.g., steel I-beams, wooden joists, etc.) may also be encountered which
15 require removal. Upon removal, these materials may be returned to DOE for further use, or the material
16 may be deemed to be a solid waste. At or near the dig face, miscellaneous materials, tarp, plastic, soil,
17 and/or wood deemed to be a solid waste, hereinafter referred to as retrieval generated waste (RGW), is
18 visually inspected [i.e., perform a hazardous waste determination (HWD) as described below] to
19 determine if the RGW has come into contact with MW. If visual evidence indicates that the RGW may
20 have come into contact with MW then the RGW may be partially sized, if required, at that time to remove
21 the MW portion of the waste item from the non-MW portion, prior to placing the MW portion into a
22 HWMA/RCRA compliant temporary accumulation area or a storage area.

23 **Performing a HWD on RGW**

24 A HWD is performed on all RGW managed during retrieval activities. This HWD is primarily
25 based upon visual examination for evidence of contact with released MW (e.g., staining) from the
26 containers in storage at the TSA IS Units. Additionally, a HWD, including sampling and analysis as
27 required, is conducted to verify that the waste items themselves are not inherently hazardous. All HWD
28 related documentation is maintained in the Operating Record.

29 All RGW is visually examined for evidence of staining at the point of generation, and the
30 surrounding area is inspected to determine if any released MW has come into contact with the RGW.
31 Visual evidence of staining from weathering (e.g., rainwater, condensation, etc.) or corrosion (e.g., rust)
32 of containers that appears on RGW will not be considered MW or hazardous waste (HW) unless there is

1 additional evidence to support a release. Additionally, a radiological survey is performed to determine if
2 the RGW is contaminated with radiological constituents. Areas of radiological or hazardous constituent
3 contamination may be fixed to the RGW using paint or other fixatives to prevent the spread of
4 contamination during subsequent management activities. Based upon the visual examination and
5 radiological survey results, a HWD is performed as described below:

- 6 • **Not Regulated Under HWMA/RCRA With No Radiological Contamination.** If there is
7 no visual evidence of staining, no radiological contamination is detected, and the RGW is not
8 inherently hazardous, then the RGW is not regulated as HWMA/RCRA waste, and will be
9 dispositioned appropriately.
- 10 • **Regulated Under HWMA/RCRA With No Radiological Contamination.** If visual
11 evidence of staining is found on the RGW and there is no evidence of radiological
12 contamination, then that portion of the waste item with visual evidence of staining is declared
13 as HW. At this point, the RGW may be sized to remove the HWMA/RCRA-regulated
14 portion from the unregulated portion of the waste item. Sizing of RGW may include using a
15 shredder or other mechanical means to size the waste, if required. Sized RGW is placed into
16 an appropriate container pending further disposition (e.g., storage, treatment, additional
17 sizing, etc.), and the HWMA/RCRA-regulated portion of the waste stream is assigned the
18 applicable HWNs based upon process knowledge and analytical data, as applicable. The
19 RGW that is not regulated by HWMA/RCRA is managed appropriately.
- 20 • **Regulated Under HWMA/RCRA With Radiological Contamination.** If radiological
21 contamination and visual evidence of staining is found on the RGW, then that portion
22 exhibiting evidence of staining and radiological contamination is declared MW. At this
23 point, the RGW may be sized to remove the HWMA/RCRA regulated portion from the
24 unregulated portion of the waste item. Sized MW is placed into appropriate containers
25 pending further disposition, and the applicable HWNs are assigned to the HWMA/RCRA
26 regulated portion based upon process knowledge and analytical data, as applicable. The
27 RGW that is not regulated by HWMA/RCRA is managed appropriately.
- 28 • **RGW Declared MW.** If it is impractical, from an operational perspective, to use visual
29 evidence of staining (i.e., it is difficult to determine if the staining on RGW is due to contact
30 with MW, weather, or other degradation resulting from long term storage), then the RGW
31 may be classified as MW and managed as described above, or sampling and analysis may be
32 performed to confirm whether or not the RGW is MW.

- 1 • **Not Regulated Under HWMA/RCRA With Radiological Contamination.** If there is no
2 visual evidence of staining, but radiological contamination is present, then the RGW may be
3 managed as ROW.

4 **Waste Container Handling**

5 After the soil and RGW have been removed, a portion of the waste stack is exposed. Waste
6 containers are then typically retrieved as follows:

- 7 • Survey the area around the container for radiation.
- 8 • Assess the integrity of the container. Visually inspect the container before lifting it off the
9 stack. Evaluate conditions such as corrosion of the container, stains on wood, etc. Repair or
10 overpack damaged containers as necessary.
- 11 • All external areas of a container that are suspected of being contaminated with hazardous
12 constituents may be painted in order to fix the contamination to the container. Containers
13 with large amounts of external contamination of hazardous constituents may be overpacked.
- 14 • Lift the container up a few inches to verify the integrity of the underside.
- 15 • Remove the container from the waste stack.
- 16 • Transfer the container from the dig face to the inspection station or to a retrieved waste
17 storage area (RWSA). Containers with questionable integrity are placed into an RWSA, and
18 secondary containment is provided.
- 19 • Inspect the container for identification information.
- 20 • Perform rapid assay scanning, as applicable.
- 21 • Weigh box containers (e.g., boxes, bins) and enter relevant information into the Operating
22 Record.
- 23 • Apply barcode labels and enter container identification information into the Operating
24 Record. If original labeling can be used to identify the container, query the existing database
25 to identify the radioactive and hazardous constituents in the waste container.

26 After retrieval, containers are typically loaded and transferred to the appropriate waste
27 management unit, usually the characterization facility (WMF-634).

1 **Container Integrity**

2 During retrieval activities, a visual inspection is performed to verify the integrity of a container to
3 determine if the container requires further management prior to additional handling or prior to transferring
4 the container out of the TSA-RE. Containers may require further management due to breaches or poor
5 container integrity. Based upon the outcome of the visual inspection, a number of actions may be taken.
6 The primary action is to repair the container integrity deficiencies (e.g., breaches, structural defects,
7 bulges, etc.) to the extent possible using various materials (e.g., adhesive tape, polyethylene patch with
8 glue, metallic patch with glue, wood, remote venting unit, etc.) without overpacking the container. All
9 actions taken to repair the integrity of a container are recorded in the Operating Record. If the integrity
10 of a container is such that it causes a threat of a release and this threat cannot be reduced such that
11 AMWTP personnel can safely manage the container, then the container will be overpacked or
12 repackaged.

13 **Venting of Bulged Containers**

14 As mentioned above, bulged containers may be identified during waste retrieval activities. In
15 order to minimize various potential hazards (e.g., MW release, volatile gases, etc.) associated with a
16 bulged container, a filter is required to be installed into a bulged container to control the release of the
17 gases built up within the container. To accomplish this, AMWTP personal may use a remote venting
18 system which attaches to the top of a container. Typically, the remote venting system is attached to the
19 container near the point where the container was retrieved from the waste stack. This assists in
20 minimizing the handling of the bulged container. Once the remote venting system has been attached to
21 the container, AMWTP personnel evacuate the immediate area around the bulged container at a distance
22 determined by AMWTP safety personnel. Once the area is clear, AMWTP personnel use a remote device
23 to activate the venting system, which in turn pneumatically installs a High Efficiency Particulate Air
24 (HEPA) filter made of non-sparking material into the lid of the bulged drum. The HEPA filter is
25 designed only to penetrate to the lid of the container, and not to penetrate an inner liner, if present.

26 As the venting system utilizes a pneumatic system to install the HEPA filter into the lid of bulged
27 containers and given that the lids of containers may be degraded (e.g., corroded), there is the possibility
28 that a filter could penetrate through the lid of the container and into the inner liner of a container, if
29 present. In order to mitigate this from occurring, AMWTP personnel are able to adjust the amount of
30 force that is applied when installing the HEPA filter. In the event that the HEPA filter does penetrate
31 through the lid of the container, then the container shall be overpacked. Additionally, the State of Idaho
32 Department of Environmental Quality (DEQ) shall be notified within seven (7) days of the occurrence.

1 **Breached Container and Leak/Spill Management**

2 During retrieval operations, it is expected that breached containers will be discovered on a routine
3 basis. This expectation is based upon the estimated retrieval rate (approximately 120 containers per day)
4 from the TSA IS Units, and the ~~contractual~~ assumption that approximately 1% of containers stored at the
5 TSA IS Units are breached. The number of breached containers estimated to be in the TSA IS Units is
6 based upon past retrieval activities. Given the estimated retrieval rate and assumed breached container
7 totals, it is expected that operations personnel will discover a breached container at least once a day. Due
8 to the expectation that a breached container, and any subsequent releases resulting from a breach, are
9 encountered daily, managing breached containers and any corresponding clean up activities is considered
10 a routine operation. Upon discovery of a release, routine retrieval operations within the immediate area
11 will be temporarily suspended pending investigation into the extent of the release. AMWTP personnel
12 will evaluate the parameters of the release and document all relevant information in the Operating Record.
13 Typical items that may be documented include the location of the release, estimated volume of the
14 release, correlation to container(s) involved in the release, activities performed and equipment used to
15 manage the release, etc. Additionally, any methods used to clean, decontaminate, and/or fix a release to
16 the asphalt pad of the TSA IS Units will be noted in the Operating Record. A determination will then be
17 performed to determine if the TSA IS HWMA/RCRA Contingency Plan must be implemented. Based
18 upon the extent of the release, one of six responses will be taken:

- 19 • **Release of MW to soil, which requires the implementation of the TSA IS HWMA/RCRA**
20 **Contingency Plan or notification of the DEQ.** If at any time, HWMA/RCRA-regulated
21 constituents are released to the soil located off of the outside edges of the TSA IS Units
22 asphalt pad or to the soil located under the TSA IS Units (through a crack in the asphalt pad)
23 then the TSA IS HWMA/RCRA Contingency Plan will be implemented, or the DEQ will be
24 otherwise notified of the proposed path forward, if the release is minor. The TSA IS
25 HWMA/RCRA Contingency Plan is only implemented for “new” or observed releases to the
26 soil. Historical releases to the soil do not require the implementation of the TSA IS
27 HWMA/RCRA Contingency Plan.
- 28 • **Small release to the TSA IS Units managed under normal operating procedures, which**
29 **does not require the implementation of the TSA IS HWMA/RCRA Contingency Plan.**
30 If the release is small, localized, does not pose a threat to human health or the environment,
31 and does not require the use of special safety equipment to facilitate cleanup (such as a
32 containment tent), then implementation of the TSA IS HWMA/RCRA Contingency Plan is

1 not required and normal operating procedures, which include a spill response procedure, may
2 be used to address these small releases.

- 3 • **Large release to the TSA IS Units managed under normal operating procedures, which
4 does not require the implementation of the TSA IS HWMA/RCRA Contingency Plan.**

5 If the release is large, has the potential to threaten human health and/or the environment, does
6 not exceed the bounds of safety equipment designated for routine operations, and is within
7 normal operating parameters [as determined by the AMWTP Emergency Coordinator (EC) ,
8 *commonly referred to as the Emergency Action Manager (EAM)*, and/or Environmental
9 Personnel], then implementation of the TSA IS HWMA/RCRA Contingency Plan is not
10 required and normal operating procedures may be used to address the release. Additional
11 safety equipment [e.g., supplied air respirators, HEPA ventilation system, tent for enclosing
12 an area, etc.] may be required. Any additional safety equipment required for mitigating large
13 releases as part of routine operations will be readily available and not classified as emergency
14 equipment.

- 15 • **Significant release not managed under normal operating procedures, which may
16 require the implementation of the TSA IS HWMA/RCRA Contingency Plan.** The
17 release is significant, has the potential to threaten human health and/or the environment, and
18 exceeds the bounds of safety equipment designated for routine operations or is determined to
19 be outside of normal operating parameters (as determined by the AMWTP ~~EC~~ *EAM* and/or
20 Environmental Personnel). In this case, implementation of the TSA IS HWMA/RCRA
21 Contingency Plan may be required. Additional safety equipment (e.g., supplied air
22 respirators, HEPA ventilation system, tent for enclosing an area, etc.) may also be required.

- 23 • **Fire or explosion that involves MW, which requires the implementation of the TSA IS
24 HWMA/RCRA Contingency Plan.** This case involves a fire and/or explosion that occurs in
25 the TSA IS Units which involves MW or is in the immediate vicinity of MW, or threatens
26 human health and/or the environment. In this case, implementation of the TSA IS
27 HWMA/RCRA Contingency Plan is required.

- 28 • **Release that exceeds the emergency action limits (EALs), as specified in the AMWTP
29 Emergency Plan/Contingency Plan, and requires the implementation of the TSA IS
30 HWMA/RCRA Contingency Plan.** If at any time the EALs in the AMWTP Emergency
31 Plan/Contingency Plan are exceeded, then the TSA IS HWMA/RCRA Contingency Plan will
32 be implemented.

1 In all situations where evidence indicates that a release of HWMA/RCRA-regulated constituents
2 has occurred, the TSA IS HWMA/RCRA Contingency Plan will be implemented, as described above.
3 However, if there are no visible signs of a release of HWMA/RCRA-regulated waste (e.g., liquids, debris,
4 etc.) and only radiological contamination can be found, then implementation of the TSA IS
5 HWMA/RCRA Contingency Plan is not required.

6 **Decontamination of Equipment**

7 During retrieval activities, there is the potential for equipment (e.g., shovels, forklifts, loaders,
8 trailers, etc.) to become contaminated with MW constituents by coming into contact with MW. Before
9 any equipment is placed out of service, stored for later use, disposed, or removed from the TSA-RE; the
10 equipment is visually inspected for signs of staining and is surveyed to determine if radiological
11 constituents are present. Based upon these results, the equipment is cleaned and/or decontaminated, as
12 required, using standard radiological practices for decontaminating equipment. Any
13 HWMA/RCRA-regulated wastes generated during cleaning/decontaminating are managed appropriately.

14 **RWSA**

15 Upon retrieval of a container from the TSA IS Units, the container may either be placed onto a
16 conveyor pending transfer out of the TSA-RE, or the container may be placed into a RWSA. A RWSA
17 may be located on any portion of the asphalt pad of the TSA IS Units, which has been cleared (e.g.,
18 removal of soil, wood, etc.) and designated for use as a storage area. All containers placed into a RWSA
19 are managed in accordance with the applicable requirements of IDAPA 58.01.05.009 (40 CFR 265).

20 At any point in time, there may be up to five types of containers managed in a RWSA.
21 Containers will not be tracked by container type, as described below, and all types of containers may be
22 managed within the same RWSA as long as the segregation, separation, and secondary containment
23 requirements, as described below, are met. Type I containers are containers of waste that have been
24 removed from the TSA IS Units waste stacks and placed directly into a RWSA. Typically, limited
25 information about a container's contents is known when the container is retrieved from a waste stack
26 depending upon the condition of the container and the existing marking/labeling, including metal tags,
27 security seals, etc., that provide information on the contents of the container. Based on this information,
28 separation or segregation of containers is not performed unless information from any marking or labeling
29 provides sufficient information to conclude that separation/segregation is required. See Section F-5 for
30 additional information on separation/segregation requirements. Secondary containment is not provided
31 for Type I containers unless the integrity of the container is degraded to a condition such that secondary
32 containment is required to contain any potential releases from the container.

1 A Type II container is a container of waste that has been removed from *at* the TSA IS Unit waste
2 stack, transported out of the TSA-RE, and has been transferred back to *the* TSA IS Unit. At a minimum,
3 this type of container has been characterized to determine specific information about the container's
4 contents (e.g., free liquids, IDC, WG, HWNs, etc.). Based upon the characterization information
5 obtained, segregation, separation, or secondary containment may be required. All Type II containers
6 identified as containing free liquids are provided with secondary containment, typically using portable
7 secondary containment pallets.

8 A Type III container contains newly-generated waste generated from an AMWTP related process.
9 Characterization information for Type III containers is based primarily on process knowledge. From this
10 characterization information, separation/segregation of containers is performed, as required. Type III
11 containers that contain free liquids are provided with secondary containment.

12 Type IV containers contain non-AMWTP newly-generated waste received from generators on or
13 off the INL or contain "true-unknown" existing waste, as defined in Section F-5a. Type IV containers are
14 only accepted for management at the TSA IS Units after notification to the DEQ has been provided. Type
15 IV containers are separated, segregated, and/or provided with secondary containment, as required.

16 Type V containers contain existing waste received from AMWTP treatment processes or existing
17 waste stored in the Type II Modules, *WMF-636 Pad 2*, and/or *the* Type I Module. Typically, these
18 containers are received from activities such as sorting, sizing, absorbing, supercompacting, sampling,
19 packaging, etc. in the AMWTP MWMUs. Type V containers are separated, segregated, and/or provided
20 with secondary containment, as required.

21 **Waste Loading and Transport**

22 **Retrieved Waste**

23 Once a container has been retrieved and inspected and all appropriate information has been
24 entered into the Operating Record, the container is then typically transported by conveyor to a loading
25 area. This loading area may or may not be located on the asphalt pad of the TSA IS Units. All portions
26 of the conveyor that are not located on the asphalt pad have a secondary containment system located
27 directly under the conveyor. Containers located on a transport vehicle are not required to have secondary
28 containment. The containers, staged off of the TSA IS Units on the conveyor and associated transport
29 vehicles, are subject to daily inspections for leaks/spills and may only be staged for a maximum of 10
30 calendar days. The 10-day staging period starts when a barcode is applied to a container and the barcode
31 is scanned at the inspection station. The container must be transferred to an approved HWMA/RCRA
32 unit before the end of the 10th calendar day.

1 **Container Assay**

2 Containers may be radioassayed within WMF-636 to estimate the amount of fissile material
3 present in a given container. The machine used for performing the radioassay with the TSA-RE building
4 is commonly referred to as a “fast” assay machine. It provides an estimate of the level of fissile material
5 present in a container by passive means. The “fast” assay results are not used for waste characterization
6 activities, but rather provide AMTWP personnel with a general idea if the container will characterize as
7 TRU or *low level waste* (LLW) to allow for optimization of process operations. The “fast” assay machine
8 may be located on ~~any of the TSA IS storage units~~ or on the asphalt pad that is south of the
9 ~~TSA-1/TSA-R storage unit~~ (i.e., ~~Pad L and Pad R~~). If “fast” assay is performed on the asphalt pad off of
10 the ~~TSA-1/TSA-R storage unit~~, then a maximum of two containers may be at or near the area designated
11 for performing the “fast” assay.

12 All containers located on the asphalt pad off of the ~~TSA-1/TSA-R storage unit~~ for the purpose of
13 performing “fast” assay are actively managed during the time period that the “fast” assay activity is
14 occurring. Upon completion of the assay, or if all personnel involved in the management of the
15 containers depart the area other than for an emergency or evacuation, the containers must be returned to a
16 HWMA/RCRA-regulated storage unit. If personnel involved in the management of containers depart the
17 area due to an emergency or evacuation of the area on the asphalt pad off of the ~~TSA-1/TSA-R storage~~
18 ~~unit~~ *TSA IS Unit*, then the containers shall be inspected upon re-entry into the area to ensure that no leaks
19 or spills have occurred.

20 **MW Off-Site Shipment**

21 Once a container has been characterized and determined to be MW that is *lower limit of detection*
22 (LLD), it may be processed for shipment to an off-Site facility in the TSA IS Units. This process includes
23 labeling, DOT packaging, storage, loading/unloading of transport packages and vehicles, and staging of
24 transport packages and vehicles prior to off-Site shipment. For the purpose of this section, packaging is
25 referred to as DOT approved packages (e.g., CONEX box, cargo container, etc.), and is not meant to
26 imply a treatment process regulated by HWMA/RCRA.

27 Loading of transport packages and vehicles may occur on or off the TSA IS Unit ~~asphalt pads~~.
28 Locations off of the asphalt pads include anywhere within the TSA-RE building structure *covering the*
29 *TSA-1/TSA-R storage unit*, or any asphalted area outside but adjacent to Door #7 or #9 of the TSA-RE
30 building structure. See Exhibit B-3-2 in Section B for additional information on the TSA-RE building
31 structure door locations. Containers are loaded into transport packages, which may be staged on the
32 ground, or onto transport vehicles, as necessary. Once loaded, transport packages and vehicles may be

1 staged on the asphalt directly south of Pad 2 or west of the TSA-RE building structure. All loaded
2 transport packages will have a hazardous waste manifest for that transport package. To facilitate
3 shipment activities, any single trailer or transport package may be stored for up to 10 calendar days.
4 Three-ft aisle space is provided on all sides of each transport vehicle or transport package to allow
5 personnel and/or equipment access for visual inspection, monitoring, and emergency response activities.
6 The west side of the TSA-RE and the west side of the Type I Module are utilized to store TRU package
7 transporters (TRUPACTs) loaded on trailers. See the AMWTP HWMA/RCRA ~~Storage~~ Permit for
8 additional information on the staging locations for the TRUPACTs loaded on trailers. The maximum
9 staging capacity for the west side of the TSA-RE, the west side of the Type I Module, and the south side
10 of Pad 2 of the TSA-RE is such that any combination of loaded transport trailers, transport packages, and
11 loaded TRUPACTs on trailers may be staged, as long as the total number of trailers and transport
12 packages does not exceed a total of 50 units (i.e., transport packages, loaded transport trailers, or loaded
13 TRUPACTs on trailers) between the previously mentioned areas. Loaded TRUPACTs on trailers may
14 not be staged on the asphalted areas adjacent to Door #7 or #9 of the TSA-RE. The trailers and transport
15 packages are inspected each day for leakage, and corrective actions are initiated as required. If any
16 leakage is noted, spill response will be completed in accordance with Section G and the closure of the
17 trailer/transport package staging areas will be addressed during closure of the TSA IS Units.

18

Building Structure

19 The TSA-RE is a "T" shaped, engineered metal building with an area of about 313,000 ft². As
20 can be seen on Exhibit B-3-2 in Section B, the TSA-RE encloses the TSA IS Units (i.e., TSA-1 and
21 TSA-R) and WMF-636 Pad 2. See the AMWTP HWMA/RCRA Permit for additional information on
22 WMF-636 Pad 2. The primary structure, which is oriented north-south, encloses TSA-1 and TSA-R and
23 is approximately 200-ft wide by 1,180-ft long, with an average eave height of approximately 35 ft. A
24 secondary structure encloses the earthen covered portion of ~~TSA-2~~ WMF-636 Pad 2, which is
25 approximately 185-ft wide by 430-ft long, with an eave height of approximately 33.5 ft. More detailed
26 information on the TSA-RE building and the TSA IS Units are as follows.

Base

27
28 The TSA IS Unit pads are composed of a 2- to 4-in. thick asphalt surface on a compacted gravel
29 base. Each pad slopes laterally toward the center-line across the width and longitudinally at a grade of
30 approximately 1%. TSA-1 and TSA-2 are sloped to the north, and TSA-R is sloped to the south. The
31 slope helps prevent water from accumulating around the stored waste. The TSA-RE building is located
32 on a continuous concrete grade beam foundation around the perimeter of both the primary building and
33 the ~~TSA-2~~ pad enclosure over WMF-636 Pad 2.

1 **Walls and Ceilings**

2 The entire TSA-RE is constructed of metal siding and roofing installed over a steel frame. The
3 enclosure is insulated. A continuous sheet metal liner is affixed to the interior of the steel girts for the
4 wall sections and to the underside of purlins that span between the bottom chords of the roof trusses for
5 the ceilings. The structural steel columns are framed and enclosed with a sheet metal liner.

6 **Doors and Entry Structure**

7 Twelve overhead doors are installed in the primary enclosure; eleven spaced along the west wall,
8 and one in the east wall near the north corner. Two overhead doors are installed in the ~~TSA-2~~
9 ~~pad~~ *WMF-636 Pad 2* wing, one in the east wall, and one in the south wall. One portable entry structure is
10 available and is designed to connect to the TSA-RE building, enclosing the overhead door and personnel
11 access door nearest the active work area during retrieval operations. Eleven personnel access doors are
12 located along the west wall of the primary enclosure, while seven personnel access doors are located
13 along the east wall. ~~The TSA-2 pad enclosure has five personnel access doors; two on the south wall and~~
14 ~~three on the east wall.~~

15 **Utilities**

16 Utilities include an electrical distribution; standby power; propane heating; lighting; instrument
17 air; emergency notification; DMS access; potable water; heating, ventilation, and air conditioning
18 (HVAC); and sewer systems.

19 **Heating System**

20 No general space heating is provided for the TSA-RE. Special purpose rooms that are routinely
21 occupied by personnel, and/or rooms that house equipment that must be freeze protected are provided
22 with locally mounted and controlled space heaters. The rooms in the change room area, the head-end
23 room, the compressor room, and the fire riser rooms are all provided with space heaters, *where required*.

24 **Ventilation System**

25 No general ventilation of the TSA-RE building is provided. An extensive ventilation system is
26 installed, but it is of limited capacity. Localized ventilation may be provided during retrieval activities by
27 equipment such as a HEPA-filtered tent.

28 **Process Drainage**

29 Process drainage for the TSA-RE is designed to collect runoff from the fire water system. The
30 system encompasses four separate systems, each terminating in a 20,000-gal double-walled collection
31 tank located underground outside the enclosures perimeter. Cast-in-place concrete drainage troughs lead

- 1 to collection basins, which are served by 12-in. diameter drainage pipes that end at the collection tank.
- 2 The drainage trenches are covered with louvered sheet metal grating over their full length, except at
- 3 doors, where fabricated steel or precast concrete covers protect the trenches.

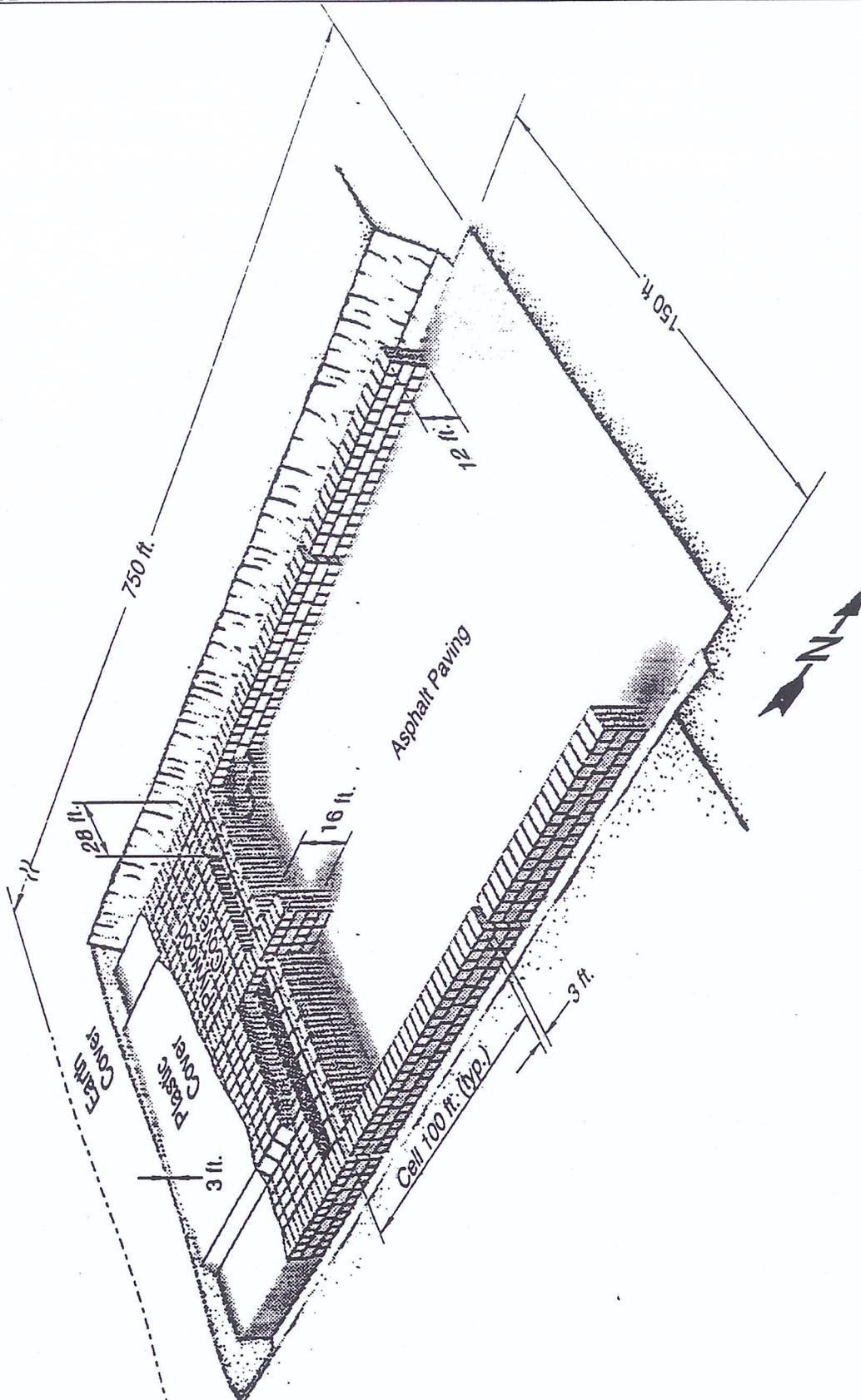


Exhibit D-1. Example Waste Stack Configuration

1 **D-1 Containers**

2 **D-1a Containers with Free Liquids**

3 The waste stored at the TSA IS Units generally contains either (1) no free liquids or (2) free
4 liquids at less than 1% of the total container volume. However, storage of containers with free liquids is
5 expected. Containers with known free liquids, as verified by RTR or visual examination, are provided
6 with secondary containment, typically by using portable secondary containment pallets, when stored in a
7 RWSA. See Section D for additional information on the requirements for storing containers in an
8 RWSA.

9 **D-1a(1) Description of Containers [IDAPA 58.01.05.009; 40 CFR 265.171 and .172]**

10 The containers, which are expected to be encountered during retrieval operations from the TSA
11 IS Units, are listed below.

- 12 1. The 30-gal drum (DOT 7A Type A, or equivalent) is a carbon-steel drum with a removable
13 head, gasket, and bolt ring.
- 14 2. The 55-gal drum/90-millimeter (mil) high-density polyethylene (HDPE) liner combination
15 (DOT 7A Type A, or equivalent) is a carbon-steel drum with a removable head, gasket, and
16 bolt ring. The liner is constructed of 90-mil molded polyethylene, and has an open head with
17 a sealable positive closure lid.
- 18 3. The 83/85-gal overpack drum is a carbon-steel drum with a removable head, gasket, and bolt
19 ring.
- 20 4. The DOT 6M, or equivalent, packaging consists of a 55-gal drum or a 100-gal drum with
21 fiberboard centering media and a DOT Specification 2R, or equivalent, inner containment
22 vessel. The drum head, gasket, and bolt ring are removable. DOT 6M, or equivalent,
23 packaging is acceptable for waste storage if the drum has a mechanism for filtered venting of
24 the interior.
- 25 5. The DOT 2R, or equivalent, containment vessel is made of stainless or carbon steel per 49
26 CFR 178.104(3)(b). The height of the polyethylene liner is 7.5 in. less than the inside height
27 of the drum. The maximum inside diameter of the container is 5.25 in. For Bettis Atomic
28 Power Laboratory shipments, 5-in. Schedule 40 piping has been approved for use as a
29 container. The Schedule 40 pipe ends are fitted with a screw-type closure or flanges to
30 provide containment. One or both of the Schedule 40 pipe ends may also be permanently
31 closed by a welded or brazed plate to provide containment.

- 1 6. The DOT 7A, or equivalent, steel bin (M series) meets the requirements of 49 CFR 178.350
2 (DOT 7A, or equivalent). It is a rectangular steel bin made of 12-gauge steel used for
3 shipment of waste or DOT-approved containers of waste. When used as an overpack, it will
4 hold eight 55-gal drums in two layers of four drums each, or 10 30-gal drums in two layers of
5 five drums each. The bins are nominally 4-ft wide by 5-ft long by 6-ft high, although this
6 series of bins covers a range of sizes and some structural variations.
- 7 7. The DOT 7A Steel Box, or equivalent, was designed at the Sandia National Laboratory.
8 These boxes come in a range of sizes ranging from 68- to 88-in. long, 48- to 54-in. wide, and
9 71- to 98-in. high. The container is welded closed, once filled with waste.
- 10 8. The DOT 7A Steel Box TX-4, or equivalent, has been developed by the Lawrence Livermore
11 National Laboratory for use in packaging TRU waste. The TX-4 is a mild-steel welded-
12 construction box with a gasketed bolted closure. The container is fabricated from a steel
13 sheet supported by an external framework of four 4-in. by 2-in. square tubing (the container
14 corners are reinforced with 2-in. angle stock, skip welded). Four 3-in. steel channels support
15 the container, allowing standard forklift handling. This box type comes in a range of sizes:
16 74- to 92-in. long, 46- to 52-in. wide, and 36- to 57-in. high. This type of box may be lined
17 with two 40-mil or one 80-mil polyvinyl chloride (PVC) liners. The top of the liner is folded
18 over the top and outside of the box and secured with duct tape.
- 19 9. The DOT 7A Type A Mark III box, or equivalent, is constructed of concrete with an integral
20 polyethylene liner and a lead liner installed if necessary. The container is 96-in. long by
21 48-in. wide by 48-in. high. The polyethylene liner has a height of 5 in. less than the inside
22 height of the concrete container. The polyethylene liner can be thermally sealed using
23 electric current, and the concrete lid can be bolted down.
- 24 10. The DOT 7A, or equivalent, 55-gal drum is a carbon-steel drum constructed of 16-gauge
25 material with a removable lid, gasket, and bolt ring.
- 26 11. The wooden boxes are constructed of plywood. At the time of use in the 1970s, these boxes
27 met the DOT 19A packaging requirements. The boxes come in a range of sizes, but are
28 generally 7-ft long by 4-ft wide by 2- or 4-ft high. The lids are either nailed or glued shut.
- 29 12. The FRP boxes are constructed in the same manner as the wooden boxes described above
30 with the same range of dimensions. However, the exterior of the box is coated with at least
31 1/8 in. of fiberglass-reinforced polyester.
- 32 13. International cargo containers, or equivalent, are typically of steel construction and comes in
33 a ranges of size, but are typically 20-ft long by-8 ft wide by 8-ft high.

1 After retrieval, characterization, and/or treatment, containers may be brought back into the TSA
2 IS Units for storage. Some of the containers that may be used to store waste in the TSA IS Units after
3 retrieval, characterization, and/or treatment include those containers listed above in addition to the
4 containers listed below.

- 5 1. The TRUPACT II Standard Waste Box (SWB) is a DOT 7A Type A, or equivalent,
6 container, nominally 71-in. long by 55-in. wide by 37-in. high. This box is constructed of
7 steel. This box may be used to package waste or to overpack any container that does not
8 meet the WAC as long as the dimensions are compatible. The lid is bolted to the box.
- 9 2. The steel overpack box may be used for overpacking boxes. This box is constructed of
10 carbon steel supported by an external framework of four 4-in. by 2-in. square tubing
11 (container corners are reinforced with 2-in. angle stock). Two 2-in. by 1-in. steel channels
12 support the container for forklift access. The dimensions of this box are 92-in. long by 56-in.
13 wide by 55-in. high. A variety of other sizes may be used; special sizes are fabricated to
14 handle a variety of overpack needs.
- 15 3. The UN1A2, or equivalent, 30-gal drum is a carbon-steel drum with a removable head,
16 gasket, and bolt ring.
- 17 4. The UN1A2, or equivalent, 55-gal drum with 90-mil HDPE liner combination is a carbon-
18 steel drum with a removable head, gasket, and bolt ring. The liner is constructed of 90-mil
19 molded polyethylene and has an open head with a sealable positive closure lid.
- 20 5. The UN1A2, or equivalent, 55-gal drum is a carbon-steel drum with a removable head,
21 gasket, and bolt ring.
- 22 6. The UN1A2, or equivalent, 83/85-gal overpack drum, that may include a roto-mold liner, is a
23 carbon-steel drum with a removable head, gasket, and bolt ring.
- 24 7. The DOT 7A Type A, or equivalent, 71-gal drums are square steel drums with one of the
25 following: a crimp type gasketed cover; removable head with gasket and bolt ring; or fully
26 removable head with gasket and bolted closure.
- 27 8. The 55-gal Recycled Shielded Storage Container (RSSC), or equivalent, has stainless-steel
28 inner and outer shells that encapsulate lead shielding with bolt-on end plates and rings. The
29 RSSC is approximately 44.5-in. high by 36.1-in. maximum outside diameter.

- 1 9. The DOT 7A Type A, or equivalent, "B" series of filtered and non-filtered boxes come in
2 various sizes, including the B-25 style bin (4.3-ft high by 4-ft wide by 6 ft-long) and B-52
3 style bin (3.5-ft high by 4.5-ft wide by 4.5-ft long).
- 4 10. The RH-TRU Shielded Overpack, or equivalent, are 30- and 55-gal drum overpack
5 assemblies that are 25 in. inside diameter and 32 in. outside diameter steel cylinders with
6 bolted steel flanges. This overpack design contains no lead as steel is used to provide
7 shielding.
- 8 11. The AMWTP puck drum, or equivalent, is a carbon-steel container with a removable lid,
9 gasket, and bolt ring. The drum is approximately 32-in. high with a 31-in. inner diameter.
10 The puck drum has a capacity of approximately 100 gal and meets the WIPP stacking criteria.
- 11 12. The Ten-Drum Overpack (TDOP) is a welded steel, right circular cylinder, with a removable
12 bolt lid on one end. The TDOP may be loaded directly or it may be loaded with 10 55-gal
13 drums, up to six 85-gal drums, or one SWB.
- 14 13. The AMWTP LLW export box, or equivalent, is constructed of carbon steel. The container is
15 approximately 96-in. wide by 48-in. high, and may be reinforced with steel bracing on the
16 inside of the container.
- 17 14. The "slim" 55-gal overpack drum is a carbon-steel drum that may be loaded with 55-gal
18 drums. The "slim" 55-gal overpack has dimensions slightly larger than that of a standard
19 55-gal drum.
- 20 15. A bag or plastic wrapping material that is secure and leak tight. Bags/plastic wrapping
21 material may be used to store rigid waste (e.g., plywood, pallet, etc.) or non-rigid waste (e.g.,
22 PPE, radiological swipes, etc.). *Bags/plastic wrapping material may only be used for storing*
23 *waste that without treatment, the waste is not amenable for storage in any of the containers*
24 *identified above.*
- 25 16. *The drum overpack box, which may contain up to six drums of various sizes. The drum*
26 *overpack box has a flat bottom and all seams within the box other than the lid are sealed with*
27 *a caulking material. The lid of the box is secured to the box with cargo tape, or equivalent.*
28 *The drum overpack box is typically used for transporting drums into the box lines of*
29 *WMF-676 for treatment.*
- 30 17. *The Industrial Packaging – 2 (IP-2) cargo shipping container with an inner stainless steel*
31 *liner. The cargo shipping container is constructed of carbon steel. The inner stainless steel*

1 *liner is constructed from continuous welded stainless steel panels covering the sides, top,*
2 *bottom and back end surfaces. The liner is constructed with a minimum thickness of 12*
3 *gauge stainless steel.*

4 ~~16-18.~~ Any other approved DOT container.

5 Exceptions to the above-specified containers do occur and are called nonstandard waste
6 containers. These exceptions generally involve variations in dimensions and weight limits. Non-standard
7 waste containers may be approved by the AMWTP Environmental Manager on a case-by-case basis.

8 After retrieval, all containers may be labeled with HW labels, barcodes, appropriate radiation
9 labels, and appropriate hazard labels. The barcode label is used to identify a container's location and its
10 contents. Radiation labels are used to identify the level(s) of radioactivity in the container. Hazard labels
11 are used to identify specific chemical characteristics of the waste. Additional labels may be used to
12 indicate the generator of the waste stream, the date of generation, the container number, the lot number, or
13 other data. Typical labels that may be affixed to containers include:

- 14 • Generator's name,
- 15 • Generator's address,
- 16 • Hazardous Waste,
- 17 • INL Tracking Numbers,
- 18 • Barcode (required),
- 19 • Awaiting analysis,
- 20 • Container pack date, and
- 21 • Generation date.

22 Containers with unknown contents are labeled with the words "Hazardous Waste" and a barcode
23 label. Additional labels are affixed to those containers with unknown contents, as new information
24 becomes available. For wastes subject to LDR requirements, the labels also include the date the wastes
25 were placed into storage at the TSA or the date the container was packaged at the generator's facility.

26 **D-1a(2) Container Management Practices [IDAPA 58.01.05.009; 40 CFR 265.173]**

27 After retrieval, containers are managed and stored in a manner to prevent container rupture or
28 leakage and to minimize radiation exposure to personnel. All containers are kept closed during retrieval,
29 transfer, storage, and handling. AMWTP personnel follow procedures and instructions that establish
30 operating practices designed to minimize the probability of accidents, which may result in a release of

1 MW to the environment. Containers are visually inspected for integrity to determine if there are signs of
2 pitting, leaks, or structural defects. Containers that fail this visual inspection for integrity are repaired,
3 repackaged, vented or overpacked, as required. Containers used by the AMWTP are compatible with the
4 types of wastes managed at the AMWTP.

5 Container loading and unloading activities are conducted in accordance with established
6 procedures for:

- 7 • Work control;
- 8 • Transfer, storage, handling, and tracking of waste;
- 9 • Receipt, inspection, and documentation of waste;
- 10 • Logkeeping practices and checklists;
- 11 • Truck/trailer waste container loading/unloading; and
- 12 • Overpacked drum recovery.

13 Each container has a unique barcode attached. The barcodes are used to identify containers
14 before and after any transfers to ensure the proper containers are moved and to identify their new location.
15 This information is used to track the movement via a computer database and identify container location.

SECTION F

PROCEDURES TO PREVENT HAZARDS

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1 **F. PROCEDURES TO PREVENT HAZARDS**

2
3 **F-1 Security [IDAPA 58.01.05.009; 40 CFR 265.14]**

4 A three-level security system including INL property warning signs, access control for the INL,
5 and security surveillance patrolling provides overall security at the INL, the RWMC, and the AMWTP.

6 **F-1a Security Procedures and Equipment [IDAPA 58.01.05.009; 40 CFR 265.14]**

7 The TSA IS Units are located within the TSA-RE building at the RWMC. To gain access to the
8 RWMC and the AMWTP, authorized personnel or visitors must first gain access to the INL by the public
9 highways. Once within the INL, traffic to the RWMC and the AMWTP enters from Adams Boulevard or
10 via one of the designated AMWTP access gates. When authorized, traffic may enter the TSA directly
11 through one of four gates in the southern or one of the two gates in the northern part of the TSA fence.
12 Three of the south gates are for AMWTP personnel, DOE, *Government*, and INL contractor-owned
13 vehicle access, and the fourth south gate is a railroad entrance. The access points described above are
14 identified on the RWMC/AMWTP Topographic Map, located in the Part A Permit Application for the
15 TSA IS Units. The RWMC and the AMWTP are provided with a surveillance system, a physical barrier,
16 and the means to prevent entry of unauthorized persons to the AMWTP MWMUs.

17 **F-1a(1) Surveillance System [IDAPA 58.01.05.009; 40 CFR 265.14(b)(1)]**

18 Access to the AMWTP is controlled by access control personnel who are based at or near the
19 various entrances to the AMWTP and the TSA. These entrances serve as the main access control points
20 for persons and vehicles entering or exiting the AMWTP area. Typically, AMWTP personnel and visitors
21 enter the TSA through a dedicated gate either on the south or north end of the TSA. See the
22 RWMC/AMWTP Topographic Map located in the Part A Permit Application for the TSA IS Units. All
23 personnel entering through the south gate must check in at the AMWTP access point to obtain access
24 authorization. All personnel entering through the north gate must check in at the RWMC access point to
25 obtain access authorization. Visitors to the AMWTP are escorted, as required.

26 Further security is provided by INL security personnel, who conduct roving patrols around the
27 perimeter of the RWMC. If off-normal conditions are detected, the appropriate AMWTP, RWMC, and/or
28 INL personnel are immediately notified. All gates located on the outermost fence surrounding the
29 RWMC leading into the AMWTP controlled areas are locked when not manned or in use.

1 **F-1a(2) Barrier [IDAPA 58.01.05.009; 40 CFR 265.14(b)(2)(i)]**

2 Physical security at the *RWMC*/AMWTP includes fencing of the entire area with locked or
3 monitored gates. The perimeter fence and access gates are presented on the *RWMC*/AMWTP
4 Topographic Map, located in the Part A Permit Application for the TSA IS Units. The perimeter fence is
5 designed as a deterrent to any unauthorized person attempting to enter or remove material from the
6 *RWMC* and the AMWTP, and as a deterrent to ~~wildlife and large animals (e.g., livestock)~~ attempting to
7 enter the *RWMC* and the AMWTP. The perimeter fence is constructed of either chain link or metal wire.
8 Portions of the fence may be topped with barbed wire.

9 **F-1a(3) Means to Control Entry [IDAPA 58.01.05.009; 40 CFR 265.14(b)(2)(ii)]**

10 Means to control entry at the AMWTP are maintained by both administrative controls and
11 physical measures. As discussed in Sections F-1a(1) and F-1a(2), the *RWMC* and the AMWTP are
12 provided with a surveillance system and are surrounded by a perimeter fence and lockable gates. Access
13 into the *RWMC*/AMWTP security area is typically controlled by locked or manned gates, card-readers, or
14 access control personnel located at the various *RWMC* and AMWTP entrances.

15 **F-1a(4) Warning Signs [IDAPA 58.01.05.009; 40 CFR 265.14(c)]**

16 Warning signs are posted in the vicinity of each entrance to the AMWTP MWMUs and in the
17 vicinity of each TSA gate. These signs are written in English (the principal language in southeast Idaho),
18 are legible from a distance of 25 ft, and are visible from most angles of approach. See Exhibits F-1, F-2,
19 and F-3 for example warning signs used throughout the INL and the TSA.

NO TRESPASSING

By Order of the
**United States
Department of Energy**

The unauthorized entry upon any facility, installation, or real property subject to the jurisdiction, administration or in the custody of the United States Department of Energy, which has been designated as subject to the provisions contained in Title 10, Code of Federal Regulations, Part 860, is prohibited. The unauthorized carrying, transporting, or otherwise introducing or causing to be introduced, any dangerous weapon, explosive, or other dangerous instrument or material likely to produce substantial injury or damage to persons or property, into or upon such facility, installation, or real property is likewise prohibited.

Whoever willfully violates these regulations upon conviction, shall be punishable by a fine of not more than \$5,000. Whoever willfully violates these regulations with respect to any facility, installation, or real property enclosed by a fence, wall, floor, roof, or other structural barrier, shall be guilty of a misdemeanor and, upon conviction, shall be punished by a fine not to exceed \$100,000 or imprisonment for not more than 1 year, or both. (Title 42, United States Code, § 2278(a); Title 18, United States Code, § 3571.)

By authority of Section 229 of the Atomic Energy Act of 1954, as amended [(Title 42, United States Code, § 2278(a)], and Title 10, Code of Federal Regulations, Part 860 of the rules and regulations of the

Department of Energy, this facility, installation, or real property has been designated as subject to these regulations by the United States Department of Energy. Trespassers may be subject to the provisions stated above.



Exhibit F-1. Example INL Boundary No Trespassing Sign

**NO GRAZING BEYOND
THIS POINT**

NO TRESPASSING

By Order of the
**United States
Department of Energy**

The unauthorized entry upon any facility, installation, or real property subject to the jurisdiction, administration or in the custody of the United States Department of Energy, which has been designated as subject to the provisions contained in Part 860 of the Rules and Regulations of the United States Department of Energy (10 CFR Part 860), which rules were continued in effect by Section 705(a) of the Department of Energy Organization Act, is prohibited, and the unauthorized carrying,

transporting, or otherwise introducing or causing to be introduced any dangerous weapon, explosive, or other dangerous instrument or material likely to produce substantial injury or damage to persons or property, into or upon such facility, installation, or real property is prohibited.

Whoever willfully violates the aforesaid regulation shall, upon conviction thereof, be punishable by a fine of not more than \$1,000. Whoever willfully violates this regulation

with respect to any facility, installation, or real property enclosed by a fence, wall, floor, roof, or other structural barrier, shall be guilty of a misdemeanor and, upon conviction thereof, shall be punished by a fine of not to exceed \$5,000 or imprisonment for not more than 1 year, or both.

By authority of Section 229 of the Atomic Energy Act of 1954, as amended, and Part 860 of the Rules and Regulations of the United States Department

of Energy, this facility, installation, or real property has been designated as subject to these regulations by the United States Department of Energy.



Exhibit F-2. Example INL Boundary No Grazing Sign



Exhibit F-3. Example of Warning Sign

1 **F-2 Inspection Schedule [IDAPA 58.01.05.009; 40 CFR 265.15]**

2 This section describes the various inspection programs in place to ensure safe management of
3 containers at the TSA IS Units, proper operation of supporting and monitoring equipment, and the
4 availability of emergency equipment in sufficient number and in operable condition whenever needed.

5 Inspection of containers stored at the TSA IS Units occurs in three stages. The reason for the
6 separation of the inspections is the current storage configuration of the containers at the TSA IS Units.
7 Currently, waste containers in storage that are awaiting retrieval do not conform to HWMA/RCRA
8 regulations with regards to aisle spacing and access for emergency response. However, compliance will
9 be attained through the retrieval of containers and subsequent placement into a HWMA/RCRA compliant
10 storage configuration. Initially, the waste stacks are visually inspected for visual evidence of leaks onto
11 the surrounding soil. As containers are retrieved from the waste stack, they are inspected prior to removal
12 from the waste stack. While waste is stored in a RWSA, which is located within the boundaries of the
13 TSA IS Units, containers are inspected according to the applicable regulations.

14 Inspections of a RWSA are conducted to detect leaks, spills, or container deterioration that may
15 lead to the release of HWMA/RCRA-regulated waste constituents to the environment or pose a threat to
16 human health. HWMA/RCRA deficiencies noted during the inspection and any corrective action taken
17 are documented and placed in the Operating Record. Deterioration or malfunction of containers,
18 equipment, or structures identified during the inspection is remedied on a schedule that ensures the
19 problem does not lead to any environmental or human health hazard. Imminent hazards or hazards that
20 have already occurred are addressed immediately on a case-by-case basis. Corrective action is initiated
21 and tracked to completion.

22 **F-2a General Inspection Requirements [IDAPA 58.01.05.009; 40 CFR 265.15(a), .15(b),**
23 **and .33]**

24 TSA IS Unit inspections are performed by AMWTP personnel on a routine basis. These
25 inspections satisfy, to the extent possible in the case of wastes awaiting retrieval, the HWMA/RCRA
26 required inspections for container storage units regulated under IDAPA 58.01.05.009 (40 CFR 265). An
27 inspection log is maintained as part of the Operating Record. In addition to these inspections,
28 preventative maintenance (PM) inspections of buildings, equipment, and various operating systems are
29 conducted on a regular basis and are typically tracked via the AMWTP computerized maintenance
30 management system (CMMS).

31 AMWTP personnel routinely conduct inspections of the AMWTP area, fences, gates, warning
32 signs, locks, and equipment; waste loading and unloading areas; staging areas, and structural and

1 operating equipment. These inspections are conducted in accordance with a pre-established schedule.
2 Area inspections are conducted at set frequencies, depending on the inspection being performed. See
3 Table F-1 for additional information. These inspections address area conditions, ensuring fences, gates,
4 buildings, and other structures are in good repair and working order. Typical items addressed include
5 physical condition of structures, blockage of access areas, operation of emergency equipment, and
6 condition of drainage systems. Inspection results are recorded on a log sheet, which is kept as part of the
7 Operating Record.

8 PM inspections are developed, reviewed, approved, scheduled, and issued using the AMWTP
9 CMMS. Typical PM inspections performed ~~for~~at the AMWTP include:

- 10 • Fire control system components (*e.g., fire sprinklers, fire water pumps, hydrants, etc.*) such
11 as:
 - 12 • ~~Fire water pumps~~
 - 13 • ~~The water storage tank~~
 - 14 • ~~Valves~~
 - 15 • ~~Fire extinguishers and hydrants~~
 - 16 • ~~Sprinkler systems~~
- 17 • ~~Emergency Standby~~ power generators
- 18 • Emergency response equipment
- 19 • Waste container handling equipment

20 PM inspections are performed per a set schedule. The frequency of an inspection is based upon
21 the AMWTP Maintenance Analysis Program, ~~or~~ vendor specifications/recommendations, *or the National*
22 *Fire Protection Agency (NFPA) requirements*. The AMWTP Maintenance Analysis Program is designed
23 to determine the maintenance requirements for a specific piece of equipment. Typical items addressed
24 under the Maintenance Analysis Program include the frequency of use, operational requirement, intended
25 use, failure modes, results/consequences of a failure, environmental conditions, and safety concerns.

26 Calibration of equipment is performed in accordance with established procedures and integrated
27 into the AMWTP CMMS. Calibrations are pre-scheduled to occur prior to the calibration expiration date.
28 Calibrations are conducted in accordance with specific checklists containing step-by-step instructions, as
29 appropriate.

30 AMWTP personnel conduct regular radiation surveys of the TSA IS Units using appropriate
31 instrumentation. These surveys enable the detection of changes in radiation levels related to the wastes in

1 storage. The surveys are recorded on survey forms by the AMWTP personnel performing the survey.
2 Whenever a container is dropped or otherwise mishandled, AMWTP personnel will conduct a radiation
3 survey and inspect the container integrity.

4 Following completion of the above-described inspections, any problems requiring further action
5 are corrected on a timely basis with full knowledge of the appropriate AMWTP management personnel.
6 AMWTP personnel report and record all identified HWMA/RCRA deficiencies, status of corrective
7 actions, and completions of corrective actions. When a deficiency is identified, the appropriate corrective
8 action and the urgency of the need is evaluated.

9 Deficiencies are tracked on a weekly basis until the deficiencies have been corrected. The
10 Operations Manager, or designee, shall review all completed HWMA/RCRA inspection forms and the
11 status of all unresolved deficiencies on a weekly basis. The review of the completed inspection forms
12 will be done to ensure that the forms are accurately filled out and that all deficiencies are adequately
13 identified. Conditions identified during the weekly reviews that are adverse to accuracy, completeness, or
14 timeliness of deficiency corrective actions shall be immediately given to AMWTP Management
15 (including the Environmental, *Security*, Safety, and Health Manager) for resolution. The AMWTP
16 Environmental Manager, or designee, shall provide oversight on deficiency tracking and resolution to
17 ensure that this process is properly implemented. If remedial actions cannot be completed within 21
18 calendar days of discovery (10 days of determination for any HWMA/RCRA deficiencies associated with
19 secondary containment systems), the Operations Manager, or designee, shall take action to notify the
20 Environmental, *Security*, Safety, and Health Manager, or designee, for review and determination of
21 necessary notifications and/or other actions. When the deficiency has been corrected, the corrective
22 action taken and date completed are to be entered on the inspection form or in association with the
23 inspection form (e.g., attached to the inspection form).

24 **F-2a(1) Types of Problems [IDAPA 58.01.05.009; 40 CFR 265.15(b)(3)]**

25 Table F-1 identifies the types of conditions evaluated during inspections. These inspection items
26 are outlined in operating procedures or maintenance procedures that support the inspections. All
27 checklists, logs, and reports include locations for the date, time, and name of the inspector performing the
28 inspection, as well as the location of items to be inspected, observations, and corrective actions or repairs
29 that are required. As discussed in Section F-2a, all HWMA/RCRA deficiencies noted during an
30 inspection are fixed, a work request written, or the deficiency is entered into one of the data tracking
31 systems, which are part of the Operating Record. An actionee is then designated and is responsible for
32 seeing the corrective action through to completion. The date when the condition is corrected or repairs
33 are made is recorded into one of the data tracking systems.

1 **F-2a(2) Frequency of Inspections [IDAPA 58.01.05.009; 40 CFR 265.15(b)(4)]**

2 The frequency of inspections is outlined in Table F-1. To ensure the safety of personnel and
3 protection of the environment, the inspection frequencies vary according to operational need for the TSA
4 IS Units and associated equipment. Inspection schedules are based on radiological and personnel safety
5 concerns. These factors are discussed further in Section F-2b.

6 In addition to the inspections described above, various inspections may be required prior to, and
7 at the start of, operation of various types of equipment.

8 **F-2b Container Inspection [IDAPA 58.01.05.009; 40 CFR 265.15(b)(4) and .174]**

9 Containers located at the TSA IS Units that are stored in a designated RWSA are inspected
10 weekly for leaks, spills, and container deterioration. Containers and secondary containment systems that
11 are located in the TSA-RE, but are not located on the TSA IS Units are inspected daily for leaks and
12 spills. Container inspections are listed in Table F-1.

Table F-1. Inspection Schedule for the TSA IS Units

Item IDAPA 58.01.05.009 [40 CFR 265.15(b)(1)]	Frequency^{a,b} IDAPA 58.01.05.009 [40 CFR 265.15(b)(4)]	Types of Problems IDAPA 58.01.05.009 [40 CFR 265.15(b)(3)]
SOIL MOUND/WASTE STACK		
Leaks/Spills	W	<p><u>Problem:</u> Spilled or leaking containers.</p> <p>Visually inspect base of soil mound/waste stack for evidence of leakage. Initiate corrective action, as required.</p>
RWSA		
Leaks/Spills	W	<p><u>Problem:</u> Spilled or leaking containers.</p> <p>Visually inspect storage area for evidence of leaks and spills. Initiate corrective action, as required.</p>
Container Position	W	<p><u>Problem:</u> Containers may be improperly stored or positioned based on the storage configuration.</p> <p>Check that containers are positioned properly and properly located in the storage configuration.</p> <p>Standard configuration:</p> <ul style="list-style-type: none"> • Drums are no more than 2 wide by 3 high by 'n' long, allowing for appropriate aisle spacing. • Boxes are no more than 2 wide by 3 high by 'n' long, allowing for appropriate aisle spacing. <p>Planar array configuration:</p> <ul style="list-style-type: none"> • Containers are no more than 4 wide by 1 high by 'n' long, allowing for appropriate aisle spacing. <p>Repaired containers:</p> <ul style="list-style-type: none"> • Drums are no more than 2 wide by 2 high by 'n' long, allowing for appropriate aisle spacing. • Boxes are no more than 2 wide by 2 high by 'n' long, allowing for appropriate aisle spacing. <p>Bag/Plastic wrap containers:</p> <ul style="list-style-type: none"> • Containers with rigid waste are no more than 2 wide by 3 high by 'n' long, allowing for appropriate aisle spacing. • Containers with non-rigid waste are no more than 2 wide by 1 high by 'n' long, allowing for appropriate aisle spacing.

Table F-1. Inspection Schedule for the TSA IS Units (continued)		
Item IDAPA 58.01.05.009 [40 CFR 265.15(b)(1)]	Frequency^{a,b} IDAPA 58.01.05.009 [40 CFR 265.15(b)(4)]	Types of Problems IDAPA 58.01.05.009 [40 CFR 265.15(b)(3)]
RWSA (continued)		
Container Integrity	W	<u>Problem:</u> Damaged or leaking containers and containers that are not closed. Visually inspect for any liquid present on or near the container and defective, visibly pitted, or metal-fatigued containers by scanning around the outside of each stack and down the aisles.
Aisle Space ^c	W	<u>Problem:</u> Insufficient aisle space. Ensure a minimum of 3-ft aisle space is maintained between rows of containers, between the rows and all internal and external walls, and between rows of containers and the edge of the asphalt pad.
Spill Pallets/Pans Secondary Containment System Integrity	W	<u>Problem:</u> Cracks, gaps, or other degradation of spill pallets/pans, which could compromise the integrity of the secondary containment system. Liquid in spill containment system. Visually inspect spill pallets/pans for evidence of significant cracks and gaps that may compromise the integrity of the containment. Ensure that no liquid is present in the spill containment system.
CONTAINER LOADING/UNLOADING AREAS		
Leaks/Spills	D	<u>Problem:</u> Spilled or leaking containers. Visually inspect loading and unloading areas, when in use, for evidence of leaks and spills. Initiate corrective action, as required.
Secondary Containment System Integrity	D	<u>Problem:</u> Cracks, gaps, or other degradation of the secondary containment system located under the conveyor system, which could compromise the integrity of the secondary containment system. Liquid in the secondary containment system. Visually inspect secondary containment system, located under the conveyor system, for evidence of significant cracks and gaps that may compromise the integrity of the containment. Ensure that no liquid is present in the secondary containment system.
SECURITY DEVICES		
AMWTP-TSA Fence Area	M	<u>Problem:</u> Fence has been damaged/breached. Check TSA fence controlled by AMWTP for condition, deterioration, and identify areas requiring repair.

Table F-1. Inspection Schedule for the TSA IS Units (continued)		
Item IDAPA 58.01.05.009 [40 CFR 265.15(b)(1)]	Frequency^{a,b} IDAPA 58.01.05.009 [40 CFR 265.15(b)(4)]	Types of Problems IDAPA 58.01.05.009 [40 CFR 265.15(b)(3)]
SECURITY DEVICES (continued)		
AMWTP-TSA Fence and Gate Warning Signs	M	<u>Problem:</u> Fence and gate warning signs missing, not in proper location, not visible, or not in good condition. Check TSA fence and gate warning signs controlled by AMWTP for the condition of the signs. Ensure signs are visible, in good condition, and verify the location of the signs.
AMWTP-TSA Fence Gates and Locks	M	<u>Problem:</u> Gates not operating properly. Gates or locks missing. Check TSA fence gates and locks controlled by AMWTP for condition, deterioration, and identification of items requiring repair.
Door Entrances	M	<u>Problem:</u> Entrance warning signs missing, not in the proper location, not visible, or not in good condition. Verify that the required warning signs are located in the vicinity of all entrances leading into the operational areas of each MWMU and that the signs are in good condition and are visible.
SAFETY AND EMERGENCY EQUIPMENT		
Spill Response Equipment ^d	M	<u>Problem:</u> Necessary spill response equipment/supplies missing from spill kit. Check tamper seal on the spill kit. If the spill kit has been opened since the last inspection, inventory the spill kit contents. Affix seal after inventory check/restocking.
Fire Extinguishers ^d	M ^e	<u>Problem:</u> Missing fire extinguisher, improper type of fire extinguisher, or inaccessible fire extinguisher. Ensure fire extinguishers are visible, are in the proper location, are the proper type, easily accessible, and there is no evidence of damage or tampering.
Fire Hazard Surveillance	M	<u>Problem:</u> Accumulation of flammable/combustible materials and the presence of ignition sources. Ensure all areas are free of fire hazards.
Fire Suppression Systems	A ^e	<u>Problem:</u> Fire suppression systems are not operational. Ensure fire suppression systems (e.g., hydrants, fire hoses, sprinkler systems, and supporting equipment) are present and ready for operation.

Table F-1. Inspection Schedule for the TSA IS Units (continued)		
Item IDAPA 58.01.05.009 [40 CFR 265.15(b)(1)]	Frequency^{a,b} IDAPA 58.01.05.009 [40 CFR 265.15(b)(4)]	Types of Problems IDAPA 58.01.05.009 [40 CFR 265.15(b)(3)]
SAFETY AND EMERGENCY EQUIPMENT (continued)		
Fire Detection Systems and Alarms	A ^e	<u>Problem:</u> Fire detection systems or alarms not operational. Ensure fire detection systems/alarms are ready for operation.
Manual Fire Alarms	A ^e	<u>Problem:</u> Inoperable manual fire alarm systems/equipment. Ensure manual fire alarms are ready for operation.
Power Standby Generator	M	<u>Problem:</u> Generator is inoperable. Verify that the equipment is functioning properly. Verify generator settings and fuel level.

- a. D = Daily (each work day); W = Weekly; M = Monthly; A = Annually
- b. Inspections are conducted only when MW is present.
- c. Minimum aisle spacing requirements are excluding support beams and portable equipment.
- d. Locations and type of equipment are identified in Table G-5 of Section G.
- e. Inspection frequencies determined by the National Fire Protection Agency (NFPA) 10, 25, and/or 72.

1 **F-3 Preparedness and Prevention Requirements**

2 This section discusses the emergency preparedness and prevention measures at the TSA IS Units.

3 **F-3a Equipment Requirements [IDAPA 58.01.05.009; 40 CFR 265.32]**

4 The following sections describe the alarms and communications equipment, emergency
5 equipment, fire protection systems, and water for fire control at the TSA IS Units. The inspection and
6 maintenance of equipment located within the TSA IS Units is described in Section F-2.

7 **F-3a(1) Alarms and Communication Equipment [IDAPA 58.01.05.009; 40 CFR 265.32(a)]**

8 The TSA IS Units ~~are~~ *is* not continuously manned. ~~They~~ *It is* ~~are~~ locally and manually operated.
9 The TSA IS Units ~~are~~ *is* equipped with communications equipment, monitoring systems, and alarms to
10 monitor storage conditions and to automatically summon emergency assistance or notify personnel
11 working in the area of emergency conditions. Alarms and parameters that are monitored include manual
12 fire alarm pull stations, water flow alarms, low air-temperature alarms (for fire sprinkler riser rooms), and
13 loss of power. Fire alarm signals are transmitted to the alarm room Fire Alarm Control Panel (FACP) and
14 subsequently to the INL Fire Department. Notifications may then be made to RWMC/Warning
15 Communications Center (WCC), as required, via telephone.

16 **F-3a(2) Internal Communications [IDAPA 58.01.05.009; 40 CFR 265.32(a)]**

17 Telephone systems in the MWMUs provide communication service between offices, control
18 rooms, selected process areas, the maintenance building, INL emergency services, and off-Site areas.
19 Additional subsystems such as voice-mail, paging, intercom, portable radios, and call accounting are
20 incorporated, as required. Hand-held radios are routinely used during normal and emergency operations
21 in the TSA IS Units.

22 While working at the TSA IS Units, personnel are informed of emergency situations (e.g.,
23 building and/or area evacuations, take cover events, fires) by the RWMC evacuation and voice paging
24 system, or by radio. The building has indoor/outdoor weatherproof speaker horns and evacuation/voice
25 paging speakers.

26 **F-3a(3) External Communications [IDAPA 58.01.05.009; 40 CFR 265.32(b)]**

27 External communication to summon emergency assistance is typically made via the AMWTP
28 telephone system, vehicle two-way radios, hand-held two-way portable radios, and automatic alarms. In
29 the event of an emergency, the following organizations that may be contacted include: security personnel,
30 the INL Fire Department, and/or the Emergency Operations Center (EOC). See Section G for additional

1 information on reporting requirements. The WCC summons by telephone or pager system any outside
2 emergency response organizations (EROs), as requested by the AMWTP.

3 The AMWTP alarm system is interfaced with the INL Site evacuation system so that INL
4 evacuation alarms are transmitted to personnel within AMWTP controlled areas. An interface with the
5 INL public address system allows voice evacuation notices from the INL to be transmitted throughout the
6 AMWTP.

7 **F-3a(4) Emergency Equipment [IDAPA 58.01.05.009; 40 CFR 265.32(c)]**

8 Adequate spill control equipment, PPE, decontamination equipment, monitoring and survey
9 equipment, and fire control equipment are available, *where required*, to respond to emergencies at the
10 TSA IS Units. A list of emergency equipment available at the TSA IS Units is provided in Section G.

11 **F-3a(5) Fire Protection System [IDAPA 58.01.05.009; 40 CFR 265.32(c)]**

12 Fire protection in the TSA-RE for the TSA IS Units is provided through a combination of smoke
13 detectors, remote and local alarms, automatic fire extinguishing systems (sprinklers), and portable fire
14 extinguishers. The TSA-RE consists of eight dry pipe sprinkler systems, which provide coverage for the
15 TSA IS Units *and WMF-636 Pad 2*. ~~Only four sprinkler systems in the TSA-RE are operational at this~~
16 ~~time, and they cover all of Pad 2 and the southern portions of Pad R. The systems located over the~~
17 ~~northern portion of Pad R and all of Pad 1 are not operational. Portable fire extinguishers are located in~~
18 ~~these areas, should a fire occur.~~

19 **F-3a(6) Water for Fire Control [IDAPA 58.01.05.009; 40 CFR 265.32(d)]**

20 Fire water for the TSA IS Units is supplied by two approximately 250,000-gal water storage tanks
21 fed by a deep well. One of the water storage tanks is dedicated for fire water storage and supplies a
22 dedicated fire water distribution system. The second water storage tank supplies the RWMC potable
23 water distribution system, which can be configured to supply backup fire water to the distribution system
24 as needed. The fire water distribution system runs throughout the TSA to provide fire water supplies to
25 (or in the immediate vicinity of) the TSA IS Units. Fire hydrants are located in the vicinity of the TSA IS
26 Units. The RWMC is able to provide water through the fire water supply system at adequate volume,
27 pressure, and duration to supply fire protection systems and hose streams to successfully fight fires at the
28 TSA IS Units. Details of the fire water supply system are provided below.

29 **Fire Water Storage Tank**

30 The approximately 250,000-gal fire water storage tank (WMF-727) is the primary RWMC water
31 storage tank and is maintained to provide a minimum 2-hour (hr) water supply to meet RWMC's worst
32 case fire demand. Water is discharged directly into the fire water distribution piping system. Both the

1 tank level and water temperature are monitored by the RWMC fire alarm system. A circulation
2 pump/water heating system is provided to move and heat the tank water as needed.

3 **Potable Water Storage Tank**

4 The approximately 250,000-gal potable water storage tank (WMF-709) serves as a backup fire
5 water tank. Both the tank level and water temperature are monitored as part of the RWMC fire alarm
6 system. The potential for water freezing is reduced by recirculating the water, accomplished by using
7 either the domestic pump or the auxiliary electric fire water pump in WMF-603, with a portion of the
8 discharge directed back to the tank.

9 **Water Storage Tank Feed (Deep-Well Pump)**

10 The potable water tank is supplied by a deep well. The deep well pump is controlled
11 automatically by the water level in the potable water storage tank. The fire water tank is supplied from
12 the potable water tank. The domestic pumps in pump house WMF-603 are used to move water from the
13 potable water tank, through a backflow preventer to the fire water tank. The fire water tank can also be
14 filled from the deep well pump if necessary, bypassing the potable water tank.

15 **Fire Water Distribution System**

16 The fire water storage tank discharges to the fire water distribution piping via pumps and a
17 discharge header. The static water pressure is maintained at approximately 135-150 pounds per square
18 inch (psi) throughout the distribution system. Within the TSA, there is a looped fire main system, with
19 8-in. and 10-in. mains with hydrants extending along three major roads to provide adequate fire water for
20 the TSA IS Units.

21 **F-3b Aisle Spacing Requirement [IDAPA 58.01.05.009; 40 CFR 265.35]**

22 After retrieval from the current storage configuration on the asphalt pads, containers may be
23 stored at a designated RWSA within the TSA IS Units while awaiting transportation to other waste
24 management units. All containers are managed in accordance with the configuration and aisle spacing
25 requirements specified in Table F-1.

1 **F-4 Prevention Procedures, Structures, and Equipment**

2 This section is not applicable per 40 CFR 265.

1 **F-5 Prevention of Reaction of Ignitable, Reactive, and Incompatible Waste**

2 The following sections describe precautions taken to prevent waste ignition, reaction, or mixing,
3 and precautions for handling ignitable, reactive, and incompatible wastes.

4 **F-5a Precautions to Prevent Ignition or Reaction of Ignitable or Reactive Waste [IDAPA**
5 **58.01.05.009; 40 CFR 265.17(a)]**

6 Ignitable MWs are accepted and stored at the TSA IS Units. The following precautions are taken
7 to prevent the ignition or reaction of ignitable, reactive, or incompatible waste.

- 8 • Segregated storage of waste known to be incompatible in the RWSA after retrieval from the
9 waste stacks. Typically, incompatibles are only known after a container has been
10 characterized and the contents of the container have been identified; however, a container
11 may be retrieved with sufficient markings/labeling to provide information on the contents of
12 the container. If this is the case, then containers with known incompatibles will be
13 segregated. Segregated storage shall be attained through the use of physical barriers (e.g.,
14 dike, berm, wall, etc.) in order to prevent wastes from co-mingling.
- 15 • Separated storage of “true unknown wastes” through the use of distance in order to prevent
16 waste from co-mingling. “True unknown wastes” are identified as waste with unknown IDCs
17 or WGs following RTR examination or wastes with known IDCs/WGS, but unknown HWNs.
18 Retrieved wastes pending transfer out of the TSA IS Units for characterization are not
19 segregated or separated, unless they are known incompatibles.
- 20 • Most stationary equipment used is grounded, as are the AMWTP units, thereby preventing
21 sparking. Portable electric tools are double insulated, battery operated, or have ground fault
22 interrupter (GFI) circuit protection.
- 23 • Open flame, cutting, welding, or other similar spark or ignition sources are not allowed inside
24 the TSA IS Units- unless repair is required on a piece of equipment, in which case the
25 equipment and the open flame or spark source are isolated to the extent feasible from the
26 waste in storage. All such work is conducted in accordance with a specific procedure or
27 under a cutting and welding permit reviewed by safety personnel. Gas hoses for welding are
28 equipped with flashback prevention.
- 29 • All electrical wiring and equipment complies with applicable NFPA codes.

30 Smoking is allowed outside of the TSA-RE in designated areas only.

1 **F-5b General Precautions for Handling Ignitable or Reactive Waste and Mixing of**
2 **Incompatible Waste [IDAPA 58.01.05.009; 40 CFR 265.17(b)]**

3 The TSA-RE and TSA IS Units design and operating practices prevent reactions which:

- 4 • Generate extreme heat or pressure, fire, explosions, or violent reactions;
- 5 • Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to pose a risk
6 of fire or explosion or to threaten human health or the environment;
- 7 • Damage the structural integrity of the TSA-RE building; and
- 8 • Through other like means, threaten human health or the environment.

9 These practices and design features are intended to separate and protect wastes from sources of
10 ignition, reaction, or spontaneous ignition, as follows:

- 11 • If known incompatible wastes are stored at the TSA IS Units, they are segregated
12 appropriately.
- 13 • All equipment and wiring are Underwriters Laboratory (UL) listed and comply with
14 applicable NFPA codes. Portable electric tools are double insulated, battery-operated, or
15 have GFI circuit protection.
- 16 • Welding or other open flames are not allowed near the stored waste unless necessary to
17 accomplish repairs and special safety precautions have been taken.
- 18 • Routine inspections of the storage areas provide regular assessment of storage conditions and
19 early identification of potentially hazardous situations.
- 20 • Ventilation systems in the TSA IS Units prevent buildup of toxic gasses [e.g., carbon
21 monoxide (CO)] from equipment operation.
- 22 • Malfunctioning equipment is tagged and either locked out or isolated. Tagged equipment is
23 entered onto a tagout/lockout record and indexed to track the date tagged and the date
24 cleared.
- 25 • Should a fire develop in the TSA IS Units, there are detection systems and sprinkler systems
26 that automatically begin operation and, in parallel, summon the INL Fire Department.
- 27 • Wastes are stored in containers that are kept closed at all times, except when adding or
28 removing waste.

1 **F-5c Management of Ignitable or Reactive Wastes in Containers [IDAPA 58.01.05.009;**
2 **40 CFR 265.176]**

3 The facility boundary line is defined as the INL boundary. The RWMC is three miles from the
4 southern INL boundary, which is the closest boundary to the RWMC. Thus, the waste stored at the TSA
5 IS Units is more than 50 ft from the INL boundary. Section B, Exhibit B-1 provides a diagram showing
6 the location of the RWMC relative to the INL boundary.

7 **F-5d Management of Incompatible Wastes in Containers [IDAPA 58.01.05.009; 40 CFR**
8 **265.177]**

9 AMWTP procedures specify that incompatible wastes are not to be placed into the same
10 container. The methods used to ensure that incompatible wastes are not co-mingled are as follows:

- 11 • Waste characterization information is reviewed to ensure incompatible wastes are not placed
12 in the same container during operations.
- 13 • Any waste repackaged at the TSA IS Units is placed into new or clean containers.

SECTION G

CONTINGENCY PLAN

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G. CONTINGENCY PLAN

G-1 General Information [IDAPA 58.01.05.009; 40 CFR 265.51]

This HWMA/RCRA Contingency Plan discusses emergency response for the TSA IS Units. Emergency actions addressed include the protection of human health, the environment, and RWMC/AMWTP buildings and equipment in ~~the an event of a release~~ originating from or affecting the TSA IS Units. The “Emergency Plan/RCRA Contingency Plan for the AMWTP” contains the implementing documents for emergency response for the AMWTP and is written to comply with requirements that are in addition to those of HWMA/RCRA. This Contingency Plan provides the HWMA/RCRA requirements that are being implemented through the “Emergency Plan/RCRA Contingency Plan for the AMWTP.”

The Contingency Plan addresses the actions to be taken to protect human health and the environment at the TSA IS Units, in the event of an emergency. When implemented, the Contingency Plan is designed to minimize the hazards from fires, explosions, or any unplanned significant release of MW, or chemical constituents of the waste to the air, soil, surface water, or groundwater. The Contingency Plan provides for emergency procedures, identifies authorities and responsibilities of emergency response personnel and organizations, and identifies the manpower, equipment and specialized services that are available to manage an emergency situation.

The Contingency Plan is maintained, at a minimum, in the *AMWTP Emergency Control Center* ~~TSA IS Units shift manager’s office~~.

The Contingency Plan applies to all AMWTP personnel who are assigned to the TSA IS Units, support personnel who work at the TSA IS Units, or personnel who are providing assistance during an emergency. The plan also applies to visitors.

At a minimum, the Contingency Plan is amended, if necessary, whenever:

- The HWMA/RCRA TSA IS Documents ~~are~~ modified;
- The plan fails in an emergency;
- The design, construction, operation, maintenance, or other circumstances involving the TSA IS Units change, in a way that materially increases the potential for fires, explosions, or significant releases of MW or waste constituents, or changes the response necessary during an emergency;
- The list of ~~ECs~~ *EAMs* changes; or
- The list of emergency equipment changes.

1 General descriptions of the activities occurring in the TSA IS Units are provided in Sections B
2 and D.

1 **G-2 Emergency Coordinators [IDAPA 58.01.05.009; 40 CFR 265.52(d) and .55]**

2 Table G-1 lists the names, addresses, and telephone numbers of the current AMWTP ~~ECs~~EAMs.

3 The on-duty ~~EC~~EAM is the primary coordinator for emergency response activities. The other
4 ~~ECs~~EAMs assume responsibilities as alternates in the order that they are listed in Table G-1. *The EAM*
5 *must be on call and available to respond to emergencies by reaching the facility within a short period of*
6 *time during the shifts the EAM is designated as the primary EAM.*

7 An ~~EC~~EAM and alternate ~~EC~~EAM shall be designated for every shift of the TSA IS Units
8 operations to provide continuous emergency response management for the TSA IS Units. If an incident
9 overlaps more than one shift, the active ~~EC~~EAM shall maintain the command until responsibility is
10 officially passed to the incoming ~~EC~~EAM.

11 The AMWTP has an ERO that includes the ~~EC~~EAM position. The ~~EC~~EAM has managerial
12 responsibilities and the technical knowledge of the TSA IS Units. The ~~EC~~EAM is knowledgeable of
13 operational activities at the TSA IS Units, building controls and equipment, building layout,
14 characteristics of waste being handled, and the personnel involved with the TSA IS Units. The ~~EC~~EAM
15 also has the authority to commit the necessary resources to implement the Contingency Plan. This
16 knowledge, leadership, and authority allows the ~~EC~~EAM to function quickly and effectively when
17 responding to an emergency incident.

18 The ~~EC~~EAM, or designee, is responsible for:

- 19
- 20 • Ensuring that the emergency procedures are implemented when responding to any incident
21 involving MW to mitigate or eliminate any immediate or potential hazard to personnel and/or
the environment, *and*
 - 22 • Serving as primary lead in coordinating with the INL Fire Department and Emergency
23 Medical Technician (EMT) Services, INL EOC, and the WCC for the proper support from
24 these organizations, ~~as required.~~

Table G-1. AMWTP Emergency Coordinators

Name	Duty Phone	Duty Pager	Home Phone	Home Address
<i>Joel Shokes (Primary/Alternate)</i>	208.557.7311	208.526.4444.7680	208.241.2625	175 Abraham Street Chubbuck, ID 83202
<i>Jeremy Szabo (Primary/Alternate)</i>	208.557.7311	208.526.4444.7347	208.681.7391	374 North 200 East Blackfoot, ID 83221
<i>Pete Hingston (Primary/Alternate)</i>	208.557.7311	208.526.4444.3497	208.932.4618	552 Tyson Avenue Idaho Falls, ID 83401
<i>Brett Stacey (Primary/Alternate)</i>	208.557.7311	208.526.4444.3494	208.528.8262	2862 Bungalow Drive Ammon, ID 83406
<i>Brett Judkins (Primary/Alternate)</i>	208.557.7311	208.526.4444.3492	208.705.8089	3075 West 2500 North Arco, ID 83213
<i>Michael Fogarty (Primary/Alternate)</i>	208.557.7222	208.526.4444.4334	208.542.1372	4019 Nathan Drive Idaho Falls, ID, 83404
<i>Theodore Griffith (Primary/Alternate)</i>	208.557.7975	208.526.4444.5898	208.522.3407	367 Ruth Avenue Idaho Falls, ID 83401
<i>Scot Dickinson (Primary/Alternate)</i>	208.557.7030	208.526.4444.7653	208.523.3760	5519 East 49 North Idaho Falls, ID 83401
<i>Brian Warner (Primary)</i>	208.557.7239	208.526.4444.4334	208.785.7474	154 N. 380 W. Blackfoot, ID 83221
<i>Joel Shokes (Primary)</i>	208.557.7311	208.526.4444.4334	208.238.0834	175 Abraham Street Chubbuck, ID 83202
<i>Rob Hamilton (Primary)</i>	208.557.7311	208.526.4444.4334	208.684.5201	992 West Highway 39 Blackfoot, ID 83221
<i>William Verlanie (Primary)</i>	208.557.7311	208.526.4444.4334	208.785.5234	95 Cone St. Blackfoot, ID 83221
<i>Michael Fogarty (Alternate)</i>	208.557.7222	208.526.4444.4334	208.542.1372	4019 Nathan Drive Idaho Falls, ID, 83404

Note: The above ECs-EAMs listed as Primary are On-Duty according to the schedule maintained by the AMWTP Emergency Planner. Off-Duty Primary and Alternate ECs-EAM's may assume ECEAM duties to relieve an On-Duty ECEAM or to take over in the ECEAM capacity should the On-Duty ECEAM become incapacitated.

The EAM on-shift acts as the primary-EAM, while the EAMs off-shift act as an alternate EAM.

1 **G-3 Implementation [IDAPA 58.01.05.009; 40 CFR 265.52(a) and .56(d)]**

2 The provisions of the Contingency Plan are implemented immediately whenever there is a fire or
3 explosion within the TSA IS Units, or there is ~~an unplanned significant~~ a release of MW constituents that
4 *could* threaten human health or the environment. *The Contingency Plan will also be implemented*
5 *whenever there is a fire outside of a MWMU that has the potential to involve MW or a MWMU.* Such an
6 occurrence (incident) requires classification to aid in expediting the appropriate emergency response.
7 Classification of an occurrence is done in accordance with the AMWTP Occurrence Categorization,
8 Notification, and Reporting Procedure.

1 **G-4 Emergency Response Procedure**

2 **G-4a Notification [IDAPA 58.01.05.009; 40 CFR 265.56(a)]**

3 Regardless of classification, once an event is categorized as an emergency, the ~~EC~~-EAM (or
4 designated representative) immediately notifies all affected personnel at or around the TSA IS Units of
5 the appropriate protective actions by activating the voice paging system, alarm system, and/or radio,
6 phone, or by word-of-mouth.

7 Personnel in the TSA IS Units are notified of an emergency either by radio, phone, word-of-
8 mouth, or by the evacuation and voice paging system. The paging system consists of a manually
9 activated operator control system connected to the AMWTP local and global communications and alarms
10 system.

11 Once activated, the paging system simultaneously distributes the same "page alert tone" (chimes),
12 followed by a voice message, if required, to all speakers connected to the system. The system consists of
13 indoor/outdoor weatherproof paging speakers to distribute the voice message to the TSA IS Units.
14 Additionally, the TSA IS Units ~~are~~is equipped with telephones *and AMWTP personnel have access to two*
15 *way radios* to allow for communications ~~to~~both on- and off-Site for summoning emergency assistance.

16 Monitoring systems (e.g., fire, radiation) in the TSA IS Units are equipped with audible alarms to
17 notify personnel of potential emergencies.

18 During an emergency, the ~~EC~~-EAM informs the INL WCC of an event typically by using either a
19 telephone or two-way radio. Notifications are made to local, state, and/or federal authorities using the
20 telephone and faxed notification forms. The AMWTP ~~EC~~-EAM or the designated alternate ensures that
21 the proper notifications are made in an emergency situation.

22 If it is determined that the TSA IS Units ~~have~~has had a *significant* release, fire, or explosion
23 which could threaten human health or the environment outside the TSA-RE, the AMWTP ~~EC~~-EAM must
24 immediately notify ~~either~~ the government official designated as the On-Scene Commander (OSC) for that
25 geographical area (i.e., the State of Idaho Emergency Management System Communications Center), or
26 the National Response Center. These notifications may also be made by the INL EOC. Appropriate State
27 and/or local agencies with designated response roles will be notified if their help is needed.

28 The agencies that may be notified are:

- 29 • The management and operations (M&O) contractor emergency preparedness duty officer (the
30 M&O contractor emergency preparedness duty officer may direct the WCC to contact the
31 DOE-ID Manager Duty Officer and/or activate the EROs);
- 32 • INL EOC ERO personnel if an alert, site area, or general emergency has been declared;

- 1 • DOE-ID Emergency Management Program Administrator;
- 2 • Other affected INL EROs, as deemed necessary;
- 3 • State, local, and tribal agencies, if help is needed; and
- 4 • DOE Headquarters Emergency Management Team, as deemed necessary.

5 The notification includes the following information:

- 6 • Name and telephone number of reporter;
- 7 • Name and address of the affected TSA IS Unit;
- 8 • Time and type of incident (e.g., release, fire);
- 9 • Name and quantity of material(s) involved, to the extent known;
- 10 • The extent of injuries, if any; and
- 11 • Possible hazards to human health or the environment outside the TSA IS Unit.

12 The ~~EC-EAM~~ or the EOC also recommends to the appropriate local, state, or federal officials
13 whether local areas should be evacuated.

14 **G-4b Identification of Hazardous Materials [IDAPA 58.01.05.009; 40 CFR**
15 **265.56(b)]**

16 ~~A database~~ *The Operating Record* containing information on the waste sent/received ~~at~~ the
17 TSA IS Units ~~is managed by AMWTP personnel. This database~~ *The Operating Record* includes
18 information, to the extent known, relative to the content of each waste container, the generator of the
19 waste, volumes of waste, and locations of waste containers within the TSA IS Units. ~~This database~~ *The*
20 *Operating Record* ~~is accessed~~ *is used* to assist in the identification of waste materials involved in an
21 emergency at the TSA IS Units.

22 Additionally, AMWTP barcodes on containers are scanned as the containers are transferred to,
23 from, and within the TSA IS Units. The container information, to the extent known, is maintained in the
24 Operating Record. The Operating Record accounts for the waste types and provides a real time inventory
25 of waste as it is being processed through the TSA IS Units. In the event of an emergency incident, the
26 Operating Record is used to retrieve information on the waste that may be involved in the incident.

27 Measured or estimated radiological/chemical concentrations in air, soil, and water (mainly
28 contaminated fire water) or on surfaces are used to characterize and identify the magnitude of any
29 released MW constituents. Also, monitoring for radiological and chemical hazards may be performed to
30 track any spread of MW constituents. The data may be collected from fixed and/or portable
31 radiation/chemical monitoring instrumentation.

1 **G-4c Assessment [IDAPA 58.01.05.009; 40 CFR 265.56(c) and (d)]**

2 As feasible, and as safety conditions warrant, information shall be gathered near the scene of the
3 incident to aid in the assessment of an actual or imminent fire, explosion, or significant release of MW so
4 that the appropriate protective actions can be implemented. INL firefighters approach the affected area if
5 incident assessment information is essential to the control of the incident, and only if adequately safe
6 conditions are present and can be maintained. Typically, the AMWTP ~~EC-EAM~~ and supporting personnel
7 gather assessment information, when feasible, from remote locations. The following information can be
8 used to assess the extent and consequences of an incident at the TSA IS Units.

9 Specifics of an Actual Fire, Explosion, or Significant Release of MW:

- 10 • Cause,
- 11 • Area involved,
- 12 • TSA IS Unit conditions, and
- 13 • Type and quantity of MW that may be involved in the incident.

14 Specifics of an Imminent Fire, Explosion, or Significant Release of MW:

- 15 • Equipment or article involved,
- 16 • Probable cause,
- 17 • Estimated area involved,
- 18 • TSA IS Unit conditions and measurements of monitoring instruments, and
- 19 • Location, type, and quantity of nearby MW that could be involved in the incident.

20 Current Conditions that Could Affect the Control or Isolation of an Incident:

- 21 • Status of fire suppression system/alarms;
- 22 • Status of TSA IS Unit equipment controls, safety features, or isolation controls; and
- 23 • Weather conditions (e.g., wind speed and direction, precipitation, temperature, etc.).

24 Exposure Assessments:

- 25 • Type and quantity of the substance initiating a fire/explosion or potential fire/explosion;
- 26 • Type and quantity of MW involved in the incident or potential incident;
- 27 • Duration of a *significant* release of MW (if applicable) and the duration of exposure;
- 28 • Measured or estimated radiological/chemical concentrations in the air, fire water, or surfaces;
29 and
- 30 • Names, total number, location, and condition of exposed persons.

1 If the release involves radiological hazards, the ~~protective~~ *Protective action* ~~Action guide~~ *Guide*
2 (PAG) exposure levels may be used to determine the appropriate response. See Tables G-2 and G-3 for
3 examples of PAG exposure level values. If the release involves chemical hazards, the Emergency
4 Response Planning Guide (ERPG) exposure levels may be used to determine the appropriate response.
5 See Table G-4 for examples of ERPG exposure level values.

6 The EOC is responsible for the continued assessment of the emergency event. In developing
7 protective actions and deciding on mitigative actions, the EOC considers both direct and indirect effects
8 of the *significant* release (e.g., the effects of any toxic, irritating, asphyxiating gases that are generated, or
9 the effects of any hazardous surface water run-off from water or chemical agents used to control fire and
10 heat-inducing explosions).

11 **G-4d Control Procedures [IDAPA 58.01.05.009; 40 CFR 265.52(a)]**

12 **Fire.** A fire at the TSA IS Units may arise from operations involving ignitable MW. A fire may
13 also originate from the ignition of flammable or combustible equipment/fuels and then spread to involve
14 or engulf nearby MW.

15 The TSA IS Units ~~are~~ *is* constructed and designed to avoid the occurrence of a fire or control a fire
16 if one starts. The TSA-RE and TSA IS Units contain fire extinguishers and a manual fire alarm system
17 for notifying the INL Fire Department and use building materials and components that adhere to
18 regulations/codes for fire prevention.

19 **Explosion.** An imminent explosion or actual explosion at the TSA IS Units may be detected by:

- 20 • Gauges, monitors, or instrumentation that indicates an enclosed vessel or line is accumulating
21 an abnormally large build-up of pressure or temperature;
- 22 • Visual identification of a bulging or ruptured drum, cylinder, vessel or line; or
- 23 • An explosion that progresses into fire and smoke, which then activates a fire/smoke alarm
24 within the TSA IS Units.

25 The TSA IS Units ~~have~~ *has* few potential explosive hazards, and safety equipment and work
26 practices reduce the probability of an explosion. An explosion at the TSA-RE or the TSA IS Units may
27 originate from a rupture in a compressed gas cylinder, failure of a liquefied petroleum gas tank, or a break
28 in a high-pressure line/vessel.

29 **Significant Release of MW.** A significant release of MW constituents at the TSA IS Units could
30 result in an exposure to personnel or contamination of the surrounding environment. A significant release
31 could occur from a spill of the MW during retrieval, storing, and/or moving operations. Also, water used
32 to fight fires may become contaminated with MW constituents, imposing additional considerations when
33 disposing of the water. Safe work practices are implemented to further reduce the potential of a MW

1 release. Due to the nature of the conditions under which the containers on the TSA IS Units have been
2 stored, it is expected that releases are a common operational occurrence. For the purposes of this
3 document, a significant release of MW constituents shall require the implementation of this
4 HWMA/RCRA Contingency Plan. Releases within the TSA-RE and TSA IS Units are classified in
5 various groups, as defined in Section D. See Section D for further information on the classification of a
6 release.

7 Released or residual waste (from a fire or explosion) that cannot be identified by labels, records,
8 logbooks, identification numbers, or the Operating Record are sampled and analyzed to determine the
9 chemical properties of the waste. The resulting information is used to determine the proper disposition of
10 the waste.

11 **Off-Site Services.** If AMWTP personnel cannot extinguish a fire during the incipient stage, or an
12 explosion or imminent explosion is detected, or a significant release of MW occurs at the TSA IS Units
13 that requires the support of off-Site firefighting/hazardous material (HAZMAT) services, the INL Fire
14 Department and, if needed, off-Site firefighting services are summoned for assistance. When the INL
15 Fire Department or off-Site firefighting services respond, the tactical fire/explosion/release prevention
16 and mitigation responsibilities are transferred to the responding senior INL Fire Department official. The
17 Senior INL Fire Department official assumes the authorities and commensurate responsibilities of the
18 OSC. Upon completion of mitigation activities, on-scene control may be returned to AMWTP
19 Operational Management.

20 **G-4e Prevention of Recurrence or Spread of Fires, Explosions, or Releases**
21 **[IDAPA 58.01.05.009; 40 CFR 265.56(e) and (f)]**

22 The AMWTP ~~EC-EAM~~ is responsible for taking all reasonable measures necessary to ensure
23 fires, explosions, and significant releases do not occur, recur, or spread to other wastes at the TSA IS
24 Units. These measures may include, where applicable, stopping processes and operations, collecting and
25 containing released waste constituents, and removing or isolating containers.

26 The AMWTP ~~EC-EAM~~ is also responsible for ensuring that the TSA IS Units and equipment
27 contained within are monitored (as practical) for pressure build-up, gas generation, or rupture in valves,
28 pipes, or other equipment.

29 The INL Fire Department is the primary responder to all fire and emergency situations at the
30 RWMC, including the various AMWTP MWMUs.

31 **Fires.** The TSA IS Units ~~have~~ has many pre-engineered features that reduce the likelihood for a
32 fire to occur, recur, or spread to other wastes contained within the building. The TSA IS Units ~~are~~ is
33 equipped with a fire extinguishing system (*sprinklers*), fire extinguishers, and manual fire alarms.

1 Additional measures include careful management of flammable, combustible, and oxidizable waste or
2 building materials; safe isolation of ignitable sources; and the establishment of safe work practices.

3 **Explosions.** Only existing wastes stored at the TSA IS Units and sealed containers have the
4 potential for hydrogen gas build-up, which could result in an explosion. Unvented, sealed containers with
5 the potential for pressure build-up are stored in the TSA IS Units prior to venting in the TSA-RE, the
6 drum vent system (WMF-634), or the drum venting facility (WMF-615). In order to prevent pressure
7 build-up due to radiolytically generated gas, filters are inserted into drums in one of the drum venting
8 units. The drum venting unit in the TSA-RE is a manually operated piece of equipment that inserts a
9 filter into the drum lid. See the AMWTP HWMA/RCRA ~~Storage~~ Permit for additional information on
10 the WMF-634 and WMF-615 venting units. The following steps are implemented, as necessary, in
11 response to an explosion at one of the TSA IS Units:

- 12 • Ensure notification to the INL Fire Department,
- 13 • Shut down equipment operating in the TSA IS Units,
- 14 • Evacuate the immediate area of the explosion, and
- 15 • Implement applicable emergency response procedures, as appropriate.

16 **Significant Releases.** A significant release of MW materials at the TSA IS Units is prevented or
17 controlled through effective design and installation of monitoring equipment, safe and controlled handling
18 of waste containers, careful management of waste throughout the TSA IS Units, and the establishment of
19 safe work practices.

20 **G-4f Storage and Treatment of Released Materials [IDAPA 58.01.05.009;**
21 **40 CFR 265.56(g)]**

22 Waste resulting from the cleanup of a fire, explosion, or release of MW is contained and managed
23 as a HWMA/RCRA-regulated waste, until such time that it can be determined otherwise. In most cases
24 the MW inventory, as part of the Operating Record, and process knowledge allow a determination of the
25 waste constituents. When necessary, however, samples of the waste may be collected and analyzed to
26 determine applicable HWNs. Typically, EPA-approved sampling and analytical methods are used.

27 **G-4g Incompatible Waste [IDAPA 58.01.05.009; 40 CFR 265.56(h)(1)]**

28 In the event of a significant waste release, the ~~EG-EAM~~ ensures that no wastes are received,
29 treated, or stored in the affected areas until cleanup operations have been completed. This procedure
30 ensures that incompatible wastes are not present in the vicinity of the significant release.

31 Abatement and cleanup waste generated as the result of a spill or release is evaluated to determine
32 its compatibility with other wastes being managed in the storage areas. The evaluation identifies the

1 material or waste that is spilled or released and determines its characteristics (e.g., ignitable, reactive,
2 corrosive, and toxic). The waste generated by the abatement and cleanup activities are stored in that part
3 of the storage area of the TSA IS Unit that has been established to manage wastes with which it is
4 compatible.

5 Additional controls are implemented (as necessary) to ensure segregation/separation of wastes, as
6 required.

7 The AMWTP ~~EC-EAM~~ does not allow MW operations to resume in the TSA IS Units if
8 significant amounts of incompatible wastes/materials have been released, before ensuring that necessary
9 post-emergency cleanup operations to remove potentially incompatible wastes/materials are completed.
10 *Operations not associated with a leak/spill in a specific area may continue while the leak/spill is*
11 *mitigated. For example, should a leak/spill occur on the south side of Pad R, operations may still be able*
12 *to continue on Pad I.*

13 **G-4h Post-Emergency Equipment Maintenance [IDAPA 58.01.05.009; 40 CFR**
14 **265.56(h)(2)]**

15 The AMWTP ~~EC-EAM~~ ensures that emergency equipment is available and ready for its intended
16 use before operations resume. Any equipment that cannot be decontaminated may be discarded.
17 Equipment or supplies that cannot be reused following an emergency are replaced. After the equipment
18 has been cleaned, repaired, or replaced, a post-emergency TSA IS Unit and equipment inspection is
19 performed, and the results are recorded in the Operating Record.

20 Cleaning and decontamination of equipment may be accomplished using non-hazardous
21 materials, whenever possible, by physically removing gross or solid residue, rinsing with water or another
22 non-hazardous liquid, and/or washing with detergent and water.

23 Decontamination and cleaning may be conducted in a confined area that is isolated from the
24 environment. Care is taken to prevent wind dispersion of particles and spray. Liquid or particulate
25 resulting from cleaning and decontamination of equipment is placed in clean, compatible containers.

26 After AMWTP personnel have completed any post-emergency cleanup of waste and waste
27 residues from areas where TSA IS Unit operations are ready to resume, and the AMWTP ~~EC-EAM~~ has
28 ensured that all emergency equipment used in managing the emergency has been cleaned or replaced and
29 is ready for use, notifications are made to the following: EPA Regional Administrator, the Director of the
30 Idaho DEQ, and any relevant local authorities. This post-emergency notification complies with IDAPA
31 58.01.05.009 [40 CFR 265.56(i)].

1 **G-4i Container Spills and Leakage [IDAPA 58.01.05.009; 40 CFR 265.52(b),**
2 **265.171, and 265.175(b)]**

3 Storage areas and containers at the TSA IS Units are inspected per a set schedule, as described in
4 Section F-2. Corrective or mitigative action is taken when container integrity is significantly deteriorated
5 or compromised.

6 Additionally, AMWTP personnel can repair, repack, or overpack a leaking container, or place
7 it in a drip pan before repairing, repackaging, or overpacking, to prevent continued leakage into a storage
8 area that may affect other stored wastes. Damaged or leaking containers are repaired, repackaged, or
9 overpacked before acceptance for storage in the TSA IS Units.

Table G-2. Example Protective Action Guides on Dose Limits for Workers Performing Emergency Services

Dose Limit^a (rem)	Activity	Condition
5 (0.05 sieverts)	All emergency services	None
10 (0.1 sieverts)	Protecting valuable property	Where lower dose not practicable
25 (0.25 sieverts)	Lifesaving or protection of large populations	Where lower dose not practicable
>25 (>0.25 sieverts)	Lifesaving or protection of large populations	Only on a voluntary basis to persons fully aware of the risks involved

- a. Sum of the external effective dose equivalent and the committed effective dose equivalent to non-pregnant adults from exposure and intake during an emergency situation. Workers performing services during emergencies should limit the dose to the lens of the eye to 3 times the listed values and the dose to any other organ (including skin and extremities) to 10 times the listed value. The limits apply to all doses from an incident, except those received in unrestricted areas as members of the public during the intermediate phase of the incident. No specific upper limit is given for thyroid exposure.

Table G-3. Protective Action Guides for the Early Phase of a Nuclear Incident

Protective Action	PAG (Projected Dose)	Comments
Evacuation (or sheltering) ^a	1-5 rem ^b (0.01 – 0.05 sieverts)	Evacuation (or for some situations, sheltering) should normally be initiated at 1 rem.
Evacuation (or sheltering) ^a	1-10 rem ^b (0.01 – 0.1 sieverts)	Where evacuation is impractical or for particularly vulnerable populations (e.g., those who are not readily mobile).
Evacuation (or sheltering) ^a	50-250 rem (skin) (0.5 – 2.5 sieverts)	Exposure to the skin should seldom, if ever, be the controlling pathway for protective action.

- a. Sheltering may be the preferred protective action when it will provide protection equal to or greater than evacuation based on consideration of factors, such as source term characteristics and temporal or other Site specific conditions.
- b. The sum of the effective dose equivalent resulting from exposure to external sources and the committed effective dose equivalent from all significant inhalation exposure pathways during the early phase.

Table G-4. Example Emergency Response Planning Guides

Chemical	ERPG-1	ERPG-2	ERPG-3
Acrolein	0.1 ppm	0.5 ppm	3 ppm
Acrylic Acid	2 ppm	50 ppm	750 ppm
Allyl Chloride	3 ppm	40 ppm	300 ppm
Ammonia	25 ppm	200 ppm	1000 ppm
Benzyl Chloride	1 ppm	10 ppm	25 ppm
Bromine	0.2 ppm	1 ppm	5 ppm
1,3-Butadiene	10 ppm	50 ppm	5000 ppm
n-Butyl Isocyanate	0.01 ppm	0.05 ppm	1 ppm
Carbon Disulfide	1 ppm	50 ppm	500 ppm
Carbon Tetrachloride	20 ppm	100 ppm	750 ppm
Chlorine	1 ppm	3 ppm	20 ppm
Dimethylamine	1 ppm	100 ppm	500 ppm
Formaldehyde	1 ppm	10 ppm	25 ppm
Hydrogen Chloride	3 ppm	20 ppm	100 ppm
Hydrogen Cyanide	NA	10 ppm	25 ppm
Hydrogen Fluoride	5 ppm	20 ppm	50 ppm
Hydrogen Sulfide	0.1 ppm	30 ppm	100 ppm
Isobutyronitrile	10 ppm	50 ppm	200 ppm
Methanol	200 ppm	1000 ppm	5000 ppm
Methyl Chloride	NA	400 ppm	1000 ppm
Phenol	10 ppm	50 ppm	200 ppm
Phosgene	NA	0.2 ppm	1 ppm
Sulfur Dioxide	0.3 ppm	3 ppm	15 ppm
Sulfuric Acid (Oleum, Sulfur Trioxide, and Sulfuric Acid)	2 mg/m ³	10 mg/m ³	30 mg/m ³
Tetrafluoroethylene	200 ppm	1000 ppm	10,000 ppm
Trimethylamine	0.1 ppm	100 ppm	500 ppm
Vinyl Acetate	5 ppm	75 ppm	500 ppm

ERPG-1: The maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to 1 hr without experiencing other than mild transient adverse health effects or perceiving a clearly defined objectionable odor.

ERPG-2: The maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to 1 hr without experiencing or developing irreversible or other serious health effects that could impair their ability to implement protective action determinations.

ERPG-3: The maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to 1 hr without experiencing or developing life-threatening health effects.

NA = not applicable

ppm = parts per million

m³ = cubic meter

mg/m³ = milligram per cubic meter

Note: In the event a hazardous substance involved in an incident does not have a published ERPG value, protective action determinations are formed based on the best readily available technical information.

1 **G-5 Emergency Equipment [IDAPA 58.01.05.009; 40 CFR 265.52(e)]**

2 The types, locations, and capabilities of emergency equipment available in the TSA IS Units are
3 listed in Table G-5.

4 Communications systems used by the AMWTP include commercial telephone, commercial
5 cellular telephones, and radio networks. These communications systems, though not dedicated to
6 emergency response, are available at the RWMC/AMWTP to provide prompt communications.

7 The RWMC/AMWTP evacuation siren and take-cover alarm, as well as the emergency voice
8 paging system, are operated from any one of the emergency notification system control panels located in
9 WMF-637, WMF-620, WMF-610, WMF-601, WMF-685 and the Operator Control Stations in WMF-634
10 and WMF-636. Take-cover and evacuation alarms are audible in all areas of the TSA IS Units.

Table G-5. Emergency Equipment for the TSA IS Units

Location	Equipment
<p>Pad 2 (South Wall) Portable Air Lock Enclosure Pad R (Center of South Wall) Pad R (Near Door 12) Pad R (Near Door 13) Pad R (Near Door 14) Pad R (Near Door 16) Pad 1 (Near Door 20) Pad 1 (Near Door 22)</p>	<p>Fire Extinguishers (ABC Type)</p>
<p>Pad 2 (South Wall) Pad R (Center of South Wall)</p>	<p>Spill Response Equipment</p> <ul style="list-style-type: none"> • Acid Neutralizer, • Caustic Neutralizer, • Solvent Absorber, • Vermiculite/absorbent, • Spill Disposal Plastic Bags, • Scraper/scoop, • pH Paper, • Shovel/Broom, • Spill Pads

1 **G-6 Coordination Agreements [IDAPA 58.01.05.009; 40 CFR 265.52(c) and .37]**

2 The AMWTP has access to INL resources, such as on-Site security, medical, and fire assistance,
3 on a 24-hr basis. The INL Fire Department would be the primary initial responder to an emergency event
4 originating at the TSA IS Units.

5 If additional resources are necessary, off-Site assistance is requested through the AMWTP and/or
6 INL EOC. Off-Site interfaces for providing emergency response support are coordinated through
7 DOE-ID. DOE-ID has mutual aid agreements in place with federal, state, local, and tribal agencies that
8 define cooperative emergency policies and procedures and the roles of the participants. A listing of these
9 agreements is included in Table G-6.

10 Copies of the Contingency Plan are provided to the local police, fire departments, and emergency
11 response personnel (i.e., hospitals, paramedics, etc.). These agencies are provided the opportunity to
12 participate in on-Site and off-Site drills and exercises, which include walkthroughs and orientation
13 sessions, to familiarize them with the layout of the TSA IS Units, properties of waste handled at the TSA
14 IS Units, associated hazards and locations where personnel would normally be working, entrances to and
15 roads inside the TSA IS Units, and possible evacuation routes.

16 Area hospital personnel participate in orientation sessions to familiarize them with the properties
17 of wastes handled at the AMWTP TSA IS Units and the types of injuries or illnesses that might occur
18 from fires, explosions, or the release of wastes.

Table G-6. Off-Site Agencies Having Memorandum of Agreements/Memorandum of Understandings with the INL

Item #	Title	Executed Date	Expiration Date
1	<i>Memorandum of Understanding Between State of Idaho and U.S. Department of Energy Idaho Operations Office Radiological Assistance Response for DOE and/or Non-DOE Incidents in Public Access Areas</i>	01/07/94	None ^a
2	<i>Memorandum of Understanding Between U.S. Department of Energy Idaho Operations Office and the State of Idaho for INEEL Radiological Emergency Preparedness and Response</i>	12/20/02	None ^a
3	<i>Memorandum of Understanding By and Between United States Department of Energy Idaho Operations Office and Bingham County Sheriff's Office</i>	10/25/04	10/25/09
4	<i>Memorandum of Understanding By and Between United States Department of Energy Idaho Operations Office and Bonneville County Sheriff's Office</i>	10/06/04	10/06/09
5	<i>Memorandum of Understanding By and Between United States Department of Energy Idaho Operations Office and Butte County Sheriff's Office</i>	10/12/04	10/12/09
6	<i>Memorandum of Understanding By and Between United States Department of Energy Idaho Operations Office and Clark County Sheriff's Office</i>	09/23/04	09/23/09
7	<i>Memorandum of Understanding By and Between United States Department of Energy Idaho Operations Office and Jefferson County Sheriff's Office</i>	09/23/04	09/23/09
8	<i>Memorandum of Understanding By and Between United States Department of Energy Idaho Operations Office and City of Idaho Falls, Idaho Police Department</i>	10/26/04	None ^a
9	<i>Memorandum of Understanding By and Between United States Department of Energy Idaho Operations Office and Bingham County Emergency Management Services</i>	09/23/04	09/23/09
10	<i>Memorandum of Understanding By and Between United States Department of Energy Idaho Operations Office and Bonneville County Emergency Management Services</i>	09/23/04	09/23/09
11	<i>Memorandum of Understanding By and Between United States Department of Energy Idaho Operations Office and Butte County Emergency Management Services</i>	09/23/04	09/23/09
12	<i>Memorandum of Understanding By and Between United States Department of Energy Idaho Operations Office and Clark County Civil Defense</i>	09/23/04	09/23/09
13	<i>Memorandum of Understanding By and Between United States Department of Energy Idaho Operations Office and Jefferson County Emergency Management Services</i>	11/16/04	11/16/09
14	<i>Memorandum of Understanding By and Between United States Department of Energy Idaho Operations Office and Eastern Idaho Regional Medical Center</i>	02/13/06	02/13/11
15	<i>Memorandum of Understanding By and Between United States Department of Energy Idaho Operations Office and Bingham Memorial Hospital</i>	01/09/06	01/09/11
16	<i>Agreement-in-Principle Between the Shoshone-Bannock Tribes and the United States Department of Energy</i>	09/27/00	None ^a

Table G-6. Off-Site Agencies Having Memorandum of Agreement/Memorandum of Understanding with the INL (continued)

<i>Item #</i>	<i>Title</i>	<i>Executed Date</i>	<i>Expiration Date^a</i>
17	<i>Memorandum of Understanding By and Between United States Department of Energy Idaho Operations Office and the Idaho Transportation Department</i>	<i>10/11/01</i>	<i>None^a</i>
18	<i>Annual Operating Plan for Mutual Fire Aid 2005 Between Idaho National Lab Fire Department and Bureau of Land Management, Department of Interior, Idaho Falls District, Caribou/Targhee National Forest Department of Agriculture</i>	<i>05/06/05</i>	<i>None^a</i>
19	<i>Environmental Oversight and Monitoring Agreement (Agreement in Principle) Between the United States Department of Energy and the State of Idaho</i>	<i>09/29/00</i>	<i>None^a</i>
20	<i>Interagency Agreement By and Between United States Department of Energy Idaho Operations Office and National Park Service</i>	<i>05/09/02</i>	<i>None^a</i>
21	<i>Reciprocal Fire Fighting Assistance Agreement Between U.S. Department of Energy and Rexburg City/Madison County Fire Department, City of Arco Fire Department, City of American Falls Fire Department, City of Blackfoot Fire Department, City of Chubbuck Fire Department, Jefferson Central Fire District, City of Pocatello Fire Department, City of Rigby Fire Department, Lost River Fire District, City of Ammon Fire Department, Shelley/Firth District, Fort Hall Fire Protection District, West Jefferson Fire Department, South Custer Rural Fire District, North Custer Rural Fire District, Hamer Volunteer Fire Department</i>	<i>05/29/01</i>	<i>None^a</i>
22	<i>Memorandum of Understanding By and Between United States Department of Energy Idaho Operations Office and City of Idaho Falls Fire Department Reciprocal Fire Fighting Assistance Agreement</i>	<i>01/30/02</i>	<i>None^a</i>
23	<i>Cooperative Fire Control Agreement for Mutual Fire Aid Between U.S. Department of Energy Idaho Operations Office and United States Department of Agriculture Salmon-Challis National Forest</i>	<i>10/13/99</i>	<i>None^a</i>
24	<i>Memorandum of Agreement Between the Naval Reactors Facility and Department of Energy Fire Department Idaho National Engineering and Environmental Laboratory</i>	<i>01/09/01</i>	<i>None^a</i>

1 a. The memorandum of agreement/memorandum of understanding does not have a set expiration date. The
2 executed agreement/memorandum is typically reviewed after five years and may be modified/extended per
3 agreement between the parties.

Title
Memorandum of Understanding between the State of Idaho and DOE ID Radiological Assistance Response for DOE and/or Non-DOE Incidents in Public Access Areas.
Memorandum of Understanding between the Bingham County Sheriff's Department and DOE ID.
Memorandum of Understanding between the Bonneville County Sheriff's Department and DOE ID.
Memorandum of Understanding between the Butte County Sheriff's Department and DOE ID.
Memorandum of Understanding between the Clark County Sheriff's Department and DOE ID.
Memorandum of Understanding between the Jefferson County Sheriff's Department and DOE ID.
Memorandum of Understanding between Bingham County Disaster Services and DOE ID.
Memorandum of Understanding between Bonneville County Emergency Management Services and DOE ID.

Memorandum of Understanding between Butte County Emergency Services and DOE ID.
Memorandum of Understanding between Clark County Civil Defense and DOE ID.
Memorandum of Understanding between Jefferson County Civil Defense and DOE ID.
Memorandum of Understanding between DOE ID and Bannock Regional Medical Center.
Memorandum of Understanding between DOE ID and Eastern Idaho Regional Medical Center.
Memorandum of Understanding between DOE ID and Pocatello Regional Medical Center.
Memorandum of Understanding between DOE ID and Bingham Memorial Hospital.
Working Agreement between DOE ID and the Shoshone-Bannock Tribes.
Memorandum of Understanding between DOE ID and the Idaho Transportation Department.
Memorandum of Understanding for Mutual Fire Aid between DOE INEL and the Upper Snake River Ecosystem Bureau of Land Management.
Environmental Oversight and Monitoring Agreement between DOE and the State of Idaho.
Interagency Agreement between the U.S. Department of Energy Idaho Operations Office and the National Park Service.
Reciprocal Fire Fighting Assistance Agreement between Rexburg City/Madison County Fire Department, City of Arco Fire Department, City of American Falls Fire Department, City of Blackfoot Fire Department, City of Chubbuck Fire Department, Jefferson Central Fire District, City of Pocatello Fire Department, City of Rigby Fire Department, and Shelley/Firth Fire District and DOE ID.
Reciprocal Fire Fighting Assistance Agreement between the City of Idaho Falls and DOE ID.
Mutual Fire Aid between U.S. Department of Agriculture Salmon-Challis National Forest and DOE ID.

1 **G-7 Evacuation Plan [IDAPA 58.01.05.009; 40 CFR 265.52(f)]**

2 Personnel are notified to take cover and/or evacuate by alarms and voice paging messages.
3 Evacuation routes are through the nearest unobstructed emergency exit. Exhibit G-1 provides the location
4 of evacuation routes for AMWTP personnel at the RWMC.

5 AMWTP personnel are notified of an emergency by the internal communications and alarm
6 system (voice or signal). This system is connected to and compatible with the existing RWMC
7 communications and alarm system. Different audible signals are sounded for fire or building evacuation.

8 The evacuation routes for the TSA IS Units are through the nearest personnel exit or egress doors.
9 Exhibit G-2 shows evacuation routes and the locations of the personnel egress doors in the TSA IS Units.
10 The TSA IS Units layout provides adequate emergency evacuation routes through aisles around stored
11 waste. Upon evacuating the TSA IS Units, personnel exit the RWMC through the south gate designated
12 for the AMWTP, unless directed otherwise. Personnel evacuate to a designated assembly area, normally
13 the south gate evacuation assembly area. During an evacuation of the RWMC or the AMWTP, AMWTP
14 personnel typically use buses or privately owned vehicles to evacuate the site.

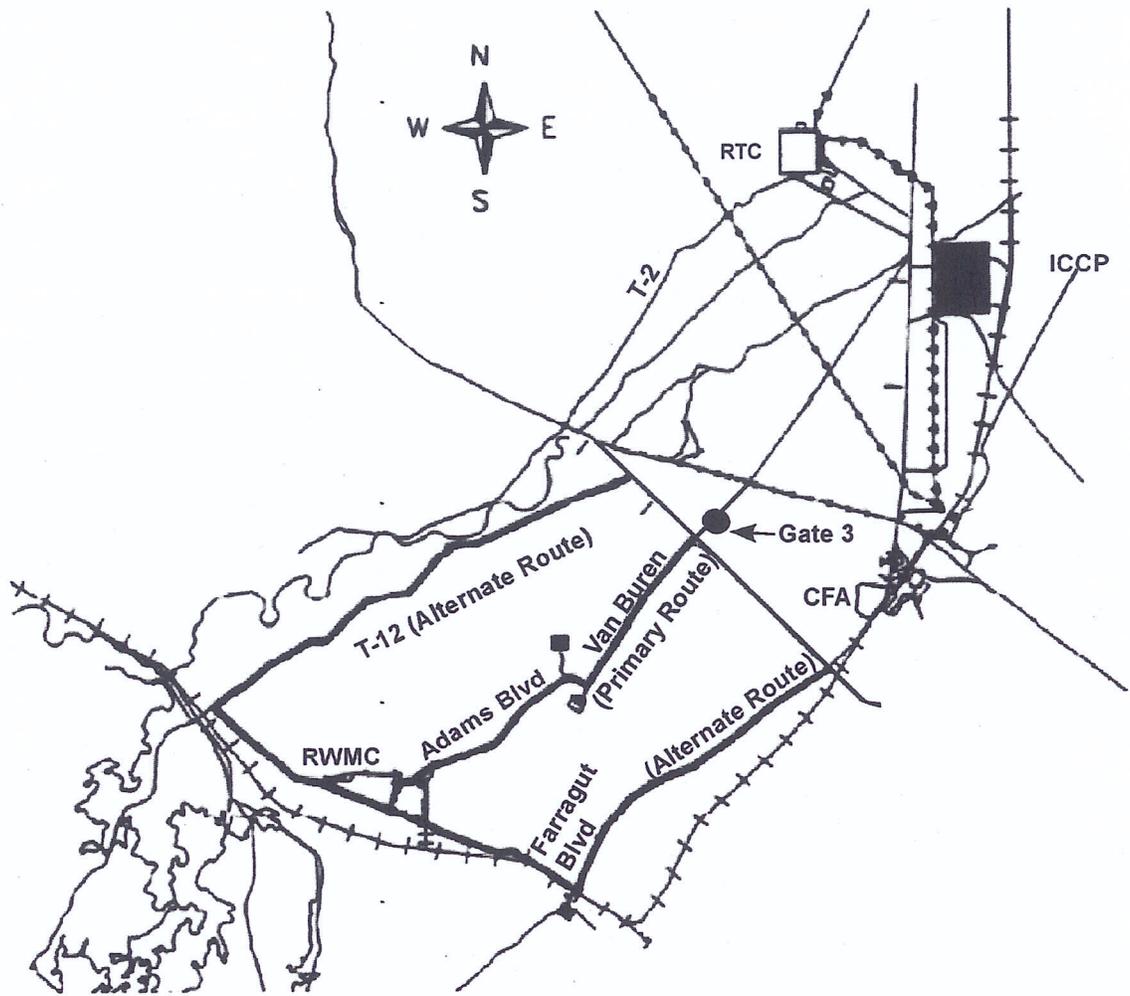
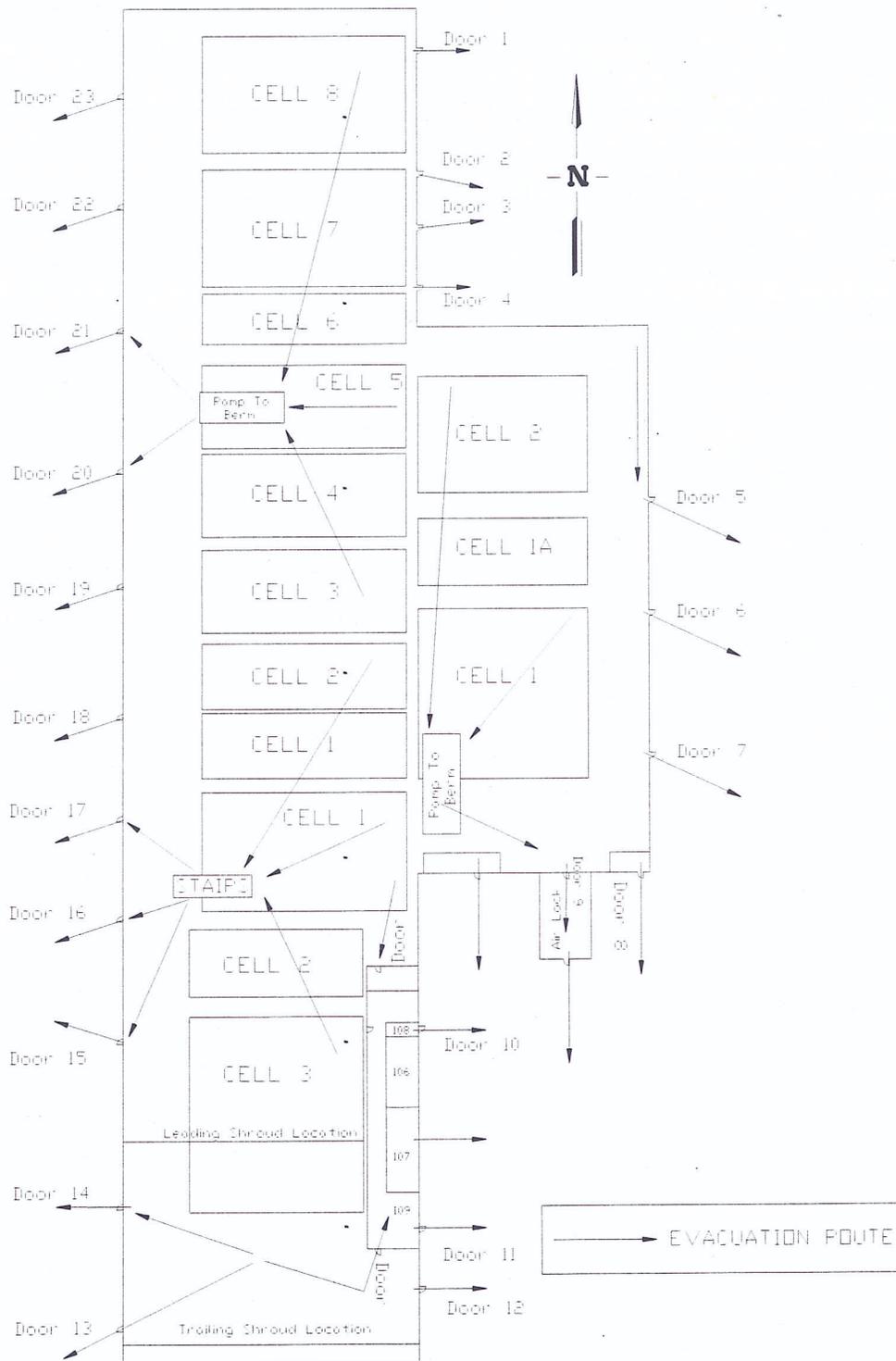


Exhibit G-1. AMWTP Evacuation Routes



Note: WMF-636 Pad 2 is shown for informational purposes only.

Exhibit G-2. Evacuation Routes for the TSA IS Units

1 **G-8 Required Reports [IDAPA 58.01.05.009; 40 CFR 265.56(j)]**

2 Emergency logs and records are considered part of the Operating Record and are maintained per
3 IDAPA 58.01.05.009 (40 CFR 265.73). Information is used to provide the details necessary to submit a
4 written report on the incident, if necessary, to the Director of the Idaho DEQ and the EPA Regional
5 Administrator within 15 days of the event.

6 Such reports include, as a minimum, the following:

- 7 • Name, address, and telephone number of the MWMU owner or operator;
- 8 • Name, address, and telephone number of the MWMU;
- 9 • Date, time, and type of incident (e.g., fire, explosion);
- 10 • Name and quantity of material(s) involved;
- 11 • Extent of any injuries, if any;
- 12 • Assessment of any actual or potential hazards to human health or the environment; and
- 13 • Estimated quantity and disposition of material recovered from the incident.

SECTION H

PERSONNEL TRAINING

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H. PERSONNEL TRAINING

H-1 Outline of the Training Plan [IDAPA 58.01.05.009; 40 CFR 265.16(a)(1)]

This section describes the Training Plan for the AMWTP personnel who work at the TSA IS Units. This Training Plan assists AMWTP personnel in performing their assigned duties in a safe manner, and it includes the required introductory and continuing training. The required training is tailored to each position title responsible for management of MW to cover the various tasks and responsibilities of the AMWTP personnel. Successful implementation of the Training Plan enhances the overall safety program and contributes to safe operations involving MW at the TSA IS Units. The Training Plan satisfies the requirements of IDAPA 58.01.05.009 (40 CFR 265.16) and 29 CFR 1910.120 (p).

Personnel involved in MW handling, management, and operations at the TSA IS Units participate in a comprehensive Training Plan. In general, these employees receive training on operations, proper handling and management of MW, emergency response procedures, and other HWMA/RCRA related topics.

The following section outlines the Training Plan for employees involved in MW management, handling, or operations at the TSA IS Units. The training consists of a combination of self-study, classroom instruction, computer-based training, and on-the-job training (OJT) in conjunction with qualification programs. Qualified personnel who have expertise in the subject provide the OJT.

H-1a Job Title/Job Description [IDAPA 58.01.05.009; 40 CFR 265.16(d)(1) and (d)(2)]

The AMWTP Training Organization maintains the following documents as part of the Operating Record:

- The job title and position description, including requisite skills, education, qualifications, and duties for each position related to the management of MW and the names of the employee filling each job.
- Written descriptions of the type and amount of both introductory and continuing training required by each person filling a job position involved with the management of MW at the TSA IS Units.

- 1 • Records that document that the minimum training and qualification requirements for the
2 AMWTP personnel involved with management of MW have been successfully completed.

3 **H-1b Training Plan Content, and Scheduling [IDAPA 58.01.05.009; 40 CFR**
4 **265.16(c) and 265.16(d)(3)]**

5 The Training Director, or designee, ensures all AMWTP personnel working at the TSA IS Units
6 are appropriately trained prior to initiating any work that may cause the employee to be potentially
7 exposed to MW. The Training Director, or designee, with assistance from management, is responsible for
8 the scheduling and completion of all required training. All AMWTP personnel directly involved with
9 activities at the TSA IS Units receive access orientation. Access orientation is designed to familiarize all
10 employees with the information and protocols necessary to maintain a safe work environment within the
11 TSA IS Units. Access orientation covers:

- 12 • General description of the TSA IS Units,
13 • Waste management activities performed in *the* TSA IS Units,
14 • Contingency Plan contents,
15 • Access and security requirements, and
16 • Hazards associated with the TSA IS Units.

17 The Contingency Plan training addresses emergency equipment use, availability, and locations;
18 alarms, evacuation procedures and routes; and other relevant emergency procedures.

19 AMWTP personnel receive annual HWMA/RCRA refresher training. This training is
20 conducted to ensure that facility personnel are able to respond effectively to emergencies by
21 familiarizing them with emergency procedures, emergency equipment, emergency systems, and
22 other relevant topics.

23 AMWTP personnel working at the TSA IS Units also receive additional training if their job
24 involves potential exposure to MW. These workers receive Hazardous Waste Operations and Emergency
25 Response (HAZWOPER) training for treatment, storage, or disposal (TSD) facilities (24-hr initial), as
26 specified in 29 CFR 1910.120(p).

27 Additionally, some AMWTP personnel involved in MW operations, described at 29 CFR
28 1910.120 (p) may receive training in:

- 1 • Respirator use and fit test,
- 2 • Radiation worker training,
- 3 • First aid, and
- 4 • Cardiopulmonary resuscitation (CPR).

5 AMWTP personnel in craft operations and certain technicians receive specialized training in the
6 areas applicable to their job assignments. This training is required for acquiring and maintaining
7 certification in their trade, or validating proficiency to perform certain tasks. Certification/Proficiency
8 training may be required for personnel responsible for such duties as fitters, mechanics, electricians,
9 equipment operators, instrument technicians, vehicle technicians, and waste handling operators.

10 Personnel may be given written and/or oral examinations, operational evaluations, and reviews to
11 ensure that they are adequately trained commensurate to their job positions. Examinations and
12 evaluations meet performance-based training criteria. Results of examinations, evaluations, and reviews
13 are documented. Completed checklists, examinations, and evaluations are placed in each individual's
14 training record.

15 Occasionally, AMWTP personnel attend training classes conducted by outside vendors. In order
16 to verify personnel attendance at such a course, a copy of the class certification or other documentation is
17 maintained in the training files.

18 **H-1c Training Director [IDAPA 58.01.05.009; 40 CFR 265.16(a)(2)]**

19 The AMWTP Training Director, or designee, is responsible for fulfilling the requirements of the
20 Training Director as specified at IDAPA 58.01.05.009 [40 CFR 265.16(a)(2)]. The Training Director, or
21 designee, is responsible for ensuring that personnel at the AMWTP are trained in programs and
22 procedures for management of MW, environmental requirements, industrial and radiation safety,
23 Contingency Plan, operational skills, and technical training.

24 The Training Director, or designee, is responsible for the development or approval of the training
25 courses provided to AMWTP employees. The Training Director, or designee, reviews lesson plans and
26 instructor's qualifications to validate the acceptance of the training course.

27 The Training Director, or designated trainers, is/are qualified to instruct AMWTP personnel about
28 the subject matter that is being presented in training. Such trainers have satisfactorily completed a

1 Training Plan for teaching the subject(s), or they have the academic credentials and instructional
2 experience necessary for teaching the subject(s).

3 The Training Director and designated trainers are trained in MW management procedures. The
4 Training Director, or designee, ensures the MW management training (including training on the
5 implementation of the Contingency Plan) is provided to the AMWTP personnel that are working at the
6 TSA IS Units and that the training is relevant to the positions in which they are assigned. The Training
7 Director, or designee, is trained and qualified in the management of MW. In addition, the Training
8 Director, or designee, provides overall leadership and management direction to the AMWTP training
9 organization. The Training Director's, or designee's, duties include the following:

- 10 • Provide direction to the training organization,
- 11 • Ensure training personnel performance is evaluated,
- 12 • Provide direction for and approval of the AMWTP Training Plan,
- 13 • Ensure AMWTP personnel receive training appropriate to their positions,
- 14 • Ensure all program objectives and requirements are satisfied, and
- 15 • Ensure the Training Plan meets the requirements of IDAPA 58.01.05.009 (40 CFR 265.16)
- 16 and 29 CFR 1910.120.

17 **H-1d Relevance of Training to Job Position [IDAPA 58.01.05.009; 40 CFR**
18 **265.16(a)(2)]**

19 Individual Training Plan or Qualification Package profiles are prepared for each AMWTP
20 position description that requires a formal Training Plan. Each profile serves as a training guide to
21 identify the minimum requirements for achieving and maintaining required qualifications and
22 certifications. The profile also serves as a checklist to ensure training record completeness. Training
23 requirements for each position are maintained in the Operating Record.

24 At a minimum, each individual Training Plan identifies the following:

- 25 • Job description,
- 26 • Qualifications, and
- 27 • Training requirements.

28 Profiles identify typical qualification and certification requirements. Some positions may require
29 specialized training (e.g., HWMA/RCRA Secondary Containment System Repair Procedure, Container

1 Repair Procedure, etc.). Special-case training is documented in the training records. Profiles include
2 requirements for hazardous and MW management and emergency response training. The AMWTP
3 Training Director, or designee, is responsible for monitoring the status of personnel qualifications and
4 certifications.

5 Persons who have the responsibility for evaluating training requirements for AMWTP personnel
6 include, but are not limited to, the AMWTP Training Director, or designee, and the appropriate supervisor
7 or manager.

8 Individuals who demonstrate an equivalency for specific requirements or prerequisites identified
9 in the training profile may be exempted from the associated training. The Training Director, or designee,
10 consults with the employee's manager/supervisor to review the claim for exemption or completion of
11 equivalent training prior to approving the exemption or equivalency. Each exemption/equivalency is
12 granted in writing and documented in the individual's training record.

13 **H-1e Training for Emergency Response [IDAPA 58.01.05.009; 40 CFR**
14 **265.16(a)(3)]**

15 Emergency response training is provided to all AMWTP personnel that work at the TSA IS Units,
16 including specialized training for the AMWTP ERO. All personnel requiring unescorted access to the
17 TSA IS Units receive training on the appropriate response to take when a fire, explosion, or significant
18 release of MW is occurring or imminent at the TSA IS Units. This training provides instructions on
19 controlling or responding to the incident and safe evacuation from the building/area. The Training Plan
20 includes the following, as applicable:

- 21 • Procedures for using, inspecting, repairing, and replacing emergency and monitoring
22 equipment;
- 23 • Use of communications or alarm systems;
- 24 • Response to fires or explosions; and
- 25 • Shutdown of operations.

26 Documentation that the AMWTP personnel working at the TSA IS Units have received initial
27 emergency response training, annual training, and specialized training is maintained in their training
28 records.

1 **H-2 Implementation of Training Plan [IDAPA 58.01.05.009; 40 CFR 265.16(b),**
2 **265.16(d)(4), and 265.16(e)]**

3 In conjunction with TSA IS Units access orientation, designated employees enter a qualification
4 or certification program specific to their job assignments. AMWTP personnel holding qualifications and
5 certifications are retrained or evaluated so they may retain their qualifications or certifications. Job
6 assignments, which require the completion of a qualification or certification program, have time
7 requirements associated with the Training Plan.

8 Initial training requirements are completed within six months of the individual's date of
9 employment or assignment to a TSA IS Unit work location when their position involves the management
10 of MW. Employees do not work in unsupervised positions involving MW until they have completed the
11 minimum specified training requirements.

12 Training files include documentation of completed training, such as class rosters, signed
13 checklists, completed exams, data base printouts, and other documents verifying training. For training
14 provided by organizations external to the AMWTP, the original training records are typically maintained
15 by the presenting organizations, and a copy of corresponding records is forwarded to the AMWTP
16 Training Director, or designee. This information is entered into the individuals training record.

17 A training record includes the person's name, identification number, job title/position, and
18 associated training documentation. Each training file includes the person's individual training profile,
19 which identifies the minimum required introductory and continuing training for the calendar year. The
20 form is updated annually.

21 Training records for AMWTP personnel are maintained as part of the Operating Record per
22 IDAPA 58.01.05.009 (40 CFR 265.73).

SECTION I

Closure Plan

~~Hazardous Waste Management Act/Resource Conservation and Recovery Act
Closure Plan for the Transuranic Storage Area Interim Status Units
(TSA-1, TSA-2, TSA-R)~~

~~Section I of the Transuranic Storage Area Interim Status Document
(BNFL-5232-TSA-01, Rev. 2)~~

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ACRONYMS and ABBREVIATIONS

AMWTP	Advanced Mixed Waste Treatment Project
ASTM	American Society for Testing and Materials
CFR	Code of Federal Regulations
DEQ	Department of Environmental Quality
DOE ID	Department of Energy Idaho Operations Office
EPA	Environmental Protection Agency
gal	gallon
HEPA	high efficiency particulate air
HW	hazardous waste
HWMA	Hazardous Waste Management Act of 1983, as amended
IDAPA	Idaho Administrative Procedures Act
INL	Idaho National Laboratory
IS	Interim Status
m ³	cubic meters
MW	mixed waste
PPE	personal protective equipment
QAPjP	Quality Assurance Project Plan
RCRA	Resource Conservation and Recovery Act
RMF	Retrieval Modification Facility
RWMC	Radioactive Waste Management Complex
SW 846	The EPA manual titled "Test Methods for Evaluating Solid Waste: Physical/Chemical Methods," current edition
TRU	transuranic
TSD	treatment, storage, and disposal
TSA	Transuranic Storage Area
TSA RE	Transuranic Storage Area Retrieval Enclosure
U.S.	United States

1 **I. CLOSURE REQUIREMENTS [~~Idaho Administration Procedures Act (IDAPA)~~**
2 **~~58.01.05.009; 40 CFR Part 265, Subpart G~~ **Title 40 of the Code of Federal Regulations****
3 **~~(CFR) Part 265, Subpart G]~~**

4 ~~The Advanced Mixed Waste Treatment Project (AMWTP) Transuranic (TRU) Storage Area~~
5 ~~(TSA) Retrieval Enclosure (TSA RE), commonly known as WMF 636, is located at the Radioactive Waste~~
6 ~~Management Complex (RWMC) on the Idaho National Laboratory (INL). The TSA RE, which is not~~
7 ~~regulated by the Hazardous Waste Management Act (HWMA)/Resource Conservation and Recovery Act~~
8 ~~(RCRA), is a metal structure that encloses three asphalt pads (TSA 1, TSA 2, and TSA R) that underlie~~
9 ~~covered stacks of retrievably stored radioactive only and mixed waste (MW). Hereinafter these pads~~
10 ~~combined with the TSA RE Retrieval Modification Facility (RMF) are collectively referred to as the TSA~~
11 ~~Interim Status (IS) Units. Closure of the TSA RE RMF will be addressed separately from this Closure Plan.~~
12 ~~The TSA IS Units are operated by BNFL Inc. under contract with Department of Energy Idaho Operations~~
13 ~~Office (DOE-ID).~~

14 This Closure Plan, hereinafter referred to as the "Plan," satisfies the requirements at IDAPA
15 58.01.05.009 [40 CFR 265.112(a)], which requires a facility to have a written closure plan. None of the
16 additional requirements at IDAPA 58.01.05.009 [40 CFR 265.111(c)] apply to the closure of the TSA IS
17 Units. This Plan specifies the performance standards and describes the process for final closure of the TSA IS
18 Units. Upon termination of operation, the owner/operator shall willfully close the TSA IS Units in
19 accordance with the applicable HWMA/RCRA closure requirements promulgated at IDAPA 58.01.05.009 (40
20 CFR Part 265, Subpart G). The activities and closure performance standards described herein apply only to
21 wastes and waste constituents regulated under HWMA/RCRA; references to radiological parameters are
22 included for informational purposes only. In this Plan, the term "decontamination" refers to the removal of
23 HWMA/RCRA-regulated wastes and waste constituents. Standards and methods for the management of
24 residual radiological contamination (e.g., plutonium) that may be present at the TSA IS Units and disposition
25 of radiologically contaminated government-furnished equipment shall follow the DOE-ID requirements
26 governing the management and disposal of radiologically contaminated materials.

27 Although closure under HWMA/RCRA is primarily concerned with the ~~hazardous waste (HW)~~
28 ~~constituents in the MW managed at the TSA IS Units, closure is performed with full cognizance of the~~
29 ~~radiological component and the threat to human health and the environment engendered by that component.~~
30 Closure will be performed to ensure the safety of personnel, as follows:

- 1 • Qualified AMWTP personnel supervise and perform closure activities in compliance with
- 2 established safety procedures,
- 3 • Personnel are equipped with appropriate ~~personal protective equipment (PPE)~~ and trained in
- 4 applicable safety procedures, and
- 5 • The use of established radiological control procedures to ensure personnel and equipment are
- 6 clean of radiological contamination before leaving any contaminated area.

7 While closure employs technologies to safeguard workers, treatment technologies that minimize the
8 generation of aerosols and other particulates are preferentially selected.

9 **I-1 Closure Plan [IDAPA 58.01.05.009; 40 CFR 265.112(b)]**

10 This section of the Plan describes the closure process, closure performance standards, inventory
11 removal, and activities related to decontamination, disposal, and sampling, and analysis. The design and
12 operation of the TSA IS Units and the waste types managed are detailed in Sections B, C, and D of the TSA
13 IS document.

14 **I-1a Partial Closure Activities [IDAPA 58.01.05.009; 40 CFR 265.112(b)(1 - 6)]**

15 Upon removal of all the stored waste on *thea* TSA IS Unit, an evaluation of options will be performed
16 as to how the TSA IS Unit will be managed. Options to be evaluated include the following:

- 17 • Permit the TSA IS Unit in accordance with IDAPA 58.01.05.008 and .012 (40 CFR Part 264 and
- 18 270),
- 19 • Continue operations of the TSA IS Unit under the IS requirements of IDAPA 58.01.05.009 (40
- 20 CFR Part 265), or
- 21 • Closure of the TSA IS Unit in accordance with this Plan.

22 **I-1b Closure Performance Standard [IDAPA 58.01.05.009; 40 CFR 265.111, .112(b)(1), and**
23 **.112(b)(2)]**

24 Closure of the TSA IS Units is conducted in accordance with the closure performance standards
25 specified at IDAPA 58.01.05.009 (40 CFR 265.111). Furthermore, all HWMA/RCRA-regulated waste and
26 waste constituents removed during closure of the TSA IS Units are managed in accordance with the
27 applicable requirements of IDAPA 58.01.05.005 through 58.01.05.012 (40 CFR Parts 261 through 270).

1 Refer to Table I-1 for the specifics on how closure of the TSA IS Units satisfies the standards at IDAPA
2 58.01.05.009 (40 CFR 265.111).

3 **I-1c Maximum Waste Inventory [IDAPA 58.01.05.009; 40 CFR 265.112(b)(3)]**

4 The estimated total maximum HWMA/RCRA-regulated waste inventory at the TSA IS Units is
5 ~~93,419 cubic meters (m³)~~ 76,608 m³ (~~{24,678,658~~20,237,720 gallons (gal)). HWMA/RCRA-regulated waste
6 is stored in a variety of containers as described in Section D of the TSA IS Document. ~~The estimated waste~~
7 ~~inventory for TSA 1/TSA R is 76,608 m³ (20,237,720 gals) and for TSA 2 is 16,811 m³ (4,440,938 gals).~~
8 Details on the methods for removing, transporting, treating, storing, or disposing of HWMA/RCRA-regulated
9 waste is found in Section I-1d of this Plan.

10 **I-1d Disposal or Decontamination of Equipment, Structures, and Soils [IDAPA 58.01.05.009;**
11 **40 CFR 265.112(b)(4) and .114]**

12 Because operational methods at the TSA IS Units place emphasis on the containment and timely
13 response to spills, and because of the TSA IS Units design, releases to the environment from the TSA IS
14 Units ~~is~~are unlikely. Therefore, disposal of contaminated soils located off the TSA IS Units pursuant to this
15 Plan is not anticipated. However, if soil contamination is found underlying the TSA IS Units, or other
16 unexpected locations, it shall be addressed via the Federal Facilities Agreement/Consent Order under the
17 direction of DOE-ID with concurrence from the ~~Idaho Department of Environmental Quality (DEQ).~~ The
18 following subsections provide a description of the actions necessary to manage the disposal or
19 decontamination of equipment or structures contaminated with HWMA/RCRA-regulated waste or waste
20 constituents. Before beginning closure activities, all waste will be removed from the TSA IS Units.

21 **I-1d(1) Sampling and Analysis**

22 All sampling and analysis performed for closure is performed in accordance with the quality
23 standards established in a Closure Quality Assurance Project Plan (QAPP), which will be submitted with the
24 closure notification 45 days before closure of the TSA IS Units begins. The Closure QAPP will detail
25 sampling and analysis procedures in accordance with the current edition of the ~~United States (U.S.)~~
26 ~~Environmental Protection Agency (EPA) manual titled "Test Methods for Evaluating Solid Waste,~~
27 ~~Physical/Chemical Methods," current edition (SW-846), the American Society for Testing and Materials~~
28 ~~(ASTM) Annual Book of ASTM Standards, or other EPA-approved methods.~~

1 **I-1d(2) Disposal of Equipment**

2 Typically, contaminated equipment from the TSA IS Units that is to be disposed is decontaminated in
3 accordance with the required treatment standards, or other technologies available and approved for such use at
4 the time of closure, for hazardous debris [IDAPA 58.01.05.011 (40 CFR 268.45) to attain a clean debris
5 surface standard.

6 An assessment of the Operating Record will be conducted to determine the extent of potential
7 contamination. Per this assessment, contaminated equipment will be decontaminated for all HWMA/RCRA-
8 regulated hazardous constituents of concern that are present. The specific technology or technologies will be
9 selected at the time of closure and during closure, based upon the hazardous constituents of concern present
10 and the effectiveness of the selected technology in attaining the closure performance standard. Equipment for
11 which the contaminated surface is not readily visible (e.g., pipe) will be treated by an appropriate alternative
12 treatment standard for hazardous debris (e.g., macroencapsulation) per IDAPA 58.01.05.011 (40 CFR 268.45,
13 Table 1) requirements.

14 Disposal of decontaminated equipment will be performed in accordance with the applicable
15 HWMA/RCRA requirements.

16 **I-1d(3) Equipment and Structures to be Reused**

17 To be protective of human health and the environment, ancillary equipment and structures designated
18 for reuse are decontaminated to meet the closure performance standard, as verified by sampling and analysis.
19 An assessment of the Operating Record will be conducted to determine the extent of potential contamination.
20 Contaminated equipment and structures are decontaminated to meet the closure performance standard as
21 verified by confirmatory sampling and analysis (as described in the Closure QAPjP). The following section
22 provides additional details for closure of the TSA IS Units.

23 **I-1d(4) TSA IS Closure Procedures**

24 Ventilation systems are maintained during closure, as required, to provide contamination control.
25 Portable containment, such as tents or glove bags, may be used to protect workers and control the spread of
26 airborne and surface contamination if closure activities disturb residual contamination.

27 **Cleaning/decontamination.** The TSA IS Units are designed and constructed to prevent migration
28 of MW constituents. Spills and leaks are cleaned up in a timely manner and documented appropriately.

1 After operations cease and all waste remaining in the TSA IS Units has been removed, the TSA IS
2 Units shall be thoroughly cleaned. The asphalt pads are swept or vacuumed using vacuum cleaners equipped
3 with ~~high efficiency particulate air (HEPA)~~ filters, if required.

4 Following cleaning, qualified personnel shall visually inspect the TSA IS Units for evidence that
5 hazardous constituents still exist. Additionally, the Operating Record will be reviewed to determine if further
6 cleaning and/or decontamination is required. Any HWMA/RCRA-regulated waste residues generated during
7 cleaning/decontamination are placed in approved containers and managed in accordance with the applicable
8 HWMA/RCRA requirements.

9 **Cleaning/decontamination verification.** Confirmatory sampling and analysis (as outlined in the
10 Closure QAPP) will follow cleaning/decontamination of the TSA IS Units, until it is established that
11 decontamination actions have removed hazardous constituents of concern to the closure performance
12 standard. If verification testing detects hazardous constituents of concern above the closure performance
13 standard, the contaminated equipment, structure, or areas are decontaminated again, followed by confirmatory
14 sampling and analysis. Closure is achieved when the TSA IS Units ~~satisfies~~ the standards at IDAPA
15 58.01.05.009 (40 CFR 265.111).

16 **Cracked or unsealed surfaces.** The TSA IS Units ~~is~~ are inspected on a regular basis to identify
17 structural problems that could result in migration of MW constituents (see Section F ~~of the TSA IS Document~~
18 for inspection schedules). If the visual inspection identifies TSA IS Unit surfaces that are cracked or
19 unsealed, the following actions are performed to meet the closure performance standard at IDAPA
20 58.01.05.009 (40 CFR 265.111):

- 21 • Review the Operating Record to determine if HWMA/RCRA-regulated hazardous constituents of
22 concern may be present,
- 23 • Decontaminate/remediate as appropriate for the HWMA/RCRA-regulated hazardous constituents
24 of concern using a technology appropriate for the hazardous constituents of concern, and
- 25 • Sample and analyze the decontaminated surface in accordance with the Closure QAPP until the
26 standards at IDAPA 58.01.05.009 (40 CFR 265.111) are satisfied.

27 **Decontamination materials and equipment.** Spent decontamination materials and residues (e.g.,
28 swabs, wipes, PPE, sampling equipment and residue, HEPA vacuum cleaner filters) are characterized per
29 process knowledge or sampled and analyzed in accordance with the Closure QAPP. Based on the results of
30 analysis, closure wastes are managed to ensure proper handling, treatment, storage, and disposal ~~(TSD)~~.

1 Equipment used for closure cleanup/decontamination is managed using the same methods and standards
2 described above.

3 Any decontamination liquids are contained within the work area, collected in containers, and
4 characterized by process knowledge in accordance with the Closure QAPP. Spill booms, spill control
5 pillows, swabs, or other absorbent material(s) may be used to contain the decontamination liquids and to
6 facilitate removal. Spent decontamination materials and other wastes may be treated by an AMWTP
7 technology (see discussion below for the order of closure) or packaged for transport to another waste
8 management unit. Following decontamination, the work area is sampled and analyzed, as required, in
9 accordance with the Closure QAPP.

10 **I-1d(5) Order of Closure**

11 To the extent practicable, closure activities associated with the closure of the TSA IS Units are
12 accomplished utilizing other HWMA/RCRA-permitted facilities at the AMWTP, including treatment or
13 storage at other AMWTP waste management units. Decontamination activities are performed in a step-wise
14 fashion to maximize the use of the AMWTP waste management units and thereby minimize the quantity of
15 HWMA/RCRA-regulated decontamination wastes requiring subsequent management. The major steps in the
16 closure of the TSA IS Units include:

- 17 • Removal of waste inventory followed by treatment, to the extent practicable;
- 18 • Cleaning/decontamination in accordance with this Plan;
- 19 • Inspection and verification in accordance with this Plan and the Closure QAPP to ~~assure~~ ensure
20 that the closure performance standards at IDAPA 58.01.05.009 (40 CFR 265.111) are satisfied;
- 21 • Management of HWMA/RCRA-regulated newly-generated waste in accordance with this Plan
22 and the Closure QAPP; and
- 23 • Closure certification.

24 **I-1e Amendment of Plan [IDAPA 58.01.05.009; 40 CFR 265.112(c)]**

25 Amendments to this Plan will be in accordance with IDAPA 58.01.05.009 [40 CFR 265.112(c)]. A
26 copy of the Plan and supporting documentation is maintained as part of the Operating Record. The Plan will
27 be amended in the future:

- 28 • At the time of closure to address the schedule for closure, changes to regulatory standards for
29 cleanup, sampling based on the Operating Record, decontamination methods/technologies to be

1 employed, changes to how and where disposal of equipment and structures will take place, and
2 other changes necessary to accomplish the closure performance standard specified at IDAPA
3 58.01.005.009 (40 CFR 265.111);

- 4 • If it becomes desirable or necessary to close the TSA IS Units in advance of the schedule
5 included in the Plan;
- 6 • Whenever changes in the TSA IS Unit's² operating plans or design affect the Plan;
- 7 • If there is a change in the expected year of closure;
- 8 • If, when conducting closure activities, an unexpected event requires an amendment;
- 9 • If a change in HWMA/RCRA regulations require amending the Plan; or
- 10 • At the request of the Director.

11 The Permittee will submit a written notification that includes a copy of the amended Plan to the
12 Director 60 days before a proposed change in the operation or design of ~~one or more of~~ the TSA IS Units that
13 affects the Closure Plan; or no later than 60 days after an unexpected event occurs that affects the Plan; or no
14 later than 30 days after an unexpected event occurs during closure.

15 **I-1f Schedule and Notification of Closure [IDAPA 58.01.05.009; 40 CFR 265.112(b)(6) and**
16 **.112(d)]**

17 The AMWTP will complete its mission in approximately 2018. The following schedule assumes
18 closure in 2019; if the decision is made to operate ~~any of~~ the TSA IS Units beyond that date, this Plan will be
19 amended as previously described. The Director will be notified at least 45 days before the planned start of
20 closure activities. Refer to Table I-2 for a tabulated summary of the schedule calendar.

Table I-1. Closure Performance Standards

Closure Performance Standard	Attainment Strategy
<p>The owner or operator must close the facility in a manner that:</p> <p>a) Minimizes the need for further maintenance.</p>	<p>Prior to and during closure all HWMA/RCRA-regulated waste and waste constituents will be removed from the TSA IS Units. No waste will be accepted in the TSA IS Units once closure has commenced.</p>
<p>b) Controls, minimizes, or eliminates, to the extent necessary to protect human health and the environment, post-closure escape of hazardous constituents, leachates, contaminated runoffs, or hazardous waste decomposition products to groundwater, surface water, or the atmosphere.</p>	<p>The TSA IS Units will be closed by the removal of HWMA/RCRA-regulated hazardous waste, hazardous waste constituents, and waste decomposition products, as well as the elimination of any source material that could generate contaminated leachates or runoff. In addition, pursuant to IDAPA 58.01.05.009 [40 CFR 265.110(b)] the HWMA/RCRA post-closure requirements at IDAPA 58.01.05.009 (40 CFR 265.116 through 40 CFR 265.120, and 40 CFR 265, Subpart H) are not applicable to the closure of the TSA IS Units.</p>
<p>c) Complies with the closure requirements of IDAPA 58.01.05.009 (40 CFR §§ 265.197, .228, .258, .280, .310, .351, and .1102).</p>	<p>The Plan describes the processes used to close the TSA IS Units in accordance with IDAPA 58.01.05.009 (40 CFR 265, Subpart G) closure requirements. None of the additional requirements apply to closure of the TSA IS Units.</p>

Table I-2. Closure Schedule

Activity	Day
Notify the Director	45 days before closure initiation
Initiate closure activities	Day 0
Complete equipment decontamination	Day 100
Complete decontamination of affected surfaces	Day 140
Decontaminate tools, complete waste assessments, remove closure waste materials	Day 160
Verify closure performance standard has been met	Day 180
Inspect and certify closure	Day 180
Complete all closure activities	Day 180
Submit closure certification to the Director	By 60 days after closure

1 **I-2 Extensions for Closure Time [IDAPA 58.01.05.009; 40 CFR 265.113(a) and (b)]**

2 The schedule presented in Section I-1f and Table I-2 indicates closure of the TSA IS Units occurring
3 within the 180 days recommended at IDAPA 58.01.05.009 (40 CFR 265.113). No extension is requested at
4 this time. However, it is recognized that this schedule may be ambitious, and that an extension may be
5 required. That determination will be made closer to the time of closure based on the operating history of the
6 TSA IS Units; or during closure based on how rapidly closure activities are being accomplished. If an
7 extension becomes necessary in the future, it will be presented in the amended Plan (if based on operating
8 history) or a request will be submitted at least 30 days before day 180 (if the need for an extension is
9 identified during closure).

1 **I-3 Certification of Closure [IDAPA 58.01.05.009; 40 CFR 265.115]**

2 An independent Idaho-registered professional engineer will be present during critical closure
3 activities and will certify closure at the conclusion of the closure process. The certification will document
4 that the TSA IS Units ~~have~~*has* been closed in accordance with the approved Plan. The certification is
5 submitted for approval to the Director within 60 days of completion of closure. Upon Director approval,
6 closure will be considered complete.

1 **I-4 Post-Closure Requirements [IDAPA 58.01.05.009; 40 CFR 265, Subpart G]**

2 Pursuant to IDAPA 58.01.05.009 [40 CFR 265.110(b)] the HWMA/RCRA post-closure requirements
3 at 58.01.05.009 (40 CFR 265.116 through 40 CFR 265.120) are not applicable.

1 **I-5 Closure Financial Requirements [IDAPA 58.01.05.009; 40 CFR Part 265, Subpart H]**

2 **I-5a Closure Cost Estimates [IDAPA 58.01.05.009; 40 CFR 265.142]**

3 DOE-ID, the owner of the TSA IS Units, as a federal government unit is exempt from the closure cost
4 estimate requirement, in accordance with IDAPA 58.01.05.009 [40 CFR 265.140(c)].

5 **I-5b Financial Assurance for Closure [IDAPA 58.01.05.009; 40 CFR 265.143]**

6 DOE-ID, the owner of the TSA IS Units, as a federal government unit is exempt from providing a
7 financial assurance mechanism for closure, in accordance with IDAPA 58.01.05.009 [40 CFR 265.140(c)].

8 **I-5c Liability Requirements [IDAPA 58.01.05.009; 40 CFR 265.147 and .148]**

9 DOE-ID, the owner of the TSA IS Units, as a federal government unit is exempt from the liability
10 requirements for closure, in accordance with IDAPA 58.01.05.009 [40 CFR 265.140(c)].

11 **I-5d Use of State Required Financial Mechanisms [IDAPA 58.01.05.009; 40 CFR 265.149]**

12 DOE-ID, the owner of the TSA IS Units, as a federal government unit is exempt from the state
13 required financial mechanism requirements for closure, in accordance with IDAPA 58.01.05.009 [40 CFR
14 265.140(c)].

15 **I-5e State Assumption of Responsibility [IDAPA 58.01.05.009; 40 CFR 265.150]**

16 DOE-ID, the owner of the TSA IS Units, as a federal government unit is exempt from the state
17 assumption of responsibility requirements for closure, in accordance with IDAPA 58.01.05.009 [40 CFR
18 265.140(c)].

1 **I-6 Post-Closure Financial Requirements [IDAPA 58.01.05.009; 40 CFR Part 265,**
2 **Subpart H]**

3 Pursuant to IDAPA 58.01.05.009 [40 CFR 265.140(b)], the HWMA/RCRA post-closure financial
4 requirements at 58.01.05.009 (40 CFR 265:144 through .146) are not applicable to the TSA IS Units.

Attachment B

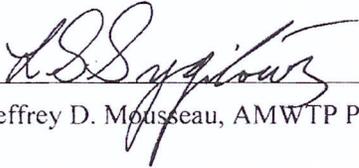
Signed Certification Statements

**BBWI Certification Statement for the January 2009 Modification Request for
the TSA IS Units Part A Permit Application**

The undersigned certifies as required by the Idaho Administrative Procedures Act (IDAPA) 58.01.05.012 [Title 40 of the Code of Federal Regulations (CFR) 270.11(d) and 270.30(k)] as follows:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Operator Signature:



Jeffrey D. Mousseau, AMWTP President and General Manager, Bechtel BWXT Idaho, LLC. Date

12/18/2008

DOE-ID Certification Statement for the January 2009 Modification Request for the TSA IS Units Part A Permit Application

The undersigned certifies as required by the Idaho Administrative Procedures Act (IDAPA) 58.01.05.012 [Title 40 of the Code of Federal Regulations (CFR) 270.11(d) and 270.30(k)] as follows:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Owner Signature:



1/22/09

Elizabeth D. Sellers, Manager, DOE Idaho Operations Office

Date