ADVANCED MIXED WASTE TREATMENT PROJECT

HAZARDOUS WASTE MANAGEMENT ACT/RESOURCE CONSERVATION AND RECOVERY ACT (HWMA/RCRA) TRANSURANIC STORAGE AREA INTERIM STATUS DOCUMENT

Revised September 17, 2014

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706 • (208) 373-0502

C.L. "Butch" Otter, Governor
Curt Fransen, Director

September 17, 2014

Ms. Nicole Hernandez
U. S. Department of Energy
Idaho Operations Office
1955 Fremont Avenue
Idaho Falls, ID 83415

RE: Approval of Modification Request to the AMWTP HWMA/RCRA TSA Interim Status Document (EPA ID No. ID4890008952)

Dear Ms. Hernandez:

The Department of Environmental Quality (DEQ) has completed a review of the Modification Request originally received on April 18, 2014, and subsequent revisions received on September 11, 2014, for 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. The modification request proposed revisions to supporting information related to the installation of the Contamination Control Enclosure (CCE) for retrieval of degraded containers inside large metal cargo containers located on the TSA-RE Pad R. DEQ has determined that the requested changes are acceptable and are hereby approved.

If you have any questions or comments concerning this letter, please contact Pete Johansen at (208) 373-0230.

Sincerely,

Robert E. Bullock
Hazardous Waste Permit Manager
Waste Management and Remediation Division

REB:PJ:js AMWTPModApprvl

cc: Barbara McCullough, U.S. EPA - Region 10
Danny Nichols, ITG
Susan Burke, DEQ INL Oversight
Natalie Clough, DEQ
INpbwmfis (pjohansen)
COF

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STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706 • (208) 373-0502

C.L. "Butch" Otter, Governor
Curt Fransen, Director

November 25, 2013

Ms. Nicole Hernandez
U. S. Department of Energy
Idaho Operations Office
1955 Fremont Avenue
Idaho Falls, ID 83415

RE: Class 1 Permit Modification Request Requiring Prior Approval for the AMWTP HWMA/RCRA Permit and Modifications to the Interim Status Document (EPA ID No. ID4890008952)

Dear Ms. Hernandez:

The Department of Environmental Quality (DEQ) has completed a review of the Class 1 Permit Modification Request (PMR) requiring prior approval, received on November 14, 2013, for the Advanced Mixed Waste Treatment Project (AMWTP) Hazardous Waste Management Act/Resource Conservation and Recovery Act Permit.

This PMR addresses use of the soft-sided overpack box for degraded mixed waste containers as well as updates to Table C-1 "Waste Managed at the TSA IS Unit" and Table G-1 "AMWTP Emergency Action Managers." DEQ has determined that the requested changes under this Class 1 PMR requiring prior approval appear to meet the requirements of IDAPA 58.01.05.012 [40 CFR § 270.42].

It was also necessary to modify the Transuranic Storage Area (TSA) Interim Status (IS) Document to address the use of the soft-sided overpack containers for degraded mixed waste containers in the following sections: the Part A, process description, and inspection procedures. Table C-1 "Waste Managed at the TSA IS Unit" and Table G-1 "AMWTP Emergency Action Managers" were also updated. These changes are necessary to support the continued retrieval of waste from the TSA IS unit.

The requested changes to both the Part B Permit and the TSA IS Document are hereby approved. In accordance with Permit Condition I.D.5, clean copies of the relevant portions of the Permit and Attachments and the TSA IS Document shall be submitted to the Director within 45 days.

If you have any questions or comments concerning this permit action, please contact Pete Johansen at (208) 373-0230.

Sincerely,

Brian R. Monson
Hazardous Waste Program Manager
Waste Management and Remediation Division

BRM:PJ:js CI1ApprvlITG13

cc: Barbara McCullough, EPA Region 10
Danny Nichols, ITG
Susan Burke, DEQ INL Oversight
Natalie Clough, DEQ
INpbwmf (pjohansen)
COF

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STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706 • (208) 373-0502

C.L. "Butch" Otter, Governor
Toni Hardesty, Director

September 8, 2011

Ms. Nicole Brooks
U. S. Department of Energy
Idaho Operations Office
1955 Fremont Avenue
Idaho Falls, ID 83415

RE: Modification Request to AMWTP HWMA/RCRA Part A Permit Application for the TSA Interim Status Unit (EPA ID No. ID4890008952)

Dear Ms. Brooks:

The Department of Environmental Quality (DEQ) has completed a review of the Modification Request received on August 31, 2011, 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 Interim Status Unit.

The modification request and your letter dated August 10, 2011 recognize that the Idaho Treatment Group LLC (ITG) will replace Bechtel BWXT Idaho LLC as the operator of AMWTP and the DOE Designated Contractor on October 1, 2011. DEQ has determined that the requested changes are acceptable and hereby approved.

If you have any questions or comments concerning this permit action, please contact Pete Johansen at (208) 373-0230.

Sincerely,

Brian R. Monson
Hazardous Waste Program Manager
Waste Management and Remediation Division

BRM:PJ:js AMWTPTSAModRqt

cc: Roberta Hedeen, U.S. EPA - Region 10
Dan Swaim, ITG
Susan Burke, DEQ INL Oversight
Natalie Clough, DEQ
INpbis/P. Johansen
COF

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STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706 • (208) 373-0502

C.L. "Butch" Otter, Governor
Toni Hardesty, Director

March 21, 2011

Ms. Nicole Brooks
U. S. Department of Energy
Idaho Operations Office
1955 Fremont Avenue
Idaho Falls, ID 83401-1216

RE: Modified Part A for the AMWTP HWMA/RCRA Interim Status Document (EPA ID No. ID4890008952)

Dear Ms. Brooks:

The Department of Environmental Quality (DEQ) received the revised Part A Permit Application for the Advanced Mixed Waste Treatment Project (AMWTP) Hazardous Waste Management Act (HWMA)/Resource Conservation and Recovery Act (RCRA) Interim Status Document on January 19, 2011. The revised Part A includes addition of treatment capabilities (liquid absorption, neutralization, liquid decanting, physical sizing, and repackaging) at the Transuranic Storage Area Interim Status (TSA IS) Unit Pad1/R. The changes are necessary to support the continued retrieval of waste from the TSA IS unit. These changes are hereby approved. A clean copy of the revised TSA Interim Status Unit Part A Application shall be provided to DEQ within forty-five (45) days. DEQ also concurs with the revised Interim Status documentation, provided on March 7, 2011.

If you have any questions or comments, please contact Pete Johansen at (208) 373-0230.

Sincerely,

Brian R. Monson
Hazardous Waste Program Manager
Waste Management and Remediation Division

BRM:PJ:js AMWTPPtAApplM

cc: Zach Hedgpeth, U.S. EPA - Region 10
Jeffrey Mousseau, BBWI AMWTP
Rensay Owen, DEQ IFRO
Susan Burke, DEQ INL Oversight
Natalie Clough, DEQ
INpbwmfis/Pete Johansen
COF

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STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

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C.L. "Butch" Otter, Governor
Toni Hardesty, Director

November 17, 2009

Ms. Nicole Brooks
U. S. Department of Energy
Idaho Operations Office
1955 Fremont Avenue
Idaho Falls, ID 83401-1216

RE: Update to the AMWTP HWMA/RCRA Interim Status Document (EPA ID No. ID4890008952)

Dear Ms. Brooks:

The Department of Environmental Quality (DEQ) received the updated Table G-5 of the Advanced Mixed Waste Treatment Project (AMWTP) Hazardous Waste Management Act (HWMA)/Resource Conservation and Recovery Act (RCRA) Interim Status Document on November 4, 2009. DEQ concurs with locating Class D fire extinguishers next to each overhead door in Pad 1 and Pad R of WMF-636. The changes regarding locations of emergency equipment in the TSA IS unit are approved and the revised page has been inserted into the document.

If you have any questions or comments, please contact Pete Johansen at (208) 373-0230.

Sincerely,

Robert E. Bullock
Hazardous Waste Permits Manager
Waste Management and Remediation Division

REB:PJ:js ApprvlFrExtLoc

cc: Zach Hedgpeth, U.S. EPA - Region 10
Jeffrey Mousseau, BBWI AMWTP
Charles Ljungberg, DOE-ID
Rensay Owen, DEQ IF Regional Office
Susan Burke, DEQ INL Oversight
Michael Gregory, DEQ
INpbwmf/Pete Johansen
COF

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DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706 • (208) 373-0502

C.L. "Butch" Otter, Governor
Toni Hardesty, Director

July 9, 2009

Ms. Nicole Telford
U. S. Department of Energy
Idaho Operations Office
1955 Fremont Avenue
Idaho Falls, ID 83401-1216

RE: Modified Part A for the AMWTP HWMA/RCRA Interim Status Document (EPA ID No. ID4890008952)

Dear Ms. Telford:

The Department of Environmental Quality (DEQ) received the revised Part A Permit Application for the Advanced Mixed Waste Treatment Project (AMWTP) Hazardous Waste Management Act (HWMA)/Resource Conservation and Recovery Act (RCRA) Interim Status Document on January 26, 2009.

The revised Part A includes removal of WMF-636 Pad 2 and the Transuranic Storage Area-Retrieval Enclosure Retrieval Modification Facility (TSA-RE RMF) as interim status units and addition of EPA Hazardous Waste Number P099. The TSA-RE RMF was never constructed and WMF-636 Pad 2 is now fully permitted for container storage as specified in the June 15, 2009 letter from DEQ. These changes are hereby approved. A clean copy of the revised TSA Interim Status Units Part A Application must be provided to DEQ within forty-five (45) days.

If you have any questions or comments, please contact Pete Johansen at (208) 373-0230.

Sincerely,

Brian R. Monson
Hazardous Waste Program Manager
Waste Management and Remediation Division

BRM:PJ:js ApprvlRevPartAIntSts

cc: Zach Hedgpeth, U.S. EPA - Region 10
Jeffrey Mousseau, BBWI AMWTP
Charles Ljungberg, DOE-ID
Rensay Owen, DEQ IF Regional Office
Susan Burke, DEQ INL Oversight
INpbwmfis/Pete Johansen
COF

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Dirk Kempthorne, Governor
Toni Hardesty, Director

May 27, 2005

Tim Safford
U. S. Department of Energy
Idaho Operations Office (NE-ID)
1955 Fremont Avenue
Idaho Falls, Idaho 83401-1216

RE: Request for Concurrence to Change TSA-RE (WMF-636) Drum Storage Configuration

Dear Mr. Safford:

The Department of Environmental Quality (DEQ) received a request to change the drum storage configuration on May 19, 2005. The requested change will allow the drum stacking height in the TSA-RE to be increased from two drums high to three drums high. This change in storage configuration will not increase the storage capacity at the TSA-RE. DEQ concurs that the requested change does not increase threat to human health or the environment and that it satisfies the requirements of IDAPA 58.01.05.009 and .012 [40 CFR 265 and 270].

Upon implementation of this change, the Interim Status Plan documents and Operating Instructions will need to be modified to reflect the change. The modified plan should be submitted to DEQ for our records.

If you have any questions or comments, please contact Stephanie Carroll at (208) 373-0502.

Sincerely,

Brian R. Monson
Hazardous Waste Program Manager
Waste Management and Remediation Division

BRM:SC:sjt

C: Jeff Hunt, U.S. EPA - Region 10
Rensay Owen, Idaho Falls Regional Office
Kathleen Trever, INEEL Oversight
Mark Clough, P.E., DEQ Technical Services
INpbwmf
COF

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FILE EQ Letters ACTION
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Dirk Kempthorne, Governor
Toni Hardesty, Director

April 6, 2005

Tim Safford
U. S. Department of Energy
Idaho Operations Office (NE-ID)
1955 Fremont Avenue
Idaho Falls, Idaho 83401-1216

RE: Class 1 Permit Modification Request, Requiring Prior Approval, for the Advanced Mixed Waste Treatment Project (AMWTP) HWMA/RCRA Storage Permit and Revised Part A Application for the HWMA/RCRA Interim Status Units for the AMWTP (EPA ID No. ID4890008952)

Dear Mr. Safford:

The Department of Environmental Quality (DEQ) has completed a review of the Hazardous Waste Management Act (HWMA) / Resource Conservation and Recovery Act (RCRA) permit modification request for the AMWTP Storage Permit, and the revised part A application for the HWMA/RCRA Interim Status Units for the AMWTP received on March 17, 2005. The requested permit modification for the storage permit and the revised part A application address the transfer of operational control from BNFL Inc. to Bechtel BWXT Idaho, LLC.

DEQ has determined that the requested change is a Class 1 permit modification, requiring prior approval, and is hereby approved. The revised part A application is also approved.

If you have any questions concerning this permit action, please contact Stephanie Carroll at (208) 373-0502.

Sincerely,

Brian R. Monson
Hazardous Waste Program Manager
Waste Management and Remediation Division

BRM:SC:sjt

C: Alan Dobson, BNFL, Inc.
Jeff Hunt, U.S. EPA - Region 10
Rensay Owen, DEQ Idaho Falls Regional Office
Kathleen Trever, INEEL Oversight
Mark Clough, P.E., DEQ Technical Services
INpbwmf
COF

STATE OF IDAHO
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1410 North Hilton • Boise, Idaho 83706-1255 • (208) 373-0502

Dirk Kempthorne, Governor
C. Stephen Allred, Director

NOV 18
DEQ
Idaho Falls

November 15, 2002

Mr. Frederick P. Hughes
General Manager
BNFL Inc.
Suite 207
1970 East 17th Street
Idaho Falls, ID 83404

SUBJECT: Modification Request to the HWMA/RCRA Part A Permit Application for the TSA Interim Status Units (Pads TSA-1/TSA-R, TSA-2, TSA-RMF) Located at the RWMC on the INEEL (EPA ID Nos. ID4890008952 and IDR000002881)

Dear Mr. Hughes:

The State of Idaho, Department of Environmental Quality (DEQ), in accordance with IDAPA 58.01.05.012 [40 CFR 270.13] and IDAPA 58.01.05.013 [40 CFR 270.72], has reviewed DOE-Idaho's August 28, 2002 request to modify the Part A Permit Application for the TSA IS Units. The modification requests the addition of hazardous waste numbers to the waste managed in the TSA units, and replaces the process and facility descriptions with references to other IS documents.

Based on the DEQ's review, the changes appear to conform to the applicable requirements.

If you have any questions or comments, please contact Mr. Gary Adamson at (208) 373-0316.

Sincerely,

Brian R. Monson, Hazardous Waste Program Mgr.
Waste Management and Remediation Division

BRM\GA:ls \Rwmc\Part A Permit Mod Approval

cc: Jeff Hunt, EPA Region 10
Rensay Owen, IFRO
INpamwtf 5

John Medema, DOE-ID
Kathleen Trever, INEEL Oversight
COF

BNFL Inc.

BNFL Inc.
1970 East 17th Street
Suite 207
Idaho Falls, ID 83404
Tel: (208) 524-8484
Fax: (208) 524-4442

January 3, 2001

Mr. Mike Bonkoski
US DOE – Idaho Operations
850 Energy Drive
Idaho Falls, ID 83401-1147

Mr. Brian Edgerton
US DOE – Idaho Operations
850 Energy Drive
Idaho Falls, ID 83401

SUBJECT: Revised Date for Transfer of the TSA-RE to BNFL Inc. to May 1, 2001; AM-BN-L-2399

Dear Mr. Bonkoski/Mr. Edgerton:

On December 20, 2000, at a DOE/BNFL Inc. meeting it was confirmed that with approval of a Basis for Interim Operations (BIO), BNFL could 1) take stewardship of the TSA-RE and the nuclear waste that is stored within it; 2) perform construction activities; and 3) perform soil sampling (according to the Soil Sampling Disposition Plan). However, DOE would require BNFL Inc. to go through an Operational Readiness Review (ORR) before any soil was moved within the TSA-RE.

Prior to this latest direction, our path forward included moving the soil on the south end of Pad 2 to allow placement of a conveyor belt. The depth of the soil covering the waste pile would have been reduced from 2 to 3 feet to approximately 6 inches. This was part of the construction activities to allow BNFL to be ready for retrieval operations after the DOE retrieval/characterization ORR, scheduled for August 2002.

With the latest understanding, BNFL has re-worked and revised the retrieval construction schedule. This schedule delays the transfer of the TSA-RE to BNFL until May 1, 2001. The new schedule (attached) also moves the retrieval/characterization ORR two months to June 2002. Upon successful completion this will allow BNFL to move the soil on Pad 2, place the conveyor on the berm and begin retrieval operations. This revised path forward will support the March 2003 shipment to WIPP.

BNFL will ensure our readiness to take over the TSA-RE and accept custody of the nuclear waste by holding a Line Management Self Assessment (LMSA) during the week of April 16th. This LMSA will determine whether the programs that BNFL has in place are sufficient for nuclear waste stewardship. DOE is welcome to participate in the readiness assessment.

BNFL will work closely with the M&O at RWMC for an efficient turnover of the TSA-RE. If you have any question or concerns, please call me at 524-8484.

Sincerely,

Frederick P. Hughes, General Manager
Advanced Mixed Waste Treatment Project

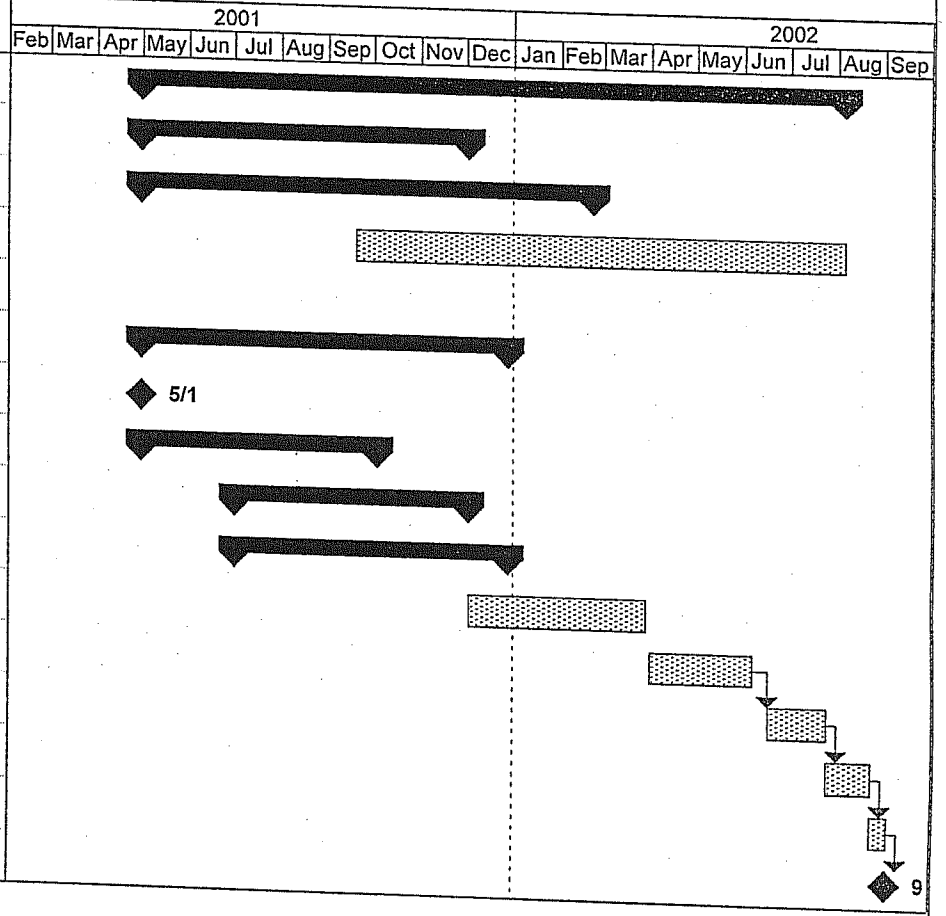
attachment

cc: David Letendre – DOE-ID
Geoffrey Beausoleil – DOE-ID
Matea McCray – DOE-ID
John Medema – DOE-ID
Paul Contreras – DOE-ID
Jim Schafer – BBWI
David Bright – BBWI
Project Files
FPH-001-2001

Jim Jackson

Retrieval Construction Schedule

ID	Task Name	Duration	Start
1	**Characterizatio (WMF-634)**	**330 days**	**Tue 5/1/01**
2	**Equipment Delivery**	**154 days**	**Tue 5/1/01**
9	**Construction Activities**	**214 days**	**Tue 5/1/01**
23	Characterization Training	228 days	Thu 9/20/01
24			
25	**Retrieval (WMF-636)**	**174 days**	**Tue 5/1/01**
26	Acceptance of TSA-RE Custody	0 days	Tue 5/1/01
27	**Test, Repair, Commission Systems**	**112 days**	**Tue 5/1/01**
33	**Equipment Delivery**	**110 days**	**Mon 7/2/01**
47	**Construction Activities**	**130 days**	**Mon 7/2/01**
55	TSA-RE Training	12 wks	Mon 12/3/01
56	BNFL ORR	7 wks	Mon 4/1/02
57	DOE ORR	4 wks	Mon 6/17/02
58	Move soil for conveyor placement	3 wks	Thu 7/25/02
59	Reclaim & Stacking Conveyor - Install	1 wk	Fri 8/23/02
60	Begin Retrieval Operations	0 days	Mon 9/2/02



Department of Energy
Idaho Operations Office
850 Energy Drive
Idaho Falls, Idaho 83401-1563

December 19, 2000

Brian Monson, Manager
RCRA Programs
Idaho Department of Environmental Quality
1410 N. Hilton, 3rd Floor
Boise, Idaho 83706-1255

SUBJECT: Transfer of Operational Control at the RWMC, TSA Interim Status Units (TS-ETSD-00-241)

REFERENCE: October 3, 2000 letter to C. S. Allred from T. L. Perkins

Dear Mr. Monson:

On October 3, 2000, DOE notified the Department that we intended to transfer operational control of the TSA interim status units, located at the RWMC, to BNFL Inc. from BBWI. This transfer was to take place on January 2, 2001. However, issues with the transfer are going to prevent this from occurring in January as planned. Currently, we are projecting a date of February 5, 2001 for the transfer. We will confirm the status of this transfer with you at the January quarterly permitting meeting.

If you have any questions concerning this letter, please call me at (208) 526-1511.

Sincerely

D. N. Rasch

Donald N. Rasch, Deputy Director
Environmental Technical Support Division

cc: Ronald Guymon, BBWI
F. Hughes, BNFL Inc.
Robert Bullock, DEQ
Jeff Hunt, EPA R-10
Rensay Owen, DEQ
Kathleen Trever, INEEL Oversight

STATE OF IDAHO
DEPARTMENT OF
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1410 North Hilton • Boise, Idaho 83706-1255 • (208) 373-0502

Dirk Kempthorne, Governor
C. Stephen Allred, Director

November 14, 2000

CERTIFIED MAIL #7099 3220 0006 2681 1109

Mr. Dave Wessman
DOE-Idaho Operations Office
850 Energy Drive
Idaho Falls, Idaho 83401-1563

Mr. Fred Hughes
Advanced Mixed Waste Treatment Project
1970 East 17th Street, Suite 207
Idaho Falls, Idaho 83404

Mr. Paul Divjak
Bechtel BWXT Idaho, LLC
P.O. Box 1625
Idaho Falls, Idaho 83415

SUBJECT: Transfer of Operational Control of the RWMC TSA Interim Status Units from Bechtel BWXT Idaho, LLC to BNFL

Dear Mr. Wessman, Mr. Hughes, and Mr. Divjak:

This letter is regarding the October 3, 2000 request to modify the Part A Permit at the Idaho National Engineering and Environmental Laboratory, EPA ID No. 4890008952.

The State of Idaho, Department of Environmental Quality (DEQ), has reviewed DOE-ID's request to modify the HWMA/RCRA Part A Permit Application for the Idaho National Engineering and Environmental Laboratory PADS TSA-1/TSA-R, TSA-2 and TSA-RMF at the Transuranic Storage Area, Volume 1a. This modification transfers operational control from BBWI to BNFL.

Based on this review, the DEQ hereby approves this modification.

If you have any questions or comments, please contact Mr. Gary Adamson at (208) 373-0316

Sincerely,

Brian R. Monson, HW Program Manager
Waste Management & Remediation Division

BRM\GA:ls

cc: J. Hunt, EPA Region 10
R. Owens, IFRO
D. D. Nishimoto, SAIC
K. Trever, INEEL Oversight
INppa 5

BNFL Inc.

BNFL Inc.
1970 East 17th Street
Suite 207
Idaho Falls, ID 83404
Tel: (208) 524-8484
Fax: (208) 524-4442

October 27, 2000

Mr. Mike Bonkoski
U.S. Department of Energy
Idaho Operations Office
850 Energy Drive
Idaho Falls, ID 83401-1147

RE: Schedule for Transferring TSA-RE to BNFL Inc. AM-BN-L-2097

Dear Mr. Bonkoski:

The new proposed date for transferring the TSA-RE is February 5, 2001. This is based on detailed discussions regarding activities we need to complete prior to transfer. The attached schedule identifies those actions that will precede the transfer. If you have questions or need additional information please call me at 524-8484 ext 114 or Jeff Hahn at 524-8484 ext 102.

Sincerely,

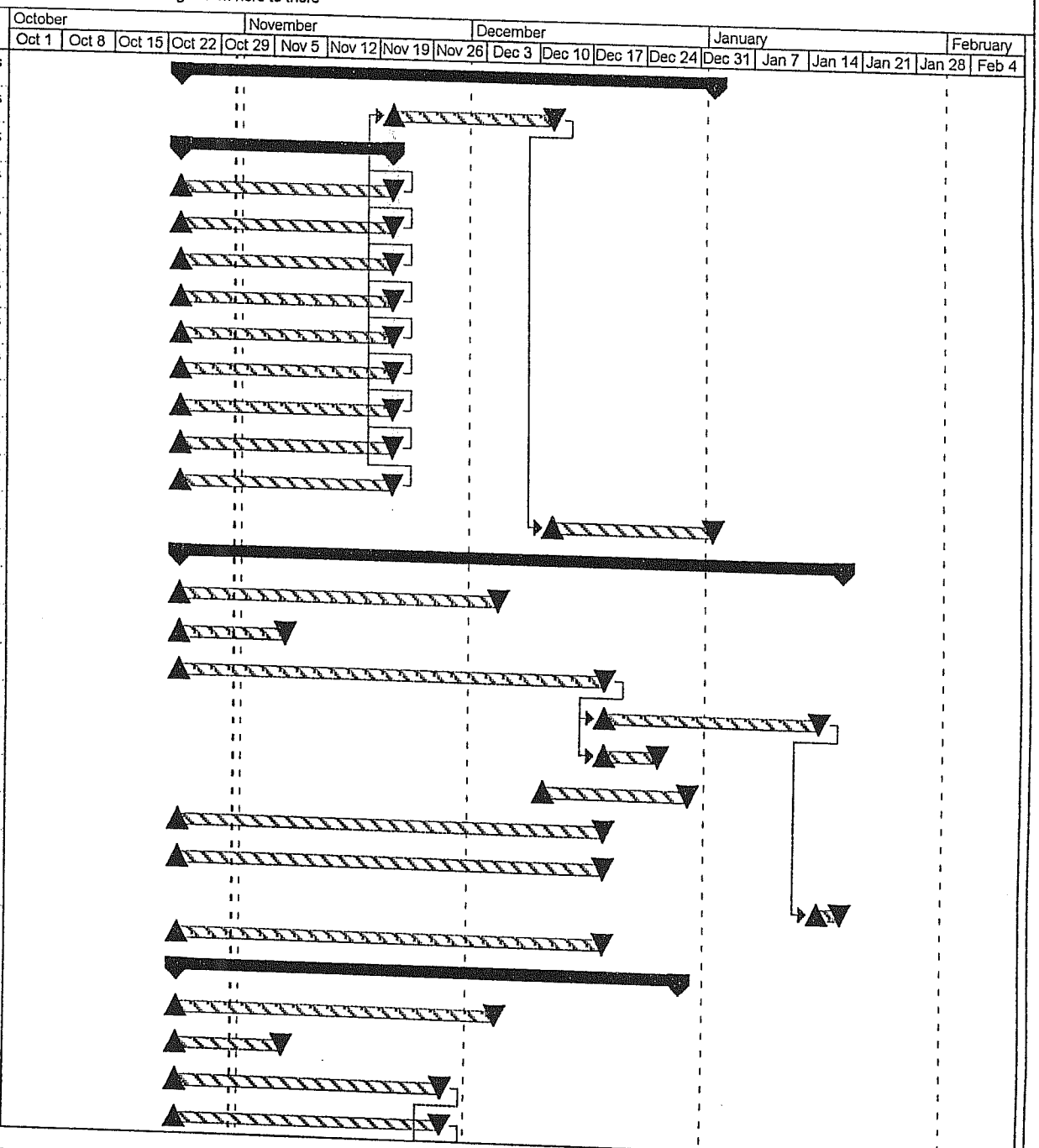
Frederick P. Hughes

Frederick Hughes, General Manager
Advanced Mixed Waste Treatment Project

cc: Cal Ozkai
Jeff Hahn
Candice Jierree
Martin Wheeler
Grenville Harrop
Tom Yount
Mike Fisher
Doug Nishimoto/SAIC
Greg Hula/DOE-ID
John Medema/DOE-ID
Project Files
FPH-039-2000

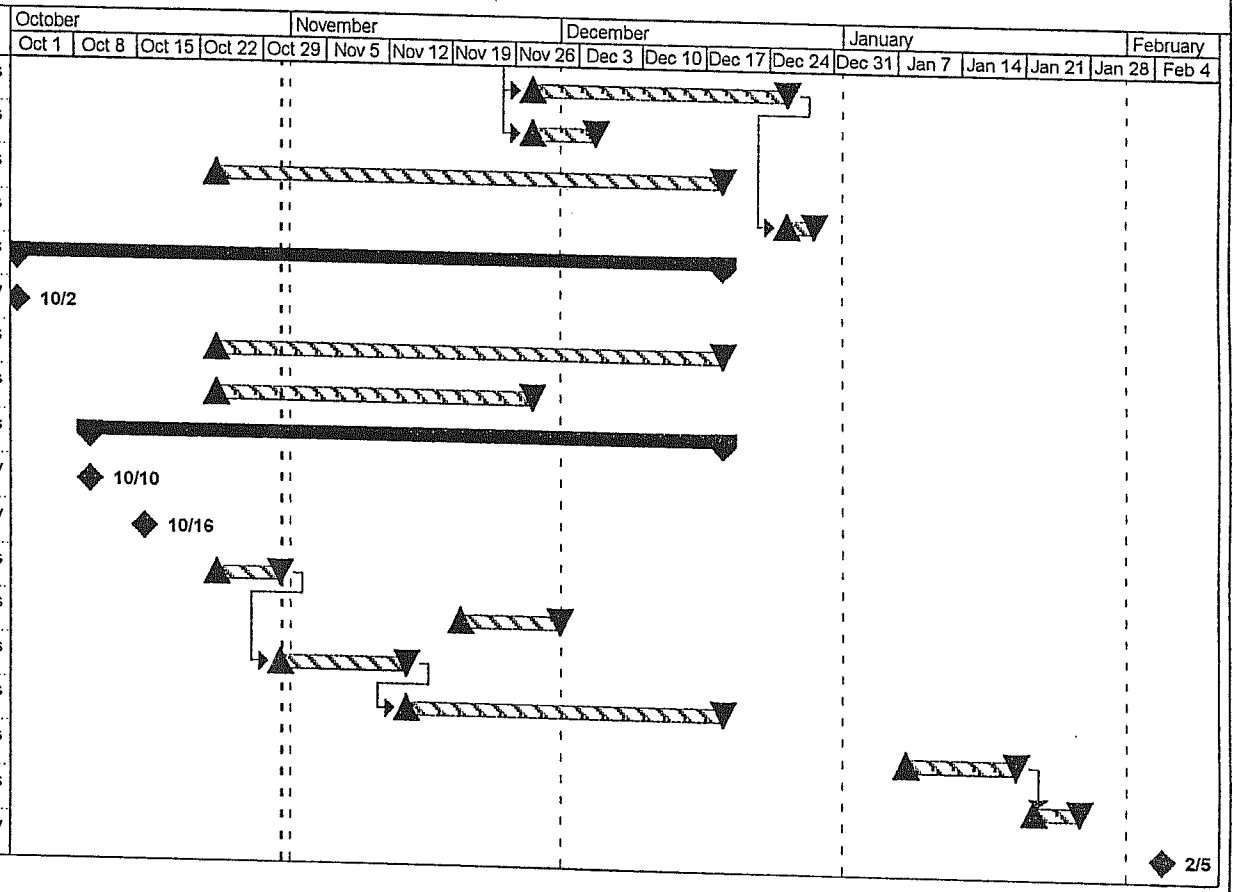
Custody Acceptance of the TSA-RE
How to get from here to there

ID	Task Name	Duration
1	**BIO for TSA-RE Mods**	**50 days**
2	Write BIO	15 days
3	**Supporting Docs & Procedures**	**20 days**
4	Emergency Preparedness/RCRA Contingency	20 days
5	Maintenance Implementation Plan	20 days
6	Quality Assurance Plans & Procedures	20 days
7	Occurence Reporting Procedure	20 days
8	Fire Hazards Analysis	20 days
9	Radiological Protection Program	20 days
10	Occupational ALARA Program	20 days
11	Hazardous Material Id., Protect. & Training	20 days
12	Staffing Management Plan	20 days
13	DOE Concurrance	15 days
14	**Rad Con Program**	**63 days**
15	DOE Approved RPP	30 days
16	Rad Con Manual	10 days
17	Hire Radcon Supervisor	40 days
18	Write Proceedures	20 days
19	Develop Training Program	5 days
20	Contract Trained RCT	15 days
21	Buy Instruments/calibration	40 days
22	Sealed Sources	40 days
23	Train RCT/Supervisor	3 days
24	Safe Work System	40 days
25	**Industrial Health Program**	**48 days**
26	DOE Approved RPP	30 days
27	IH Program	10 days
28	Hire IH Supervisor (BNFL)	25 days
29	IH Technician (MK)	25 days



Custody Acceptance of the TSA-RE
How to get from here to there

ID	Task Name	Duration
30	Write Procedures	20 days
31	Develop Training Program	5 days
32	Buy Instruments/calibration	40 days
33	Train IH personnel	3 days
34	**Permits**	**66 days**
35	Mod to DEQ	1 day
36	RCRA Contingency Plan	40 days
37	Transfer Permit (NOV issues)	25 days
38	**Building Physical Condition**	**50 days**
39	Walkdown of TSA-RE	1 day
40	Identified System Tests to M&O	1 day
41	M&O Status	5 days
42	Mutual Acceptance Testing	9 days
43	Develop list of repairs & mods.	10 days
44	Identify Maintenance & Implementation Plan	25 days
45	Management Review Preps	10 days
46	BNFL Management Review	5 days
47	Take Over Custody of the TSA-RE	1 day



Department of Energy
Idaho Operations Office
850 Energy Drive
Idaho Falls, Idaho 83401-1563

October 3, 2000

C. Stephen Allred, Director
c/o: Ms. Katherine Kelly, Administrator
Idaho Department of Environmental Quality
State Waste Management and Remediation Program
1410 North Hilton
Boise, ID 83706-1255

SUBJECT: Notice of Transfer of Operational Control of the RWMC TSA Interim Status Units (TS-ETSD-00-198)

Dear Mr. Allred:

This letter is to inform you of the planned transfer of operational control of the RWMC TSA interim status (IS) units (i.e., TSA-1/R, TSA-2 and the TSA-RE RMF) from the current operator, Bechtel BWXT Idaho, LLC (BBWI) to BNFL Inc. at 12:00 AM on January 2, 2001, in support of the Advanced Mixed Waste Treatment Project (AMWTP). The TSA IS units are located within building WMF-636, the Transuranic Storage Area-Retrieval Enclosure (TSA-RE) at the Radioactive Waste Management Complex (RWMC) at the Idaho National Engineering and Environmental Laboratory (INEEL).

Enclosed are two copies of the newly created Volume 1a of the INEEL HWMA/RCRA Part A Permit Application. This new volume is largely excerpted from the applicable portions of the existing January 2000 revision of Volume 1, *HWMA/RCRA Part A Permit Application for the INEEL*, prepared by BBWI. In accordance with 40 CFR 265.12(b), a letter from the current operator (BBWI) to the new operator (BNFL Inc.), notifying them of the requirements of 40 CFR Parts 265 and 270, will be forthcoming.

BNFL Inc. has delegated authority for signing environmental permits and reports to the AMWTP General Manager, Frederick P. Hughes. Documentation for this change is enclosed, in accordance with IDAPA 58.01.05.012 [40 CFR Part 270.11(c)].

We appreciate your attention and efforts on this important project. For any questions that may arise, please call Greg Hula at (208) 526-9899 or Doug Nishimoto (SAIC) at (208) 528-2121.

Sincerely,

Teresa L. Perkins, Director
Environmental Technical Support Division

Enclosure

cc: w/enc.
Robert E. Bullock, IDEQ
Jeff Hunt, EPA Region 10
Rensay Owen, DEQ, IFO
Kathleen Trever, INEEL Oversight

BNFL Inc.

Memorandum

To: Fred P. Hughes
General Manager, Advanced Mixed Waste Treatment Plant

Date: August 31, 2000

cc: K. Edward Newkirk
Vice President and General Counsel

Carl B. Smith
Corporate Manager, Environmental Health & Safety/Quality Assurance

From: Paul A. Miskimin
President and Chief Executive Officer

Your ref:

Ext: (703) 460-2000
Fax: (703) 385-5343

Our ref:

Subject: **Delegation of Authority Relating to Environmental Permits and Reports**

The purpose of this memorandum is to delegate certain of my authorities to you, as General Manager in charge of BNFL's Advanced Mixed Waste Treatment Plant (AMWTP) Project located at the U.S. Department of Energy's Idaho National Environmental Engineering Laboratory.

Federal, state and certain local environmental laws and regulations state that the only persons authorized to sign certain environmental permit applications are (1) a corporate officer or (2) a manager of one or more manufacturing, production or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in 1980 dollars). The BNFL Inc. position of General Manager on the AMWTP Project fully satisfies the latter category.

Accordingly, as President and Chief Executive Officer of BNFL Inc., I hereby authorize you as BNFL's General Manager of the AMWTP Project, to take and perform the following actions on behalf of BNFL Inc.:

1. Signing any (a) federal, state, or local environmental permit application, (b) application for modification, assignment, or transfer of any environmental permit, and (c) contract, agreement or commitment that BNFL will become a permittee or co-permittee, or will assume any responsibilities as a permittee or co-permittee, of any environmental permit or modification relating to the AMWTP Project; and

2. Signing of all reports required by federal, state or local permits relating to the AMWTP Project.

Inasmuch as environmental permitting is a critical component of BNFL's commitment to safety and environmental compliance, your authority under item 1 requires that you provide a copy of any environmental permit application or other such documentation to the General Counsel and to the Director of ES&H/QA and obtain their concurrence before signing any such document. Your authority under item 1 is not subdelegable.

With regard to item 2, if authorized by law and regulations, you may subdelegate this responsibility to the appropriate manager. Any such subdelegation shall be in writing and shall require the prior concurrence of the General Counsel and the Director of ES&H/QA.

In addition, if at any time, it appears that the AMWTP Project neither employs more than 250 persons nor has gross annual sales or expenditures exceeding $25 million (in 1980 dollars), this delegation shall be automatically revoked.

ASK/js

K:\AMWTP\Amwtp00\Delegation1.doc

TABLE OF CONTENTS

OMB# 2050-0024; Expires 12/31/2014

SEND COMPLETED FORM TO: The Appropriate State or Regional Office.

United States Environmental Protection Agency
RCRA SUBTITLE C SITE IDENTIFICATION FORM

1. Reason for Submittal

MARK ALL BOX(ES) THAT APPLY

Reason for Submittal:

- ☐ To provide an Initial Notification (first time submitting site identification information / to obtain an EPA ID number for this location)
- ☐ To provide a Subsequent Notification (to update site identification information for this location)
- ☐ As a component of a First RCRA Hazardous Waste Part A Permit Application
- ☒ As a component of a Revised RCRA Hazardous Waste Part A Permit Application (Amendment #_____)
- ☐ As a component of the Hazardous Waste Report (If marked, see sub-bullet below)
  - ☐ Site was a TSD facility and/or generator of ≥1,000 kg of hazardous waste, >1 kg of acute hazardous waste, or >100 kg of acute hazardous waste spill cleanup in one or more months of the report year (or State equivalent LQG regulations)

2. Site EPA ID Number

EPA ID Number ID489008952

3. Site Name

Name: IDAHO NATIONAL LABORATORY

4. Site Location Information

Street Address:

City, Town, or Village: SCOVILLE **County:** See Comments

State: IDAHO **Country:** USA **Zip Code:** 83415

5. Site Land Type

☐ Private ☐ County ☐ District ☑ Federal ☐ Tribal ☐ Municipal ☐ State ☐ Other

6. NAICS Code(s) for the Site (at least 5-digit codes)

A. 92411 **C.** 336992

B. 54171 **D.**

7. Site Mailing Address

Street or P.O. Box: 1955 FREMONT AVENUE

City, Town, or Village: IDAHO FALLS

State: IDAHO **Country:** USA **Zip Code:** 83415

8. Site Contact Person

First Name: TERESA **MI:** L **Last:** PERKINS

Title: ENVIRONMENT & SUSTAINABILITY DIRECTOR

Street or P.O. Box: 1955 FREMONT AVENUE

City, Town or Village: IDAHO FALLS

State: ID **Country:** USA **Zip Code:** 83415

Email: perkinstl@id.doe.gov

Phone: (208) 526-1483 **Ext.:** NOT APPLICABLE **Fax:** (208) 526-1926

9. Legal Owner and Operator of the Site

A. Name of Site's Legal Owner: US DOE IDAHO OPERATIONS OFFICE **Date Became Owner:** 01/01/1952

Owner Type: ☐ Private ☐ County ☐ District ☑ Federal ☐ Tribal ☐ Municipal ☐ State ☐ Other

Street or P.O. Box: 1955 FREMONT AVENUE

City, Town, or Village: IDAHO FALLS **Phone:** 208-526-1483

State: ID **Country:** USA **Zip Code:** 83415

B. Name of Site's Operator: IDAHO TREATMENT GROUP, LLC **Date Became Operator:** 10/01/2011

Operator Type: ☑ Private ☐ County ☐ District ☐ Federal ☐ Tribal ☐ Municipal ☐ State ☐ Other

10. Type of Regulated Waste Activity (at your site)
Mark "Yes" or "No" for all current activities (as of the date submitting the form); complete any additional boxes as instructed.

A. Hazardous Waste Activities; Complete all parts 1-10.

Y ☑ N ☐ **1. Generator of Hazardous Waste**
If "Yes", mark only one of the following – a, b, or c.

- ☑ a. LQG: Generates, in any calendar month, 1,000 kg/mo (2,200 lbs./mo.) or more of hazardous waste; **or** Generates, in any calendar month, or accumulates at any time, more than 1 kg/mo (2.2 lbs./mo) of acute hazardous waste; **or** Generates, in any calendar month, **or** accumulates at any time, more than 100 kg/mo (220 lbs./mo) of acute hazardous spill cleanup material.
- ☐ b. SQG: 100 to 1,000 kg/mo (220 – 2,200 lbs./mo) of non-acute hazardous waste.
- ☐ c. CESQG: Less than 100 kg/mo (220 lbs./mo) of non-acute hazardous waste.

If "Yes" above, indicate other generator activities in 2-4.

Y ☐ N ☑ **2. Short-Term Generator** (generate from a short-term or one-time event and not from on-going processes). If "Yes", provide an explanation in the Comments section.

Y ☐ N ☑ **3. United States Importer of Hazardous Waste**

Y ☑ N ☐ **4. Mixed Waste (hazardous and radioactive) Generator**

Y ☑ N ☐ **5. Transporter of Hazardous Waste**
If "Yes", mark all that apply.

- ☑ a. Transporter
- ☐ b. Transfer Facility (at your site)

Y ☑ N ☐ **6. Treater, Storer, or Disposer of Hazardous Waste** Note: A hazardous waste Part B permit is required for these activities.

Y ☐ N ☑ **7. Recycler of Hazardous Waste**

Y ☐ N ☑ **8. Exempt Boiler and/or Industrial Furnace**
If "Yes", mark all that apply.

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

Y ☐ N ☑ **9. Underground Injection Control**

Y ☑ N ☐ **10. Receives Hazardous Waste from Off-site**

B. Universal Waste Activities; Complete all parts 1-2.

Y ☑ N ☐ **1. Large Quantity Handler of Universal Waste (you accumulate 5,000 kg or more) [refer to your State regulations to determine what is regulated]. Indicate types of universal waste managed at your site. If "Yes", mark all that apply.**

- a. Batteries ☑
- b. Pesticides ☐
- c. Mercury containing equipment ☑
- d. Lamps ☑
- e. Other (specify) _____ ☐
- f. Other (specify) _____ ☐
- g. Other (specify) _____ ☐

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

C. Used Oil Activities; Complete all parts 1-4.

Y ☐ N ☑ **1. Used Oil Transporter**
If "Yes", mark all that apply.

- ☐ a. Transporter
- ☐ b. Transfer Facility (at your site)

Y ☐ N ☑ **2. Used Oil Processor and/or Re-refiner**
If "Yes", mark all that apply.

- ☐ a. Processor
- ☐ b. Re-refiner

Y ☐ N ☑ **3. Off-Specification Used Oil Burner**

Y ☐ N ☑ **4. Used Oil Fuel Marketer**
If "Yes", mark all that apply.

- ☐ 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

D. Eligible Academic Entities with Laboratories—Notification for opting into or withdrawing from managing laboratory hazardous wastes pursuant to 40 CFR Part 262 Subpart K

❖ You can **ONLY** Opt into Subpart K if:

- you are at least one of the following: a college or university; a teaching hospital that is owned by or has a formal affiliation agreement with a college or university; or a non-profit research institute that is owned by or has a formal affiliation agreement with a college or university; AND
- you have checked with your State to determine if 40 CFR Part 262 Subpart K is effective in your state

Y☐ N☐ 1. Opting into or currently operating under 40 CFR Part 262 Subpart K for the management of hazardous wastes in laboratories **See the item-by-item instructions for definitions of types of eligible academic entities. Mark all that apply:**

☐ a. College or University

☐ b. Teaching Hospital that is owned by or has a formal written affiliation agreement with a college or university

☐ c. Non-profit Institute that is owned by or has a formal written affiliation agreement with a college or university

Y☐ N☐ 2. Withdrawing from 40 CFR Part 262 Subpart K for the management of hazardous wastes in laboratories

11. Description of Hazardous Waste

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 Comments						

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.

See Comments						

12. Notification of Hazardous Secondary Material (HSM) Activity

Y ☐ N ☑ Are you notifying under 40 CFR 260.42 that you will begin managing, are managing, or will stop managing hazardous secondary material under 40 CFR 261.2(a)(2)(ii), 40 CFR 261.4(a)(23), (24), or (25)?

If "Yes", you must fill out the Addendum to the Site Identification Form: Notification for Managing Hazardous Secondary Material.

13. Comments

Item 1. Reason for sumittal: Revision October 2013.

Item 4. Site Location: County - Butte, Clark, Jefferson, Bonneville, Bingham

Item 11.A. See Item 9 of the Hazardous Waste Permit Information Form OMB #2050-0034.

Item 11.B. 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.

14. 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 fines and imprisonment for knowing violations. For the RCRA Hazardous Waste Part A Permit Application, all owner(s) and operator(s) must sign (see 40 CFR 270.10(b) and 270.11).

Signature of legal owner, operator, or an authorized representative	Name and Official Title (type or print)	Date Signed (mm/dd/yyyy)
	Richard B. Provencher, Manager	11/13/13
	DOE-ID Operations Office	
	Danny Nichols, President	10/31/13
	Idaho Treatment Group, LLC	

United States Environmental Protection Agency

HARDOUS WASTE PERMIT INFORMATION FORM

1. Facility Permit Contact

First Name: TERESA | **MI:** L | **Last Name:** PERKINS

Contact Title: DIRECTOR, ENVIRONMENT & SUSTAINABILITY DIVISION

Phone: (208) 526-1483 | **Ext.:** NOT APPL. | **Email:** perkintl@id.doe.gov

2. Facility Permit Contact Mailing Address

Street or P.O. Box: 1955 FREMONT DRIVE

City, Town, or Village: IDAHO FALLS

State: ID

Country: USA | **Zip Code:** 83415

3. Operator Mailing Address and Telephone Number

Street or P.O. Box: 850 ENERGY DRIVE, SUITE 100

City, Town, or Village: IDAHO FALLS

State: ID | **Phone:** (208) 557-7301

Country: USA | **Zip Code:** 83415

4. Facility Existence Date

Facility Existence Date (mm/dd/yyyy): 01/01/1949

5. Other Environmental Permits

A. Facility Type *(Enter code)*	B. Permit Number	C. Description
R	ID4890008952	Part A Permit Application for Interim Status Unit(TSA1/R)
P	023-000001	AMWTF Permit to Construct (Air Pollution Source)
P	P-201101.0109	TSA-RE Permit to Construct (Air Pollution Source)
P	T1-2009.0148	Title V Operating Permit

6. Nature of Business: See Comments

7. Process Codes and Design Capacities – Enter information in the Section 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. 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 8.

B. PROCESS DESIGN CAPACITY – For each code entered in Item 7.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 Item 7.B(1), enter the code in Item 7.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 Unit 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; Hectares-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	Gallons; Liters; Cubic Meters; or Cubic Yards
S05	Drip Pad	Gallons; Liters; 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
T02	Surface Impoundment	Gallons Per Day; Liters Per Day
T03	Incinerator	Short Tons Per Hour; Metric Tons Per Hour; Gallons Per Hour; Liters Per Hour; BTUs Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Gallons 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; Short Tons Per Day; BTUs Per Hour; Gallons Per Day; Liters Per Hour; or Million BTU Per Hour
T80	Boiler	Gallons; Liters; Gallons Per Hour; Liters Per Hour; BTUs Per Hour; or Million BTU Per Hour
Treatment (Continued)		**(for T81 – T94)**
T81	Cement 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
T82	Lime Kiln	
T83	Aggregate Kiln	
T84	Phosphate Kiln	
T85	Coke Oven	
T86	Blast Furnace	
T87	Smelting, Melting, or Refining Furnace	
T88	Titanium Dioxide 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
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
Short Tons Per Hour	D
Short Tons Per Day	N
Metric Tons Per Hour	W
Metric Tons Per Day	S
Pounds Per Hour	J
Kilograms Per Hour	X
Million BTU Per Hour	X
Cubic Yards	Y
Cubic Meters	C
Acres	B
Acre-feet	A
Hectares	Q
Hectare-meter	F
BTU Per Hour	I

7. Process Codes and Design Capacities (Continued)

EXAMPLE FOR COMPLETING Item 7 (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		
X	1	S	0	2	533.788	G	001	
	1	S	0	1	20,237,720	G	001	
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
1	0							
1	1							
1	2							
1	3							

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 line sequentially, taking into account any lines that will be used for "other" process (i.e., D99, S99, T04, and X99) in Item 8.

8. Other Processes (Follow instructions from Item 7 for D99, S99, T04, and X99 process codes)

Line Number (Enter #s in sequence with Item 7)		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		
X	2	T	0	4	100.00	U	001	
	1	T	0	4	Liquid Absorption - 5,500	U	001	
	2	T	0	4	Liquid Neutralization - 5,500	U	001	
	3	T	0	4	Liquid Decanting - 5,500	U	001	
	4	T	0	4	Physical Sizing - 16,500	U	001	
	5	T	0	4	Repackaging - 16,500	U	001	

Supplement to Item 7

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**

Supplement to Item 8

Other Processes, Process Codes, and Design Capacities

LINE NUMBER	PROCESS TYPE UNIT NAME		PROCESS DESIGN CAPACITY[a,b]
1	**T04 Treatment Via In-Container Absorption of Liquid:** • 55 gallons/drum x 100 drums/day = 5,500 gallons/day.		5,500 gallons/day
		Line 1 Total:	**5,500 gallons/day**
2	**T04 Treatment Via Neutralization of Liquid:** • 55 gallons/drum x 100 drums/day = 5,500 gallons/day.		5,500 gallons/day
		Line 2 Total:	**5,500 gallons/day**
3	**T04 Treatment Via Decanting of Liquid:** • 55 gallons/drum x 100 drums/day = 5,500 gallons/day		5,500 gallons/day
		Line 3 Total:	**5,500 gallons/day**
4	**T04 Treatment Via Physical Sizing of Waste.**		16,500 gallons/day
		Line 4 Total:	**16,500 gallons/day**
5	**T04 Treatment Via Repackaging of Waste.**		16,500 gallons/day
		Line 5 Total:	**16,500 gallons/day**

Notes:

a. Any container size may processed, as long as the process design capacity is not exceeded.

b. When multiple treatment processes are used sequentially to treat the same waste within a 24 hour period, the waste volume shall only be counted once against the process limit. For example, a 55-gal drum that requires decanting of liquids may also require absorption.

9. Description of Hazardous Wastes - 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 Item 9.A, estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in Item 9.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 Item 9.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 Item 9.A, select the code(s) from the list of process codes contained in Items 7.A and 8.A on page 3 to indicate all the processes that will be used to store, treat, and/or dispose of all listed hazardous wastes.

For non-listed waste: For each characteristic or toxic contaminant entered in Item 9.A, select the code(s) from the list of process codes contained in Items 7.A and 8.A 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 9.D(1).
3. Use additional sheet, enter line number from previous sheet, and enter additional code(s) in Item 9.E.

2. PROCESS DESCRIPTION: If code is not listed for a process that will be used, describe the process in Item 9.D(2) or in Item 9.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 Item 9.A. On the same line complete Items 9.B, 9.C, and 9.D by estimating the total annual quantity of the waste and describing all the processes to be used to store, treat, and/or dispose of the waste.
2. In Item 9.A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In Item 9.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 9 (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 Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES									
								(1) PROCESS CODES (Enter Code)									(2) PROCESS DESCRIPTION (If code is not entered in 9.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 9

Description of Hazardous Wastes

Container storage plus treatment (liquid absorption, neutralization, liquid decanting, physical sizing, and repackaging) of waste in the TSA-1/TSA-R is listed under Item 9, along with the EPA hazardous waste numbers (HWNs) associated with the wastes that are expected to be handled in the units.

Page Numbers	Process
5 (A-1) of 6 to 5 (A-5) of 6	Wastes stored in TSA-1/TSA-R.
5 (B-1) of 6 to 5 (B-5) of 6	Wastes treated via liquid absorption.
5 (C-1) of 6 to 5 (C-5) of 6	Wastes treated via neutralization of liquid.
5 (D-1) of 6 to 5 (D-5) of 6	Waste treated via decanting of liquid.
5 (E-1) of 6 to 5 (E-5) of 6	Waste treated via physical sizing.
5 (F-1) of 6 to 5 (F-5) of 6	Waste treated via repackaging.

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 m^3/box)
Volume/trailer = 9.51 m^3/trailer

55-gallon Drums:
Quantity/trailer = 16
Volume/drum = 0.208 m^3
Volume/trailer = (16 drum/trailer)(0.208 m^3/drum)
Volume/trailer = 3.33 m^3/trailer

100-gallon Puck Drums:
Quantity/trailer = 14
Volume/drum = 0.379 m^3
Volume/trailer = (14 drum/trailer)(0.379 m^3/drum)

Volume/trailer = 5.3 m^3/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 m^3/trailer)(1.1023 tons/m^3)

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

3. Estimated Annual Quantity Treated by Liquid Absorption (Process Code T04)

The estimated daily quantity treated by liquid absorption is 5,500 gallons/day (20.8 m^3/day). This was determined in the Supplement to Item 8.

Estimated Annual Quantity for Liquid Absorption = (20.8 m^3/day)(1.1023 tons/m^3)(365 days/year)

Estimated Annual Quantity for Liquid Absorption = 8,369 tons/year

4. Estimated Annual Quantity Treated by Neutralization of Liquid (Process Code T04)

The estimated daily quantity treated by neutralization of liquids is 5,500 gallons/day (20.8 m^3/day). This was determined in the Supplement to Item 8.

Estimated Annual Quantity for Neutralization of Liquid = (20.8 m^3/day)(1.1023 tons/m^3)(365 days/year)

Estimated Annual Quantity for Neutralization of Liquid = 8,369 tons/year

5. Estimated Annual Quantity Treated by Decanting of Liquid (Process Code T04)

The estimated daily quantity treated by decanting of liquids is 5,500 gallons/day (20.8 m^3/day). This was determined in the Supplement to Item 8.

Estimated Annual Quantity for Decanting of Liquid = (20.8 m^3/day)(1.1023 tons/m^3)(365 days/year)

Estimated Annual Quantity for Decanting of Liquid = 8,369 tons/year

6. Estimated Annual Quantity Treated by Physical Sizing (Process Code T04)

The estimated daily quantity treated by physical sizing is 16,500 gallons/day (62.5 m^3/day). This was determined in the Supplement to Item 8.

Estimated Annual Quantity for physical sizing = (62.5 m^3/day)(1.1023 tons/m^3)(365 days/year)

Estimated Annual Quantity for Physical Sizing = 25,146 tons/year

6. Estimated Annual Quantity Treated by Repackaging (Process Code T04)

The estimated daily quantity treated by repackaging is 16,500 gallons/day (62.5 m^3/day). This was determined in the Supplement to Item 8.

Estimated Annual Quantity for repackaging = (62.5 m^3/day)(1.1023 tons/m^3)(365 days/year)

Estimated Annual Quantity for Repackaging = 25,146 tons/year

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

9. Description of Hazardous Wastes (Continued. Use Additional Sheet(s) as necessary; number pages as 5a, 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	4	1				**Included with Storage, page 5 (A-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**

9. Description of Hazardous Wastes (Continued. Use Additional Sheet(s) as necessary; number pages as 5a, 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 Storage, page 5 (A-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**

9. Description of Hazardous Wastes (Continued. Use Additional Sheet(s) as necessary; number pages as 5a, 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	U	1	2	3				**Included with Storage, page 5 (A-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**

9. Description of Hazardous Wastes (Continued. Use Additional Sheet(s) as necessary; number pages as 5a, 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)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in D(1))
	1	U217				**Included with Storage page 5 (A-1) of 6, line 1**
	2	U218				**Included with above**
	3	U219				**Included with above**
	4	U220				**Included with above**
	5	U225				**Included with above**
	6	U226				**Included with above**
	7	U227				**Included with above**
	8	U228				**Included with above**
	9	U239				**Included with above**
1	0	U328				**Included with above**
1	1					
1	2					
1	3					
1	4					
1	5					
1	6					
1	7					
1	8					
1	9					
2	0					
2	1					
2	2					
2	3					
2	4					
2	5					
2	6					
2	7					
2	8					
2	9					
3	0					
3	1					
3	2					
3	3					

9. Description of Hazardous Wastes (Continued. Use Additional Sheet(s) as necessary; number pages as 5a, 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	75,399	T	T	0	4						Liquid Absorption, Liquid Neutralization, Liquid Decanting, Physical Sizing, Repackaging
	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

9. Description of Hazardous Wastes (Continued. Use Additional Sheet(s) as necessary; number pages as 5a, 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)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in D(1))
	1	D	0	4	1				Included with Liquid Absorption, Liquid Neutralization, Liquid Decanting, Physical Sizing, Repackaging, 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

9. Description of Hazardous Wastes (Continued. Use Additional Sheet(s) as necessary; number pages as 5a, 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)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in D(1))
1	P120				Included with Liquid Absorption, Liquid Neutralization, Liquid Decanting, Physical Sizing, Repackaging, page 5 (B-1) of 6, line 1
2	U002				Included with above
3	U003				Included with above
4	U004				Included with above
5	U007				Included with above
6	U009				Included with above
7	U012				Included with above
8	U014				Included with above
9	U019				Included with above
10	U020				Included with above
11	U032				Included with above
12	U037				Included with above
13	U043				Included with above
14	U044				Included with above
15	U048				Included with above
16	U052				Included with above
17	U069				Included with above
18	U070				Included with above
19	U072				Included with above
20	U078				Included with above
21	U079				Included with above
22	U080				Included with above
23	U081				Included with above
24	U083				Included with above
25	U084				Included with above
26	U102				Included with above
27	U103				Included with above
28	U105				Included with above
29	U108				Included with above
30	U116				Included with above
31	U118				Included with above
32	U122				Included with above
33	U133				Included with above

9. Description of Hazardous Wastes (Continued. Use Additional Sheet(s) as necessary; number pages as 5a, 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)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in D(1))
1	U123				Included with Liquid Absorption, Liquid Neutralization, Liquid Decanting, Physical Sizing, Repackaging, page 5 (B-1) of 6, line 1
2	U127				Included with above
3	U128				Included with above
4	U131				Included with above
5	U133				Included with above
6	U134				Included with above
7	U135				Included with above
8	U138				Included with above
9	U140				Included with above
10	U144				Included with above
11	U145				Included with above
12	U147				Included with above
13	U151				Included with above
14	U154				Included with above
15	U159				Included with above
16	U162				Included with above
17	U165				Included with above
18	U169				Included with above
19	U170				Included with above
20	U171				Included with above
21	U182				Included with above
22	U188				Included with above
23	U190				Included with above
24	U191				Included with above
25	U196				Included with above
26	U201				Included with above
27	U204				Included with above
28	U207				Included with above
29	U209				Included with above
30	U210				Included with above
31	U211				Included with above
32	U213				Included with above
33	U215				Included with above

9. Description of Hazardous Wastes (Continued. Use Additional Sheet(s) as necessary; number pages as 5a, 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	U	2	1	7				Included with Liquid Absorption, Liquid Neutralization, Liquid Decanting, Physical Sizing, Repackaging, 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								
2	1								
2	2								
2	3								
2	4								
2	5								
2	6								
2	7								
2	8								
2	9								
3	0								
3	1								
3	2								
3	3								

10. Map

Attach to this application a topographical 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 intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all spring, rivers, and other surface water bodies in this map area. See instructions for precise requirements.

11. Facility Drawing

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

12. Photographs

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).

13. Comments

Item 6. The Advanced Mixed Waste Treatment Project (AMWTP) is located at the Radioactive Waste Management Complex (RWMC) in the southwest corner of the U.S. Department of Energy's Idaho National Laboratory (INL). The Project mission is to retrieve from storage, characterize, treat (as necessary), certify, prepare, load, and ship stored waste, including transuranic mixed waste and low-level mixed waste, to approved disposal facilities.

Item 10. For the topographic map, please see Appendix II of the AMWTP HWMA/RCRA Permit.

Item 11. For the facility drawing, please see the topographic map, located in Appendix II of the AMWTP HWMA/RCRA Permit.

Item. 12. For the facility photograph, please see Supplement to Item 12, Photographs.

Item 13. For a description of hazardous waste debris categories treated, stored, or disposed at the facility, as required by IDAPA 58.01.05.012 (40 CFR 270.13 [n]), please see the attached information titled: "Supplement to Item 13, Additional Information Hazardous Waste Debris Categories."

Supplement to Item 10

RWMC/AMWTP Topographic Map

(located in sheet protector following)

RWMC/AMWTP

Legend

- RCRA Permitted Treatment and Storage Area
- Trailer/TRUPACT staging area or Outside Storage Area (OSA)
- Loading/Unloading area
- Catchment Area I
- Catchment Area II
- Catchment Area III
- Catchment Area IV
- Catchment Area V
- Catchment Area VI
- Catchment Area VII
- Catchment Area VIII
- Surface water flow path
- 10-ft index contour
- 2-ft interval contour
- 2-ft index depression contour
- Building
- Tank
- Road
- Railroad track
- Fence
- Culvert
- Sewage lagoon
- Fire water line
- Sewer line

Wells and Well Instrumentation Types

- Production
- Aquifer monitoring
- Radiological vapor port
- Tensiometer
- Tensiometer/radiological vapor port
- Perched water monitoring
- Lysimeter
- Lysimeter/OCVZ vapor port/OCVZ extraction
- Lysimeter/OCVZ vapor port/OCVZ extraction/ perched water monitoring
- Lysimeter/radiological vapor port
- Lysimeter/tensiometer
- Lysimeter/tensiometer/OCVZ vapor port
- Lysimeter/tensiometer/radiological vapor port
- OCVZ extraction
- OCVZ vapor port
- OCVZ vapor port/aquifer monitoring
- OCVZ vapor port/OCVZ extraction
- OCVZ vapor port/perched water monitoring

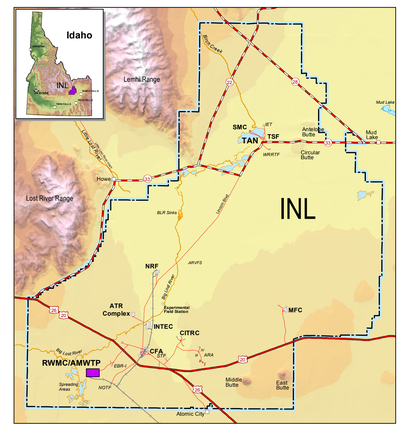
NOTES:
Landuse: RWMC facility boundaries are surrounded by restricted-access federal lands.

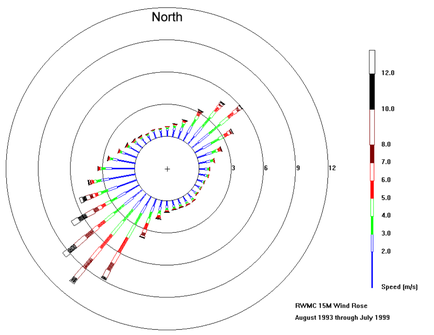
Legal Description: RWMC facility boundaries are located in Township 2 North, Range 29 East, Sections 17 and 18.

Base Map: Low-altitude aerial flyover, September 2011, 2-ft contour intervals.

Big Lost River Flood Hazard Study, Idaho National Laboratory, Idaho Report 2005-2, Dean A. Ostenaa and Daniel R. H. O'Connell, United States Bureau of Reclamation, Denver, Colorado (BOR, 2005).

100-year floodplain: Portions of the RWMC facility boundaries are located within the 100-year floodplain. The AMWTF, WMF-610, and WMF-628 through -635 boundaries are not located within the 100-year floodplain. If a 100-year flood were to occur the existing surface water drainage control system would prevent washout of any of the RWMC TSA HWMA regulated units.





N
W E
S

Meters
0 25 50 100 150 200 250 300 350

Feet
0 100 200 400 600 800 1,000 1,200

GIS Analyst: Dan Mahnami
Date Drawn: 9/30/2013
Path: X:\gis_projects3\rwmc\rwmc_permit_maps
File Name: AMWTP_RCRA_Permit_2013-el_v1.mxd

Supplement to Item 12

Photographs

Photo Number	Photo Description – Unit Process Code(s)	Page Number
Photo 1	Aerial View of the Transuranic Storage Area inside the Radioactive Waste Management Complex (looking east)	6c of 6
Photo 2	Southeast corner of the TSA-RE (exterior view)	6d of 6
Photo 3	Northwest corner of TSA-RE (exterior view)	6d of 6
Photo 4	Retrieval of drums from the Retrieval Contamination Enclosure (RCE) located on TSA-1/TSA-R inside the TSA-RE.	6e of 6

Photo 1. Aerial View of the Transuranic Storage Area inside the Radioactive Waste Management Complex (looking east).

Photo 2. Southeast corner of the TSA-RE.

Photo 3. Northwest corner of the TSA-RE.

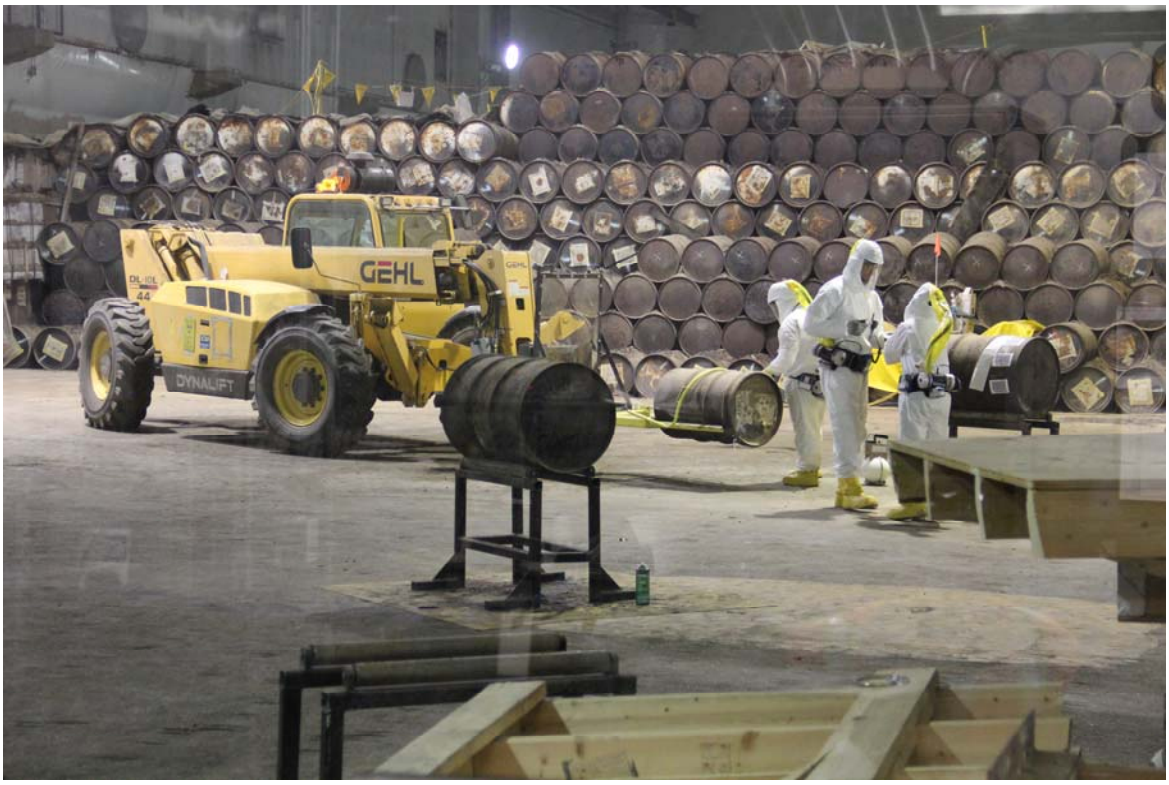


Photo 4. Retrieval of drums from the Retrieval Contamination Enclosure (RCE) located on TSA-1/TSA-R inside the TSA-RE.

Supplement to Item 13, 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

ACRONYMS AND ABBREVIATIONS

%	percent
αLLW	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
ASTM	American Society for Testing and Materials
BBWI	Bechtel BWXT, Idaho, LLC
BRFC	box retrieval forklift carriage
CCE	contamination control enclosure
CFR	Code of Federal Regulations
CMMS	computerized maintenance management system
CO	carbon monoxide
CPR	cardiopulmonary resuscitation
CW	combustible waste
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 levels
EAM	Emergency Action Manager
EC	Emergency Coordinator
EOC	Emergency Operations Center
EMT	Emergency Medical Technician
EPA	Environmental Protection Agency

ERO	emergency response organization
ERPG	Emergency Response Planning Guide
F	filters
FACP	fire alarm control panel
FRP	fiberglass reinforced plywood
ft	foot or feet
ft^2	square feet
G	graphite
gal	gallon
GFI	ground fault interrupter
HAZMAT	Hazardous Material
HAZWOPER	hazardous waste operator
HD	heterogeneous debris
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
ICE	Inner Contamination Enclosure
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
mil	millimeter
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
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
PAG	Protective Action Guide
PCB	polychlorinated biphenyl
PM	preventative maintenance
PPE	personal protective equipment
ppm	parts per million
psi	pounds per square inch
PVC	polyvinyl chloride
QAPP	quality assurance project plan
RCE	Retrieval Contamination Enclosure
RCRA	Resource Conservation and Recovery Act
RFETS	Rocky Flats Environmental Technology Site
RGN	reactivity group numbers
RGW	retrieval generated waste
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
SCW	special case waste
SI	solidified inorganic(s)
SO	solidified organic(s)

SSOP	soft-sided overpack container
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-1	Transuranic Storage Area-Pad 1
TSA-R	Transuranic Storage Area-Pad R
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
UTS	universal treatment standard
VE	visual examination
WAC	waste acceptance criteria
WAP	Waste Analysis Plan
WCC	Warning Communications Center
WG	waste group
WIPP	Waste Isolation Pilot Plant
WMF	Waste Management Facility

SECTION B

FACILITY DESCRIPTION

(For Information Only)

TABLE OF CONTENTS

LIST OF EXHIBITS

B. FACILITY DESCRIPTION

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

The Advanced Mixed Waste Treatment Project (AMWTP) Transuranic Storage Area (TSA)-Retrieval Enclosure (TSA-RE), also referred to as Waste Management Facility (WMF)-636, is located within the Radioactive Waste Management Complex (RWMC) at the Idaho National Laboratory (INL). The TSA-RE is operated by a designated contractor under contract with the United States Department of Energy-Idaho Operations Office (DOE-ID). Exhibit B-1 is a map of the INL showing the major area locations and buildings, including the RWMC.

The TSA-RE is a metal structure that encloses three asphalt pads (TSA-1, TSA-R, and WMF-636 Pad-2), which are regulated under the Hazardous Waste Management Act (HWMA)/Resource Conservation and Recovery Act (RCRA) Interim Status (IS) regulations in IDAPA 58.01.05.009 (40 CFR Part 265) and the HWMA/RCRA container storage unit regulations in IDAPA 58.01.05.008 (40 CFR 264 Subpart I). This HWMA/RCRA IS Document covers only the mixed waste management unit (MWMU) that is regulated under the IS regulations (i.e., TSA-1 and TSA-R). For information on the WMF-636 Pad 2 container storage unit, refer to the AMWTP HWMA/RCRA Permit.

When constructed, the TSA-RE contained covered stacks of retrievably-stored transuranic (TRU) and alpha low-level waste (αLLW), which is mixed waste (MW) or radioactive only waste (ROW). Located on TSA-1, is the Retrieval Contamination Enclosure (RCE), which surrounds the waste that to be retrieved from TSA-1(i.e., Cells 1 and 2). Also inside the RCE is an Inner Contamination Enclosure (ICE), which is used for the retrieval of severely degraded containers and/or treatment of wastes. The TSA-RE contains an IS container storage unit (i.e., TSA-1/TSA-R) and treatment processes may be performed in the RCE/ICE (i.e., absorption, decanting, neutralization, repackaging, and sizing).

Located on TSA-R, is the TSA-R contamination control enclosure (CCE), which is used for the retrieval of waste in degraded containers, including the contents of metal cargo containers. Refer to Exhibit B-2 for the original floor plan of the TSA-RE, and to Exhibit B-3 for a simplified drawing, showing the relative locations of TSA-1, TSA-R, and associated contamination enclosures.

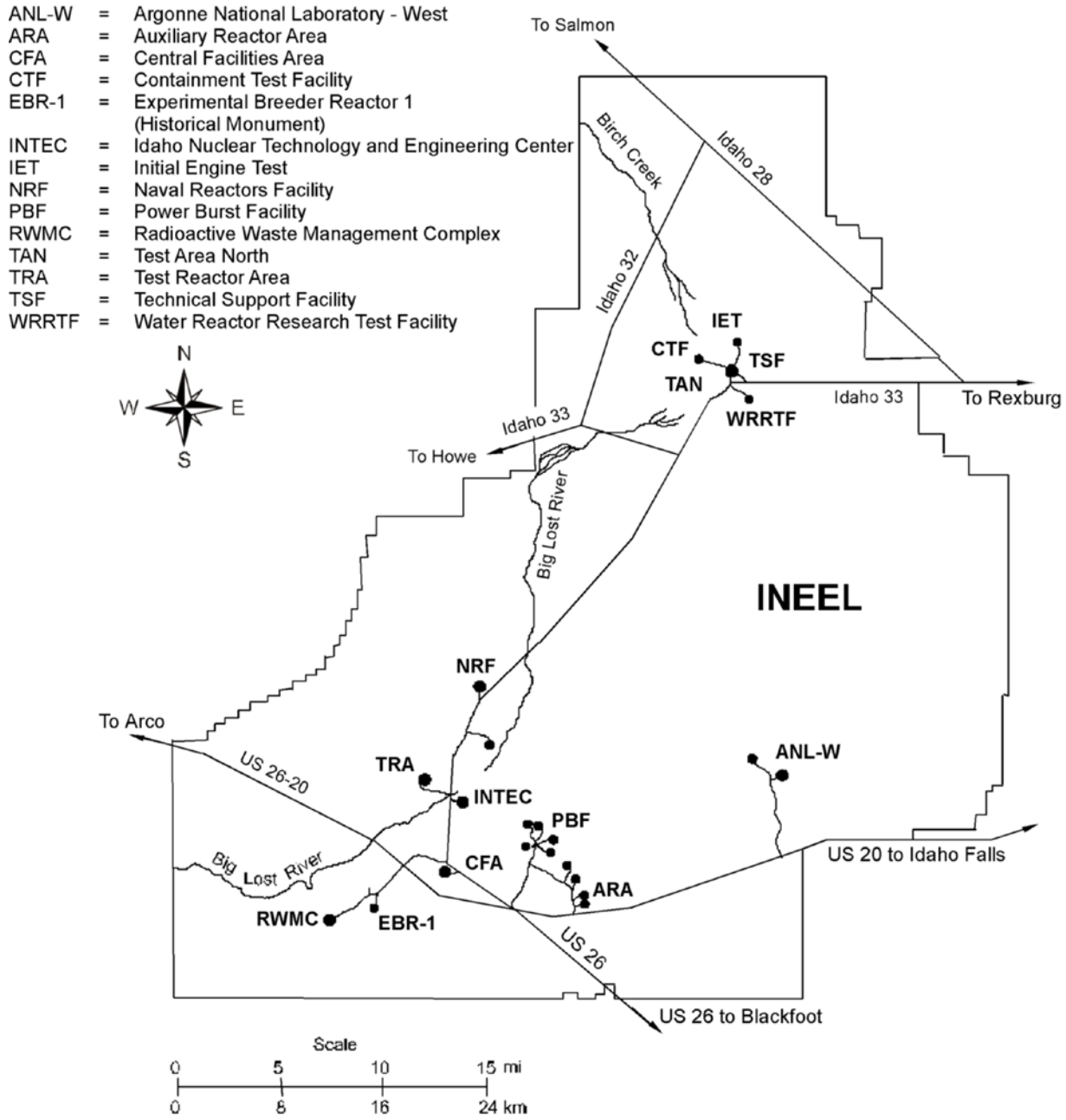


Exhibit B-1. Map of INL showing major area locations.

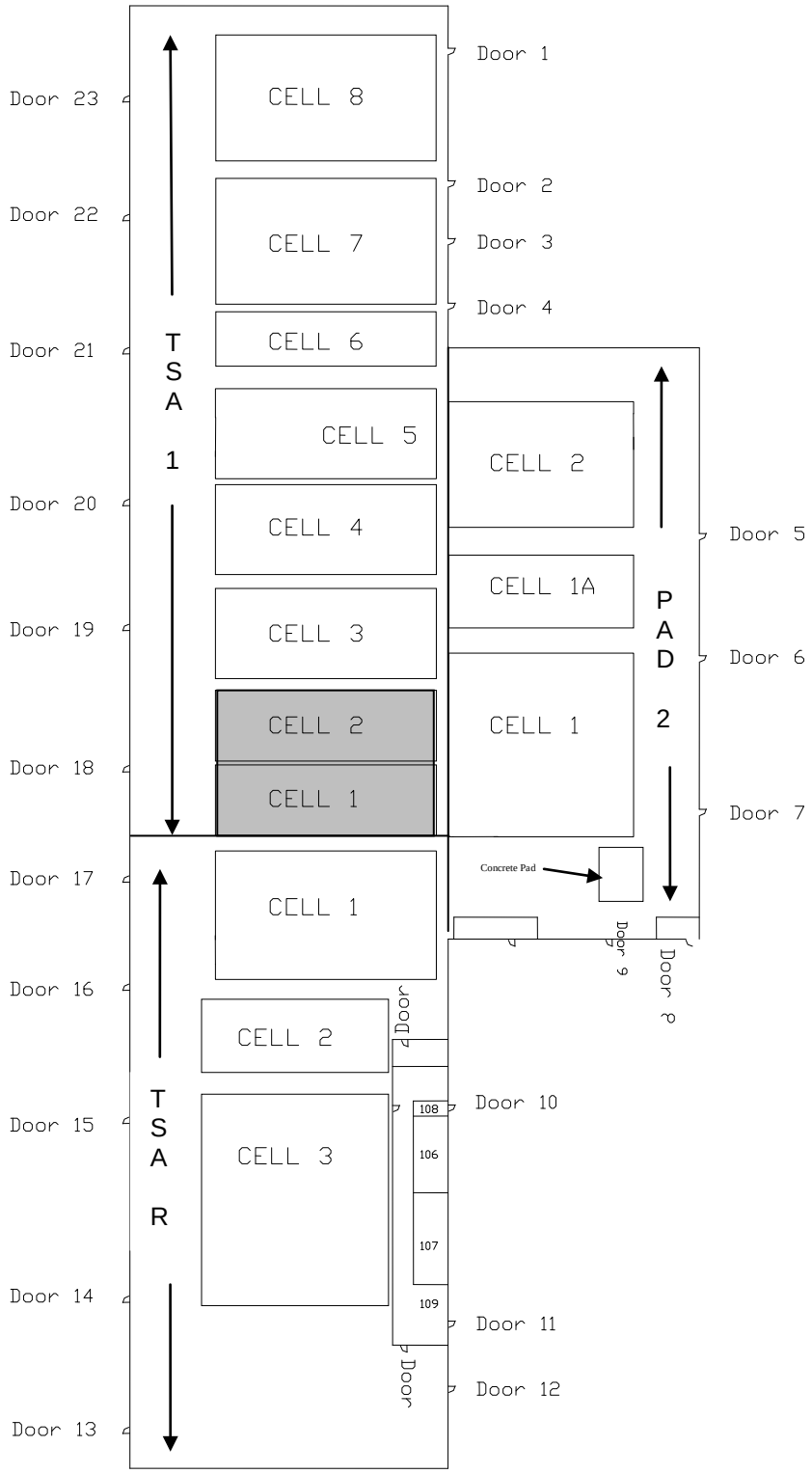


Exhibit B-2. TSA-RE Original Floor Plan, showing location of remaining waste in Cells 1 and 2 of TSA-1.

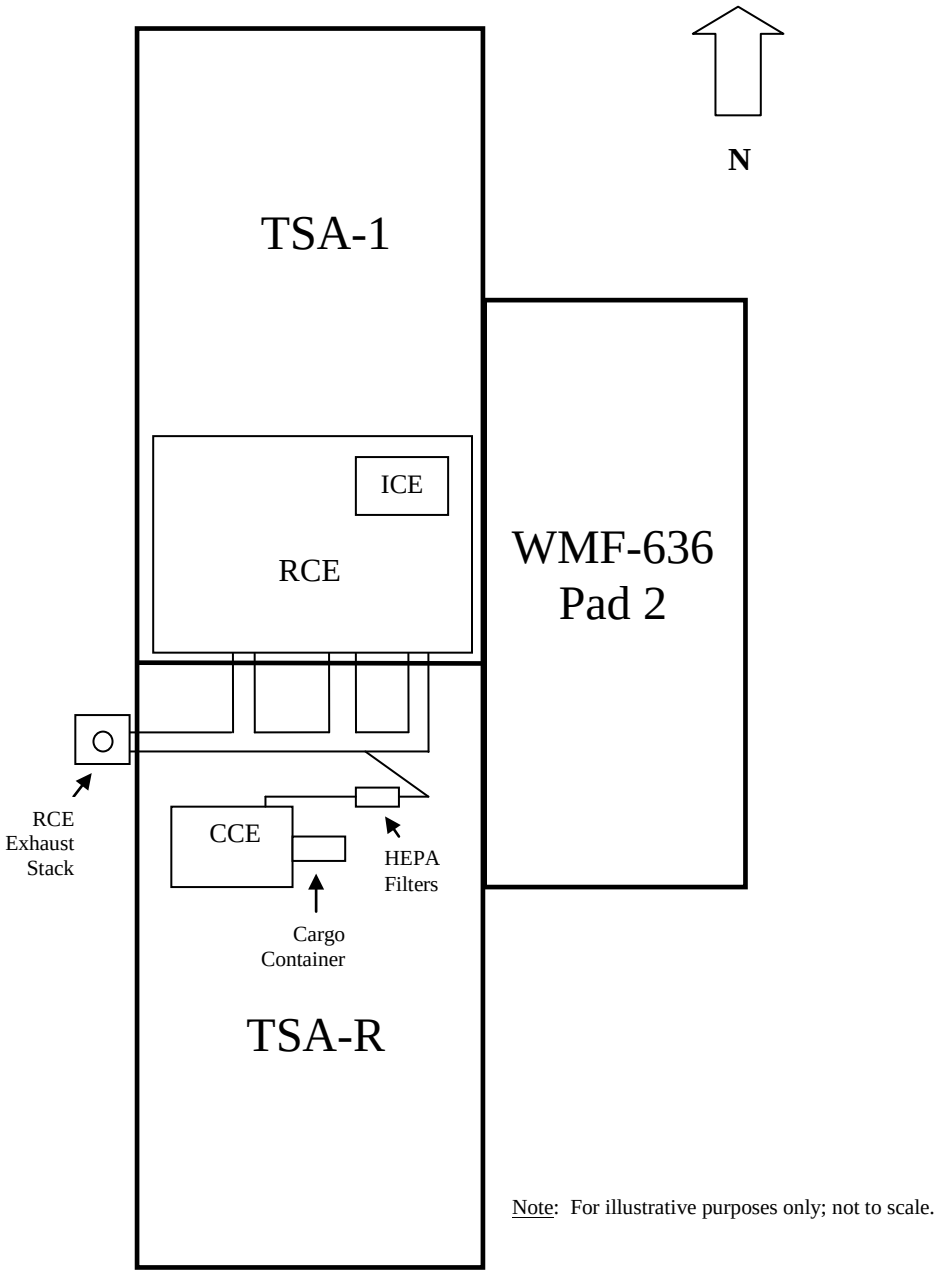


Exhibit B-3. TSA-RE, showing relative locations of TSA-1, TSA-R, and associated contamination enclosures.

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

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

AMWTP Process Description

Waste retrieved from the TSA-RE is managed in the TSA IS Unit and in the following AMWTP permitted MWMUs:

- WMF-636, Pad 2
- Waste Characterization Facility (WMF-634)
- Stored Waste Examination Pilot Plant (SWEPP, WMF-610)
- Type I Module (WMF-635)
- Type II Modules (WMF-628 through WMF-633), and the
- Advanced Mixed Waste Treatment facility (AMWTF, WMF-676)

Waste management activities include characterization for storage and treatment or direct shipment, storage in preparation for treatment or shipment, pre-treatment (as required), treatment (as required), and packaging and certification (as required) for shipment to the Waste Isolation Pilot Plant (WIPP) or to another MWMU. Containers are transported/transferred to, from, and within the TSA IS Unit and other 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 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 located inside the TSA-RE. The TSA-RE provides weather protection for retrieval operations. The locations of the TSA-RE and other AMWTP MWMUs are shown on the RWMC/AMWTP Topographic Map, which is located in the Part A Permit Application for the TSA IS Unit.

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 or cargo containers; inspecting, monitoring, and barcoding containers; repairing containers, or containerizing waste, as necessary; then transporting containers to other MWMUs. Containerization includes those activities that comply with IDAPA 58.01.05.009, 40 CFR 265.171, and 40 CFR 270.1(c)(3) (e.g., overpacking, un-overpacking, or transferring the contents of a breached container or container with poor integrity into a container with good integrity, etc.)

The only waste remaining to be retrieved resides in Cells 1and 2 of TSA-1, and in cargo containers stored on Pad-R of the TSA IS Unit. Cargo containers still requiring retrieval are located on TSA-R. Because many of the containers remaining to be retrieved from TSA-1 are severely degraded,the condition of these containers may be such that the containers do not have adequate integrity to be retrieved without additional contamination controls. Therefore, the RCE/ICE contamination enclosures have been constructed around Cells 1, 2, and 3 of TSA-1.

In addition to the waste remaining on TSA-1, a variety of 83-gallon, 55-gallon, and 30-gallon drums remain to be retrieved from the metal cargo containers that are currently stored on TSA-R. Similar to the situation on TSA-1, the condition of these containers may be such that the containers do not have adequate integrity to be retrieved without additional contamination controls. As a result, the CCE has been installed on the north side of TSA-R to provide an additional contamination control enclosure in the TSA IS Unit.

Additional information on the RCE/ICE and CCE is provided in the TSA IS Units Description paragraph of this section, and in Sections D and F.

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 combined drum venting system (DVS) and headspace gas sampling unit, portable headspace gas sampling units, a unit for the treatment (via addition of absorbent to containers with liquids, decanting liquids, neutralization of liquids, repackaging of waste, the sizing of waste, or by the mechanical vibration of

waste) and visual examination of containers, a drum core sample retrieval system (DCSRS), and an area for performing macroencapsulation. Containers are received at WMF-634 for characterization and/or treatment. Waste is stored in WMF-634 while awaiting characterization, treatment (as required), and transport to the Type I Module, the Type II Modules, or the TSA IS Unit for storage, pending disposition. Select drums pass through the DVS and DCSRS in WMF-634 prior to routing for further disposition.

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

Storage

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

Direct Shipment

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

Pretreatment

Waste containers to be treated in WMF-676 are transported from storage to the waste receiving and storage areas of WMF-676. The containers are then transferred within WMF-676 to the pretreatment areas or directly to treatment. See the AMWTP HWMA/RCRA Permit for further information on the pretreatment processes in WMF-676.

Treatment in the AMWTP MWMUs

Various methods of treatment are allowed in the TSA IS Unit (RCE/ICE, limited in CCE), WMF-628 through WMF-635, WMF-610, and WMF-676. A brief description of each treatment activity as it is performed in the TSA IS Unit is provided below. See the AMWTP HWMA/RCRA Permit for further information on the treatment methods performed in WMF-628 through WMF-635, WMF-610, and

WMF-676. Secondary containment will be provided in all areas where liquid is being treated. See Section D for additional information.

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

Decanting. Liquid wastes are decanted from containers into containers. The decanted wastes may then be neutralized and/or absorbed. Co-mingling of decanted liquids or absorbed wastes may occur, as applicable, after compatibility of the wastes has been addressed.

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

Repackaging. Repackaging is the segregation and packaging of waste or waste components where the segregation of the waste or waste components is conducted to facilitate waste processing or disposal (e.g., removal of prohibited items, segregation of combustible materials from potential pyrophoric radionuclides).

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

TSA IS Units Description

The TSA-RE is an existing engineered metal building encompassing approximately 313,000 square feet (ft^2) that encloses the TSA IS Unit and WMF-636 Pad 2. The TSA-1/TSA-R asphalt pads are made up of a number of storage cells. See Exhibits B-2 and B-3 for the location of the TSA-1/TSA-R asphalt pads in reference to the floor plan of the TSA-RE.

TSA-1/TSA-R Storage Pads

TSA-1 was the first pad constructed at the TSA. Initially, the pad was 150-feet (ft) wide by 400-ft long and surfaced with an asphalt pad. The length of TSA-1 was extended to approximately 730 ft in 1972. The pad is divided into cells of varying lengths separated by soil firewalls. The first waste was

placed onto TSA-1 in November 1970, and the last waste was received for storage at TSA-1 in October 1975.

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

RCE

The RCE is a combination hard-sided/soft-sided enclosure that surrounds Cells 1, 2, and 3 of TSA-1. The RCE was commissioned to retrieve the waste remaining in the TSA IS Unit. The RCE includes equipment/personnel airlocks, a control room, operations support room (e.g., radiological control, industrial health, industrial safety) and waste export airlock. Designated areas within the RCE may be used for container storage and the performance of treatment activities in (i.e., absorption, decanting, neutralization, repackaging, and sizing). All treatment activities involving liquids will be performed within secondary containment. See Section D for additional information.

ICE

The ICE(s) are mobile, soft-sided enclosures (or similar structures) located within the RCE. It is used for the retrieval of severely degraded containers and may be used for the performance of treatment activities (i.e., absorption, decanting, neutralization, repackaging, and sizing) within the TSA IS Unit. All treatment activities involving liquids will be performed within secondary containment. See Section D for additional information.

CCE

The CCE is a flame-resistant soft-sided enclosure (or similar structure, e.g., Perma-Con) located on the north end of TSA-R. The asphalt floor of Pad R has been covered with a layer of impermeable flame resistant Herculite fabric. Inside the CCE, a high strength G-Floor 85 mil Vinyl Flooring covers the Herculite fabric. It was commissioned to retrieve and treat waste in severely degraded containers, including the contents of metal cargo containers. Contamination control features associated with the CCE include a sleeve, flap, or equivalent feature that is attached to the cargo container to minimize air leaks past the CCE/cargo container seal.

Two airlocks are attached to the CCE, the equipment airlock is on the west face to enhance contamination and boundary control, while the personnel airlock is attached to the north face of the CCE

to allow personnel to enter and exit the area safely. The airlocks are secured to the CCE using a plastic weld material or equivalent sealer to minimize leaks. The CCE is filtered by three stage HEPA filters, which vent to the RCE exhaust stack. The air is pulled from both the equipment and personnel airlocks through the CCE and into the rear of the cargo container by the HEPA filtration unit(s). See Section D for additional information.

SECTION C

WASTE CHARACTERISTICS

TABLE OF CONTENTS

LIST OF TABLES

C. WASTE CHARACTERISTICS

This section describes the overall waste characteristics of the MW stored in the TSA IS Unit. The bulk of the waste that is stored at the TSA IS Unit is MW. Table C-1 lists the IDCs that are managed within the TSA IS Unit 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 Unit Part A Permit Application is accepted for storage/treatment in the TSA IS Unit. Waste accepted for storage/treatment at the TSA IS Unit 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 Unit, 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 Managed at the TSA Interim Status Unit a, b, c, d, e, f, g, h, i

Generator	IDC	Description	Hazardous Waste Numbers	55-gal Drums	83-gal Drums	Boxes	Bins	Waste Volume (m3)	WG
ANL-E	100	General Plant Waste	D001, F003	0	0	1	4	17	HD
ANL-E	101	Cut Up Gloveboxes	D008	0	0	0	4	14	HD
ANL-E	102	Absorbed Liquids	D001, F003	0	0	3	17	67	UNK
ANL-E	104	Alpha Hot Cell Waste	None Identified	0	0	0	0	0	HD
ANL-E	105	Empty Bottles and Absorbent	D001, F003	0	0	0	1	3	UNK
ANL-E	107	RH Waste	None Identified	0	0	0	0	0	HD
ANL-E	110	Research Generated Waste	D004, D006, D008, F003	0	0	0	0	0	HD
ANL-E	111	Solidified Wet Sludge	D004, D005, D006, D007, D008, D009	0	0	1	0	3	UNK
ANL-E	121	TRU Organic Solid Waste	D004, D005, D006, D007, D008, D009	0	0	8	0	25	UNK
Babcock	515	Plastics, Paper, Cloth, Etc.	None Identified	0	0	0	0	0	HD
Babcock	516	Steel, Al, Electrical Devices-Handheld	None Identified	0	0	0	0	0	HD
Babcock	517	Heavy Metals, Steel, Al, Brass	None Identified	0	0	0	0	0	HD
Battelle	201	Non-combustible Solids	D005, D006, D007, D008, D009, D011, F001, F002, F005	0	0	1	0	3	HD
Battelle	202	Combustible Solids-Paper/Cloth	D005, D006, D007, D008, D009, D011, F001, F002, F005	0	0	0	0	0	HD
Battelle	203	Paper, Cloth, Metals, Glass	D005, D006, D007, D008, D009, D011, F001, F002, F005	0	0	0	1	3	HD
Battelle	204	Solidified Solutions	D005, D006, D007, D008, D009, D011, F001, F002, F005	0	0	0	0	0	SI
Bendix	111	Miscellaneous Source Material	None Identified	0	0	0	0	0	HD
Bettis	10	Rags, Gloves, Poly	F002	436	59	0	0	109	CW
Bettis	12	Miscellaneous Sources	None Identified	0	0	0	0	0	UNK
Bettis	15	Neutron Sources	None Identified	0	0	0	0	0	UNK
Bettis	20	Non-compressible, Non-combustible	D002, F002	354	14	0	0	78	HD
Bettis	30	Solidified Grinding Sludge	F002	0	0	0	0	0	SI
Bettis	338	RWMC Lead Shielded Overpack Empty	None Identified	0	0	0	0	0	LCM
Bettis	40	Solidified Binary Scrap Powder	None Identified	0	0	0	0	0	UNK
Bettis	50	Solidified Solutions	None Identified	0	0	0	0	0	SI
Bettis	81	Metal Samples Fissile	TBD	0	0	0	0	0	UM
ID	0	Not Recorded-Retrieved RFP TRU UNK	None Identified	0	0	0	0	0	UNK
ID	150	Laboratory Waste	D002, D008	0	0	0	0	0	HD
ID	152	Pu Neutron Sources	None Identified	0	0	0	0	0	HD
ID	153	Combustible Lab Waste	None Identified	0	0	0	0	0	HD
ID	154	Sample Fuel	None Identified	0	0	0	0	0	INM
ID	155	TRU Scrap	None Identified	0	0	0	0	0	HD

Table C-1. Waste Managed at the TSA Interim Status Unit [a, b, c, d, e, f, g, h, i] (cont'd)

Generator	*IDC*	*Description*	*Hazardous Waste Numbers*	*55-gal Drums*	*83-gal Drums*	*Boxes*	*Bins*	*Waste Volume (m3)*	*WG*
ID	*157*	*Miscellaneous Radionuclide Sources*	*D008*	*0*	*0*	*0*	*0*	*0*	*HD*
ID	*21*	*Radioactive Mixed Lead Waste*	*D008*	*0*	*0*	*0*	*0*	*0*	*HD*
ID, IC	*150*	*Laboratory Waste*	*D002, D008*	*0*	*0*	*0*	*0*	*0*	*HD*
ID, IC	*152*	*Pu Neutron Sources*	*None Identified*	*0*	*0*	*0*	*0*	*0*	*HD*
ID, IC	*156*	*Chem Cell Rip-out (UNK)*	*None Identified*	*0*	*0*	*0*	*0*	*0*	*HD*
ID, IC	*525*	*Laboratory Debris Waste (P/U-listed)*	*D004, D005, D006, D007, D008, D009, D010, D011, D022, D026, D027, D028, D029, D030, D032, D033, D034, D036, D037, D043, F001, F002, F005, F006, F007, F009, P030, P098, P099, P106, U003, U103, U108*	*0*	*0*	*0*	*0*	*0*	*HD*
ID, IC	*526*	*Laboratory PCB Debris Waste*	*TBD*	*0*	*0*	*0*	*0*	*0*	*HD*
ID, IC	*527*	*Laboratory non-PCB Debris Waste*	*TBD*	*0*	*0*	*0*	*0*	*0*	*HD*
ID, IC	*601*	*Alpha Low Level Lab. WIPP Analytical Waste*	*TBD*	*0*	*0*	*0*	*0*	*0*	*HD*
ID, IC	*602*	*Laboratory Homogeneous Solids Waste (P/U-listed)*	*D004, D005, D006, D007, D008, D009, D010, D011, D022, D026, D027, D028, D029, D030, D032, D033, D034, D036, D037, D043, F001, F002, F005, F006, F007, F009, P030, P098, P099, P106, U003, U103, U108*	*0*	*0*	*0*	*0*	*0*	*UNK*
ID, IC	*603*	*Laboratory Homogeneous Solids Waste*	*TBD*	*0*	*0*	*0*	*0*	*0*	*UNK*
ID, IW	*157*	*Miscellaneous Radionuclide Sources*	*D008*	*0*	*0*	*0*	*0*	*0*	*HD*
ID, IW	*176*	*RWMC Homogeneous Solids*	*TBD*	*0*	*1*	*0*	*0*	*0*	*UNK*
ID, IW	*177*	*RWMC Homogeneous Debris*	*TBD*	*0*	*87*	*0*	*0*	*27*	*HD*
ID, IW	*178*	*RWMC Homogeneous Soil*	*TBD*	*0*	*0*	*0*	*0*	*0*	*S*
ID, IW	*179*	*Early Waste Retrieval Bins*	*TBD*	*0*	*0*	*1*	*18*	*64*	
ID, IW	*337*	*Plastic, Teflon, Wash, PVC, Ret. RF TR*	*TBD*	*0*	*0*	*0*	*0*	*0*	*CW*
ID, IW	*5*	*Evaporator Salts-Retrieved RF TRU*	*TBD*	*0*	*0*	*0*	*0*	*0*	*SW*

Table C-1. Waste Managed at the TSA Interim Status Unit [a, b, c, d, e, f, g, h, i] (cont'd)

Generator	*IDC*	*Description*	*Hazardous Waste Numbers*	*55-gal Drums*	*83-gal Drums*	*Boxes*	*Bins*	*Waste Volume (m3)*	*WG*
ID, IW	*527*	*Laboratory Non-PCB Debris Waste*	*D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D026, D027, D028, D029, D030, D032, D033, D034, D035, D036, D037, D038, D039, D040, D043, F001, F002, F004, F005, F006, F007, F009*	*0*	*0*	*0*	*0*	*0*	*HD*
ID, IW	*603*	*Laboratory Homogeneous Solids Waste*	*D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D026, D027, D028, D029, D030, D032, D033, D034, D035, D036, D037, D038, D039, D040, D043, F001, F002, F004, F005, F006, F007, F009*	*0*	*0*	*0*	*0*	*0*	*UNK*
ID, IW	*704*	*SDA Homogeneous Solids*	*TBD*	*0*	*0*	*0*	*0*	*0*	*UNK*
IN-ANLW	*152*	*Pu Neutron Sources*	*None Identified*	*0*	*0*	*0*	*0*	*0*	*HD*
IN-ANLW	*153*	*Combustible Lab Waste*	*None Identified*	*0*	*0*	*0*	*0*	*0*	*HD*
IN-ANLW	*155*	*TRU Scrap*	*None Identified*	*0*	*0*	*0*	*0*	*0*	*HD*
IN-ANLW	*165*	*Ash Stabilization and GGE Debris*	*TBD*	*0*	*0*	*0*	*0*	*0*	*HD*
IN-ANLW	*150*	*Laboratory Waste*	*D002, D008*	*0*	*0*	*0*	*0*	*0*	*HD*
IN-ANLW	*154*	*Sample Fuel*	*None Identified*	*0*	*0*	*0*	*0*	*0*	*HD*
IN-ANLW	*160*	*AL/CL Debris Waste*	*None Identified*	*0*	*0*	*0*	*0*	*0*	*HD*
IN-ANLW	*161*	*ACL Glassware, Paper, Poly, and Misc.*	*None Identified*	*0*	*0*	*0*	*0*	*0*	*HD*
IN-ANLW	*162*	*ANL-W FMF EFL Zr-U-Pu Fuel Cast.*	*None Identified*	*0*	*0*	*0*	*0*	*0*	*HD*
IN-ANLW	*163*	*ANL-W ACL Cold-Line Ab. Liq. and Debris*	*None Identified*	*0*	*0*	*0*	*0*	*0*	*HD*
IN-ANLW	*164*	*ANL-W HRA/WCA Debris*	*D005, D006, D007, D008, D009, D011, D022, D028, D029, F001, F002, F003, F004, F005*	*0*	*0*	*0*	*0*	*0*	*HD*
IN-ANLW	*167*	*MFC CH-TRU Heterogeneous Debris*	*D006, D007, D008, D011*	*0*	*0*	*0*	*0*	*0*	*HD*
J. Haynes	*826*	*Combustible Equip Boxes and Floor Swp.*	*None Identified*	*0*	*0*	*0*	*0*	*0*	*HD*
J. Haynes	*827*	*Solid Trash and Dry Lab Material*	*None Identified*	*0*	*0*	*0*	*0*	*0*	*HD*
Mexico	*142*	*Scrap Processing Equipment*	*None Identified*	*0*	*0*	*0*	*0*	*0*	*HD*

Table C-1. Waste Managed at the TSA Interim Status Unit [a, b, c, d, e, f, g, h, i] (cont'd)

Generator	*IDC*	*Description*	*Hazardous Waste Numbers*	*55-gal Drums*	*83-gal Drums*	*Boxes*	*Bins*	*Waste Volume (m3)*	*WG*
Monsanto	*530*	*Compacted Waste*	*None Identified*	*0*	*0*	*0*	*0*	*0*	*HD*
Monsanto	*535*	*Compacted Waste/Lead*	*None Identified*	*0*	*0*	*0*	*0*	*0*	*HD*
Monsanto	*540*	*Non-Compacted Waste*	*None Identified*	*0*	*0*	*0*	*0*	*0*	*HD*
Monsanto	*545*	*WEP Sheilded Waste*	*None Identified*	*0*	*0*	*0*	*0*	*0*	*HD*
Monsanto	*550*	*Solidified Oil*	*None Identified*	*0*	*0*	*0*	*0*	*0*	*SI*
Mound	*801*	*Rags, Paper, Wood, etc.*	*None Identified*	*0*	*0*	*0*	*0*	*0*	*HD*
Mound	*802*	*Dry Box Gloves and O-rings*	*D008*	*0*	*0*	*0*	*0*	*0*	*HD*
Mound	*803*	*Metal, Equipment, Pipe, Valves, etc*	*D009*	*0*	*0*	*0*	*0*	*0*	*HD*
Mound	*804*	*Plastic, Tygon, Mani-Boots, etc.*	*D009*	*0*	*0*	*0*	*0*	*0*	*HD*
Mound	*805*	*Asbestos Filters*	*D001, D002, D009*	*0*	*0*	*0*	*0*	*0*	*HD*
Mound	*810*	*Glass Flasks, Sample Vials, Etc.*	*D009*	*0*	*0*	*0*	*0*	*0*	*HD*
Mound	*811*	*Evaporator and Dissolver Sludge*	*D001, D009*	*0*	*0*	*0*	*0*	*0*	*SI*
Mound	*813*	*Glass Filters and Fiberglass*	*D001, D002, D009*	*0*	*0*	*0*	*0*	*0*	*HD*
Mound	*814*	*Graphite Waste*	*D009*	*0*	*0*	*0*	*0*	*0*	*HD*
Mound	*815*	*Classified Parts*	*D009*	*0*	*0*	*0*	*0*	*0*	*UNK*
Mound	*824*	*Equipment Boxes, Non-combustible*	*D005, D006, D007, D008, D009, D010, D011*	*0*	*0*	*74*	*0*	*235*	*HD*
Mound	*825*	*Equipment Drums, Non-combustible*	*D005, D006, D007, D008, D009, D010, D011*	*0*	*0*	*0*	*0*	*0*	*HD*
Mound	*826*	*Equipment Boxes, Combustible*	*D009*	*0*	*0*	*0*	*0*	*0*	*HD*
Mound	*827*	*Equipment Drums, Combustible*	*D008, D009*	*0*	*0*	*0*	*0*	*0*	*HD*
Mound	*834*	*High Level Acid*	*D001, D002*	*0*	*0*	*0*	*0*	*0*	*SI*
Mound	*835*	*High Level Caustic*	*D002*	*0*	*0*	*0*	*0*	*0*	*SI*
Mound	*836*	*High Level Sludge/Cement*	*D002, D006, D007, D008, D009, D010, D011, F001, F002, F003*	*0*	*3*	*0*	*0*	*1*	*SI*
Mound	*838*	*<10 nCi/g Non-combustible*	*None Identified*	*0*	*0*	*0*	*0*	*0*	*HD*
Mound	*842*	*Contaminated Soil*	*D006, D007, D008, D009, D010, D011*	*0*	*0*	*0*	*0*	*0*	*S*
Mound	*847*	*LSA<100 nCi/g Combustible*	*D008, D009*	*0*	*0*	*0*	*0*	*0*	*HD*
Mound	*848*	*LSA<100 nCi/g Non-combustible*	*D001, D002, D005, D006, D007, D008, D009, D010, D011*	*0*	*0*	*0*	*0*	*0*	*HD*
RFETS	*1*	*First Stage Sludge*	*TBD*	*683*	*5*	*0*	*0*	*144*	*SI*
RFETS	*2*	*Second Stage Sludge*	*TBD*	*1237*	*34*	*0*	*0*	*268*	*SI*
RFETS	*241*	*Americium Process Residue*	*D001, D002, D008, F002, F003*	*80*	*0*	*0*	*0*	*17*	*HD*
RFETS	*290*	*Filter Sludge*	*D002, D006, D008, F001, F002, F003*	*5*	*0*	*0*	*0*	*1*	*SI*

Table C-1. Waste Managed at the TSA Interim Status Unit [a, b, c, d, e, f, g, h, i] (cont'd)

Generator	*IDC*	*Description*	*Hazardous Waste Numbers*	*55-gal Drums*	*83-gal Drums*	*Boxes*	*Bins*	*Waste Volume (m3)*	*WG*
RFETS	*292*	*Cemented Sludge*	*D004, D005, D006, D007, D008, D009, D010, D011, D022, F001, F002, F003, F005, F006, F007, F009*	*0*	*0*	*0*	*0*	*0*	*SI*
RFETS	*3*	*Organic Setups, Oil Solids*	*D005, D008, D011, D022, D029, D036, F001, F002, F003, F005*	*580*	*29*	*0*	*0*	*130*	*SO*
RFETS	*300*	*Graphite Molds*	*D008, D029, D040, F001, F002, F005*	*15*	*1*	*0*	*0*	*3*	*G*
RFETS	*301*	*Graphite Cores*	*D008, D029, D040, F001, F002, F005*	*0*	*0*	*0*	*0*	*0*	*G*
RFETS	*302*	*Benelex and Plexiglas*	*TBD*	*0*	*0*	*0*	*0*	*0*	*CW*
RFETS	*303*	*Scarfed Graphite Chunks*	*D008, D029, D040, F001, F002, F005*	*0*	*0*	*0*	*0*	*0*	*G*
RFETS	*310*	*Graphite Scarfings*	*None Identified*	*14*	*0*	*0*	*0*	*3*	*G*
RFETS	*311*	*Graphite Heels*	*None Identified*	*3*	*0*	*1*	*0*	*4*	*SI*
RFETS	*312*	*Coarse Graphite*	*D008, D029, D040, F001, F002, F005*	*0*	*0*	*0*	*0*	*0*	*G*
RFETS	*320*	*Heavy Non-special Source Metal*	*D008, D009, F001, F002, F005*	*157*	*2*	*0*	*0*	*33*	*LCM*
RFETS	*321*	*Lead*	*D002, D008*	*0*	*0*	*0*	*0*	*0*	*LCM*
RFETS	*328*	*Ful-Flo Incinerator Filters*	*D002, D005, D007, D008, D009, D011, F001, F002, F003, F005*	*0*	*0*	*0*	*0*	*0*	*F*
RFETS	*330*	*Paper and Rags-Dry*	*TBD*	*4008*	*22*	*0*	*0*	*841*	*CW*
RFETS	*335*	*Absolute 8 x 8 Filters*	*D005, D007, D008, D009, D011, D022, F001, F002, F005, F006, F007, F009*	*28*	*0*	*0*	*0*	*6*	*F*
RFETS	*336*	*Paper and Rags-Moist*	*TBD*	*894*	*45*	*0*	*0*	*200*	*CW*
RFETS	*337*	*Plastics, Teflon, Washables, PVC*	*TBD*	*243*	*9*	*0*	*0*	*53*	*CW*
RFETS	*338*	*Insulation and CWS Filter Media*	*D001, D005, D007, D008, D011, F001, F002*	*0*	*1*	*0*	*0*	*0*	*F*
RFETS	*339*	*Leaded Rubber Gloves and Aprons*	*D008, D022, F001, F002, F003, F005, F006, F007, F009*	*0*	*1*	*0*	*0*	*0*	*CW*
RFETS	*33A*	*WETP Bin Program - Combustibles A*	*TBD*	*0*	*0*	*0*	*0*	*0*	*CW*
RFETS	*33B*	*WETP Bin Program - Combustibles B*	*TBD*	*0*	*0*	*0*	*0*	*0*	*CW*
RFETS	*360*	*Insulation*	*D005, D007, D008, D009, D011, F001, F002*	*53*	*3*	*0*	*0*	*12*	*F*
RFETS	*361*	*Insulation Heel*	*None Identified*	*0*	*0*	*0*	*0*	*0*	*SI*
RFETS	*368*	*Magnesium Oxide Crucibles*	*None Identified*	*0*	*0*	*0*	*0*	*0*	*INM*
RFETS	*370*	*Leco Crucibles*	*None Identified*	*93*	*0*	*0*	*0*	*19*	*INM*
RFETS	*371*	*Fire Brick*	*D004, D005, D006, D007, D008, D009, D010, D011, F001, F002, F003, F005, F006, F007, F009*	*795*	*12*	*3*	*0*	*179*	*INM*
RFETS	*372*	*Grit*	*D007*	*0*	*0*	*0*	*0*	*0*	*HD*

Table C-1. Waste Managed at the TSA Interim Status Unit [a, b, c, d, e, f, g, h, i] (cont'd)

Generator	*IDC*	*Description*	*Hazardous Waste Numbers*	*55-gal Drums*	*83-gal Drums*	*Boxes*	*Bins*	*Waste Volume (m3)*	*WG*
RFETS	*374*	*Blacktop, Concrete and Construction Rubble*	*D004, D005, D006, D007, D008, D009, D010, D011, D018, F001, F002, F003, F005, F006, F007, F009*	*0*	*6*	*0*	*0*	*2*	*HD*
RFETS	*375*	*Oil-Dri*	*D004, D005, D006, D007, D008, D009, D010, D011, D022, F001, F002, F003, F005*	*0*	*0*	*0*	*0*	*0*	*SI*
RFETS	*376*	*Cemented Insulation and Filter Media*	*D005, D007, D008, D009, D011, D022, F001, F002, F005, F006, F007, F009*	*1*	*1*	*0*	*0*	*1*	*F*
RFETS	*377*	*Coarse Fire Brick*	*D004, D005, D006, D007, D008, D009, D010, D011, F001, F002, F003, F005, F006, F007, F009*	*0*	*0*	*0*	*0*	*0*	*INM*
RFETS	*391*	*Crucibles and Sand*	*None Identified*	*1*	*0*	*0*	*0*	*0*	*INM*
RFETS	*392*	*Sand, Slag, and Crucible*	*None Identified*	*2*	*3*	*0*	*0*	*1*	*INM*
RFETS	*393*	*Sand, Slag, and Crucible Heels*	*D007*	*0*	*0*	*0*	*0*	*0*	*SI*
RFETS	*4*	*Special Setups*	*TBD*	*125*	*7*	*0*	*0*	*28*	*SI*
RFETS	*409*	*Molten Salt-30% Unpulverized*	*None Identified*	*0*	*0*	*0*	*0*	*0*	*SW*
RFETS	*410*	*Molten Salt-30% Pulverized*	*None Identified*	*0*	*0*	*0*	*0*	*0*	*SW*
RFETS	*411*	*Electrorefining Salt*	*None Identified*	*0*	*0*	*0*	*0*	*0*	*SW*
RFETS	*412*	*Gibson Salts*	*None Identified*	*0*	*0*	*0*	*0*	*0*	*SW*
RFETS	*414*	*Direct Oxide Reduction Salt*	*F001, F002*	*0*	*0*	*0*	*0*	*0*	*SW*
RFETS	*416*	*Zinc Magnesium Alloy Metals*	*None Identified*	*0*	*0*	*0*	*0*	*0*	*UM*
RFETS	*420*	*Ash, Incinerator (Virgin)*	*D004, D005, D006, D007, D008, D009, D010, D011, D029, F001, F002, F003, F005*	*6*	*0*	*0*	*0*	*1*	*SI*
RFETS	*421*	*Ash Heels*	*D004, D005, D006, D007, D008, D009, D010, D011, D029, F001, F002, F003, F005*	*0*	*0*	*0*	*0*	*0*	*SI*
RFETS	*422*	*Soot*	*D004, D005, D006, D007, D008, D009, D010, D011, D029, F001, F002, F003, F005*	*5*	*0*	*0*	*0*	*1*	*SI*
RFETS	*425*	*Fluid Bed Ash*	*D007, F003, F005*	*0*	*0*	*0*	*0*	*0*	*SI*
RFETS	*430*	*Unleached Ion Column Resin*	*D001*	*25*	*0*	*0*	*0*	*5*	*CW*
RFETS	*431*	*Leached Resin*	*None Identified*	*6*	*0*	*0*	*0*	*1*	*CW*
RFETS	*432*	*Resin, Leached and Cemented*	*D007, D008, D029, F001, F002, F005*	*0*	*1*	*0*	*0*	*0*	*SO*
RFETS	*440*	*Glass*	*D005, D008, D009, D022, F001, F002, F005*	*232*	*1*	*2*	*0*	*55*	*INM*
RFETS	*441*	*Raschig Rings, Unleached*	*TBD*	*38*	*0*	*0*	*0*	*8*	*UM*
RFETS	*442*	*Raschig Rings, Leached*	*TBD*	*1*	*2*	*0*	*0*	*1*	*UM*

Table C-1. Waste Managed at the TSA Interim Status Unit [a, b, c, d, e, f, g, h, i] (cont'd)

Generator	*IDC*	*Description*	*Hazardous Waste Numbers*	*55-gal Drums*	*83-gal Drums*	*Boxes*	*Bins*	*Waste Volume (m3)*	*WG*
RFETS	*44A*	*WETP Bin Program - Glass*	*D005, D008, D009, F001, F002, F005*	*0*	*0*	*0*	*0*	*0*	*INM*
RFETS	*460*	*Washables, Rubber, Plastic*	*F001, F002*	*6*	*0*	*0*	*0*	*1*	*CW*
RFETS	*463*	*Leaded Rubber Gloves and Aprons*	*D008, F001, F002*	*9*	*0*	*0*	*0*	*2*	*CW*
RFETS	*464*	*Benelex and Plexiglass*	*TBD*	*5*	*0*	*0*	*0*	*1*	*CW*
RFETS	*480*	*Non-special Source Metal*	*D006, D007, D008, D009, D011, D028, F001, F002, F003, F005, F006, F007, F009*	*315*	*8*	*305*	*0*	*1035*	*LCM*
RFETS	*481*	*Leached Non-special Source Metal*	*D006, D007, D008, D009, D011, D028, F001, F002, F003, F005, F006, F007, F009*	*9*	*1*	*0*	*0*	*2*	*LCM*
RFETS	*488*	*Glovebox Parts w/Lead*	*TBD*	*0*	*0*	*0*	*0*	*0*	*LCM*
RFETS	*48A*	*WETP Bin Program - Metal*	*D004, D005, D006, D007, D008, D009, D010, D011, D028, F001, F002, F003, F005, F006, F007, F009*	*0*	*0*	*0*	*0*	*0*	*LCM*
RFETS	*490*	*HEPA Filters and CWS Filters*	*D001, D005, D007, D008, D009, D011, D022, F001, F002, F005, F006, F007, F009*	*18*	*0*	*28*	*0*	*93*	*F*
RFETS	*491*	*Plenum Prefilters*	*F001, F002*	*0*	*0*	*0*	*0*	*0*	*F*
RFETS	*5*	*Evaporator Salts*	*D001*	*4*	*7*	*0*	*0*	*3*	*SW*
RFETS	*696*	*Bldg 771 Cemented Incinerator Sludge*	*D004, D005, D006, D007, D008, D009, D010, D011, D022, F001, F002, F003, F005, F006, F007, F009*	*0*	*0*	*0*	*0*	*0*	*SI*
RFETS	*697*	*Dirt*	*D004, D005, D006, D007, D008, D009, D010, D011, D018, F001, F002, F003, F005, F006, F007, F009*	*0*	*1*	*0*	*0*	*0*	*S*
RFETS	*7*	*Building 374 Dry Sludge*	*D006, D007, D008, D009, D010, D011, D032, F001, F002, F005, F006, F007, F009*	*0*	*2*	*0*	*0*	*1*	*SI*
RFETS	*700*	*OASIS Waste*	*D022, F001, F002*	*0*	*0*	*0*	*0*	*0*	*SI*
RFETS	*741*	*Pits 11 & 12 First Stage Sludge*	*TBD*	*55*	*2*	*0*	*0*	*12*	*SI*
RFETS	*742*	*Pits 11 & 12 Second Stage Sludge*	*TBD*	*172*	*3*	*0*	*0*	*37*	*SI*
RFETS	*743*	*Pits 11 & 12 Organic Setups*	*TBD*	*345*	*31*	*0*	*0*	*81*	*SO*
RFETS	*744*	*Pits 11 & 12 Special Setups*	*TBD*	*37*	*1*	*0*	*0*	*8*	*SI*
RFETS	*745*	*Pits 11 & 12 Evaporator Salts*	*TBD*	*5*	*3*	*0*	*0*	*2*	*SW*
RFETS	*746*	*Pits 11 / 903 Pad Oil Drums*	*TBD*	*0*	*0*	*0*	*0*	*0*	*SO*
RFETS	*747*	*Pits 11 and 12 Miscellaneous Sludge*	*TBD*	*0*	*0*	*0*	*0*	*0*	*UNK*

Table C-1. Waste Managed at the TSA Interim Status Unit [a, b, c, d, e, f, g, h, i] (cont'd)

Generator	*IDC*	*Description*	*Hazardous Waste Numbers*	*55-gal Drums*	*83-gal Drums*	*Boxes*	*Bins*	*Waste Volume (m3)*	*WG*
RFETS	*749*	*Pits 11 and 12 Sewer Sludge*	*TBD*	*11*	*7*	*0*	*0*	*4*	*SO*
RFETS	*750*	*Pits 11 & 12 Debris*	*TBD*	*6008*	*667*	*0*	*0*	*1459*	*HD*
RFETS	*751*	*Pits 11 & 12 Roaster Oxide*	*TBD*	*268*	*631*	*0*	*0*	*254*	*UNK*
RFETS	*752*	*Pits 11 and 12 Debris Waste from Non-RF Facilities*	*TBD*	*1*	*5*	*0*	*0*	*2*	*HD*
RFETS	*753*	*Pits 11 and 12 Legacy Dirt*	*TBD*	*0*	*5*	*0*	*0*	*2*	*S*
RFETS	*754*	*Pits 11 and 12 Legacy Dirt from Non-RF Facilities*	*TBD*	*0*	*0*	*0*	*0*	*0*	*S*
RFETS	*760*	*Pad 1 Cells 1 and 2 RFP Debris*	*D004, D005, D006, D007, D008, D009, D010, D011, D022, D028, D029, F001, F002, F005, F006, F007, F009*	*0*	*96*	*0*	*0*	*30*	*HD*
RFETS	*800*	*First Stage Sludge - Cemented*	*TBD*	*0*	*0*	*0*	*0*	*0*	*SI*
RFETS	*801*	*Solidified Organics*	*D021, D022, F001, F002, F003*	*0*	*0*	*0*	*0*	*0*	*SI*
RFETS	*802*	*Solidified Laboratory Waste*	*TBD*	*0*	*0*	*0*	*0*	*0*	*SI*
RFETS	*803*	*Solidified DCP Sludge*	*D006, D007, D008, D009, D010, D011, D032, F001, F002, F005, F006, F007, F009*	*0*	*0*	*0*	*0*	*0*	*SI*
RFETS	*806*	*Solidified Process Solids*	*D004, D005, D006, D007, D008, D009, D010, D011, F001, F002, F003, F005*	*0*	*0*	*0*	*0*	*0*	*SI*
RFETS	*807a*	*Bldg 374 Bypass Sludge (After 3/21/87)*	*D006, D007, D008, D009, D010, D011, D032, F001, F002, F005, F006, F007, F009*	*0*	*0*	*0*	*0*	*0*	*SI*
RFETS	*807b*	*Bldg 771 Cemented Incinerator Sludge*	*D004, D005, D006, D007, D008, D009, D010, D011, D022, F001, F002, F003, F005, F006, F007, F009*	*0*	*0*	*0*	*0*	*0*	*SI*
RFETS	*817*	*Cemented SS and C Heels*	*D007, D008, F001, F002, F003*	*0*	*0*	*0*	*0*	*0*	*SI*
RFETS	*818*	*Cemented Incinerator Ash*	*D004, D005, D006, D007, D008, D009, D010, D011, F001, F002, F003, F005*	*0*	*0*	*0*	*0*	*0*	*SI*
RFETS	*820*	*Cemented Soot*	*D004, D005, D006, D007, D008, D009, D010, D011, F001, F002, F003, F005*	*0*	*0*	*0*	*0*	*0*	*SI*
RFETS	*822*	*Cemented Resins*	*None Identified*	*0*	*1*	*0*	*0*	*0*	*SO*
RFETS	*823*	*Cemented Miscellaneous Sludge*	*D004, D005, D006, D007, D008, D009, D010, D011, F001, F002, F003, F005*	*0*	*0*	*0*	*0*	*0*	*SI*
RFETS	*831*	*Dry Combustibles*	*TBD*	*0*	*0*	*0*	*0*	*0*	*CW*
RFETS	*832*	*Wet Combustibles*	*TBD*	*0*	*0*	*0*	*0*	*0*	*CW*
RFETS	*833*	*Plastics, TRU Mixed*	*TBD*	*0*	*0*	*0*	*0*	*0*	*CW*
RFETS	*90*	*Dirt*	*TBD*	*84*	*70*	*0*	*0*	*39*	*S*

Table C-1. Waste Managed at the TSA Interim Status Unit [a, b, c, d, e, f, g, h, i] (cont'd)

Generator	*IDC*	*Description*	*Hazardous Waste Numbers*	*55-gal Drums*	*83-gal Drums*	*Boxes*	*Bins*	*Waste Volume (m3)*	*WG*
RFETS	*900*	*LSA Paper, Plastic, etc.*	*D004, D005, D006, D007, D008, D009, D010, D011, F001, F002, F003, F005*	*306*	*3*	*0*	*0*	*65*	*CW*
RFETS	*95*	*Sewer Sludge*	*TBD*	*21*	*1*	*0*	*0*	*5*	*SO*
RFETS	*950*	*LSA Metals, Glass, etc.*	*D004, D005, D006, D007, D008, D009, D010, D011, F001, F002, F005*	*284*	*2*	*128*	*0*	*466*	*HD*
RFETS	*960*	*Concrete, Asphalt, etc.*	*D004, D005, D006, D007, D008, D009, D010, D011, F001, F002, F005*	*149*	*33*	*0*	*0*	*41*	*HD*
RFETS	*970*	*Wood*	*D008, F001, F002, F003, F005*	*4*	*0*	*12*	*0*	*39*	*CW*
RFETS	*976*	*Building 776 Process Sludge*	*D006, D007, D008, D009, D022, F001, F002, F003*	*0*	*0*	*0*	*0*	*0*	*SI*
RFETS	*978*	*Laundry Sludge*	*D006, D007, D008, D009, D022, F001, F002, F003*	*0*	*0*	*0*	*0*	*0*	*SI*
RFETS	*980*	*Equipment*	*D008, F001, F002*	*0*	*0*	*0*	*0*	*0*	*UNK*
RFETS	*990*	*Dirt*	*TBD*	*165*	*16*	*0*	*0*	*39*	*S*
RFETS	*995*	*Sewer Sludge*	*TBD*	*11*	*2*	*0*	*0*	*3*	*SO*
RFETS	*998*	*Pits 11 and 12 Cargos and Bins*	*TBD*	*0*	*0*	*2*	*183*	*628*	*HD*
RFETS	*999*	*Pits 11 and 12 Cargos and Bins with Roaster Oxide*	*TBD*	*0*	*0*	*4*	*37*	*138*	*HD*
Various	*0*	*Undetermined Form*	*TBD*	*80*	*2206*	*3*	*21*	*790*	*UNK*
			TOTALS	***18492***	***4153***	***577***	***286***	***7952***	

Notes:

a. The numbers and types of containers listed in this table are based on data as of June 24, 2013. Volumes were calculated using the following conversion factors: (1) 0.208 m^3/55-gal drum, (2) 0.314 m^3/83-gal drum, (3) 3.172 m^3/box, and (4) 3.398 m^3/bin.

b. Eleven IDCs are currently identified as TSCA-regulated in RPT-TRUW-12: RFETS 003; RFETS 743; RFETS 746; RFETS 998; ID,IW 176; ID,IW 178; ID,IW 526; ID,IW 603; ID,IC 526; ID,IC 603; and Batelle 203.

c. The waste group (WG) may vary, based upon additional characterization obtained.

d. The number of containers may change, based upon the actual waste retrieved.

e. The WG may be determined from real-time radiography (RTR).

f. Potential corrosives if liquids exceed 1%.

g. Possible ignitable, either if deemed a Department of Transportation Oxidizer, or in some cases if liquid is present.

h. This table is included for information only. Changes required to the table are administrative in nature and are not subject to the requirements of IDAPA 58.01.05.0.12 (40 CFR 270.42). This table will be updated once each calendar year as an equivalent or superior determination or as part of a Modification Request.

i. One of two WGs may be assigned to RFETS 374, Blacktop, Concrete, Dirt, and Sand, based on the majority of waste in the container (i.e., >50% dirt or sand is soil; > 50% concrete, blacktop, metal, combustibles, plastics, gloves, etc., is debris).

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

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

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

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

Descriptions of containers used for storing waste at the TSA IS Unit are provided in Section D-1a(1). Characterization of the physical forms and chemical compositions of wastes are further detailed in Sections C-2 and C-3.

The following sections summarize the characterization strategy for existing waste. Section C-1a focuses on the characterization of the MW. Section C-2 presents the specifics of the planned waste

characterization activities. Additional analyses pertaining to Land Disposal Restrictions (LDR) for final waste forms are discussed in Section C-3.

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

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

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

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

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

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

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

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

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

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

Prior to treatment, waste containers are typically characterized using process knowledge. For liquid absorbent, the appropriate absorbent is selected based upon the process knowledge maintained within the Operating Record.

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

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

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

As described earlier, waste generated from normal operations and/or closure processes [e.g., personal protective equipment (PPE), floor sweepings, rags/wipes from routine maintenance/decontamination activities, and equipment] is normally characterized based on the process knowledge of the original waste that comes into contact with the generated waste (see Table C-3). When this is not possible, the waste may be physically sampled (see Table C-5 for sampling equipment and strategies) and analyzed. Residuals, including debris from the routine decontamination/maintenance of treatment and/or storage areas, carry the HWNs assigned to the waste managed in the areas. Characteristic HWNs may be removed if it can be shown that the characteristic HWNs no longer apply.

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

Liquid waste, other than decontamination waste water, is generated at the TSA IS Unit primarily from the retrieval of intact containers, the retrieval of degraded containers, free liquids removed from containers, or other residual liquids. Liquid waste is managed on secondary containment systems as described in Section D. Liquids retain the HWNs assigned to the original waste. Characteristic HWNs may be removed if it can be shown that the characteristic HWNs no longer apply.

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

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

- A new waste stream is generated by AMWTP operations;
- Analytical data show that a waste stream that was expected to have a consistent composition is actually highly variable; or
- Unexpected waste properties, items, or analytical results are encountered during treatment operations that are inconsistent with the current waste characterization information.

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

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

Waste generated off-Site is not received at the TSA IS Unit; therefore, this section is not applicable. Any waste received by the AMWTP from off-Site is received in accordance with Attachment 2 of the AMWTP HWMA/RCRA Permit.

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

No waste in the existing TSA inventory is assigned HWN D003 by RPT-TRUW-12. Historically, IDCs RFETS-480 and -481 were the only wastes for which small amounts of pyrophoric, unoxidized plutonium were identified as potential problems. Further examination of the documented process knowledge (Report No. WM-F1-82-021, “Content Code Assessments for INEL Contact-Handled Stored Transuranic Wastes”) revealed that this was a concern only for RFETS-481. However, the referenced report states that any pyrophoric plutonium fines present in the waste were washed off the metal debris prior to packaging. Any IDCs that are determined to contain pyrophoric radionuclides are addressed under the Atomic Energy Act (AEA) as specified at IDAPA 58.01.05.005 [40 CFR 261.4(a)(4)] and procedures for their management are implemented. However, any such wastes are not designated as

HWN D003 reactive wastes since the pyrophoric/reactive characteristic is associated strictly with the AEA-regulated portion of the waste.

Further examination of documented process knowledge (from Report No. ICP/EXT-04-00248, "Historical background Report for Rocky Flats Plant Waste Shipped to the INEEL and Buried in the SDA from 1954 to 1971") and historical shipping records from Rocky Flats to the INL have revealed that depleted uranium waste may be present at the AMWTP. The depleted uranium waste (e.g., machining chips, turnings, and fines) was originally incinerated (i.e., roasted) at Rocky Flats Building 447 in order to convert the depleted uranium to a stable oxide form prior to shipment to the INL. Based upon current evidence, the practice of roasting depleted uranium at the Rocky Flats Facility did not ensure that all of the depleted uranium was completely oxidized. Therefore, there may still be pyrophoric depleted uranium present within roaster oxides. As stated previously, these wastes are not designated as HWN D003 reactive wastes per IDAPA 58.01.05.005 [40 CFR 261.4(a)(4)], since the pyrophoric/reactive characteristic is associated strictly with the AEA regulated portion of the waste. Any roaster oxide containers will be stored, inspected, and managed as stated in Sections D and F.

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

The co-mingling of any waste will only occur after the waste streams to be co-mingled have been evaluated for compatibility. Should the compatibility information of a waste stream be insufficient to determine if liquid waste streams are compatible, a compatibility test will be run using ASTM standards prior to co-mingling the liquid waste.

Extensive waste data have been developed for each IDC documenting the existing characterization information and the results of the compatibility evaluations. As the waste characterization efforts progress, the compatibility evaluations are updated and the wastes are

re-categorized into the 41 RGNs to identify any new incompatible binary combinations. If additional incompatibilities are identified or data validation/waste characterization eliminates potential incompatibilities, additional precautions may be implemented or certain practices may be relaxed, as 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 Unit 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.
Physical matrix via visual examination	Debris and non-debris	Verify matrix and/or WG, assign IDC/WG/HWNs to unknown debris waste streams. Identify items that require removal.
pH	Liquid	Identify liquids requiring neutralization and appropriate precautions for corrosive waste.

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, VE, drum coring and/or sampling and analysis
HWMA/RCRA listed wastes, waste constituents, composition	Volatile organics	PK, SW-846
	Semi-volatile organics	PK, SW-846
	Metals	PK, SW-846
Toxicity characteristic constituents (TCLP may be used for final waste form LDR status determinations)	TCLP metals (Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, Silver)	PK, SW-846
	TCLP organics	PK; SW-846
Other parameters	Free liquids	PK, RTR/VE
	Cyanide, total & amenable	PK, SW-846
	Thallium	PK, SW-846
	Antimony	PK, SW-846
	Beryllium	PK, SW-846
	Nickel	PK, SW-846
	Vanadium	PK, SW-846
	Zinc	PK, SW-846
Debris/non-debris	Physical Matrix	PK, RTR/VE
Compatibility [c]	Compatibility	PK, waste characterization results, compatibility evaluations, ASTM, SW-846
Ignitability	Ignitability	RTR/VE, PK, ASTM, SW-846
Corrosivity	Corrosivity	RTR/VE, PK, SW-846

a. 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.

b. For further information on the specified characterization/analytical method, refer to Attachment 2 of the AMWTP HWMA/RCRA Permit.

c. 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.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

C-3d Additional Requirements for Treatment Facilities [IDAPA 58.01.05.009 and 58.01.05.011; 40 CFR 265.13 and 268.7]

This section describes the additional sampling, analytical, and documentation requirements the AMWTP employs when treating LDR waste at the TSA IS Unit.

In addition to the required information for LDR notifications, any other information required in applicable IDAPA 58.01.05.011 (40 CFR 268.7) notifications must be included. LDR certifications are completed by AMWTP personnel when MW meets LDR treatment standards after treatment, in accordance with IDAPA 58.01.05.011 [40 CFR 268.7(b)] requirements.

C-3d(1) Off-Site Facilities [IDAPA 58.01.05.008 and 58.01.05.011; 40 CFR 264.13(a) and 268.7(b)]

This section is not applicable as off-Site waste is not accepted at the TSA IS Unit.

C-3d(2) Analysis of Waste or Waste Treatment Residues [IDAPA 58.01.05.008 and 58.01.05.011; 40 CFR 264.13 and 268.7]

Final waste forms are assigned the HWNs assigned to the original waste treated. Characteristic HWNs may be removed if it can be shown that the characteristic HWNs no longer apply. The UHCs expected to be in the original waste are also determined, if the original waste was designated with HWNs D001, D002, D004-D011, or D018-D043. Sampling and analyses of the final waste forms (in accordance with SW-846 methods) determine if the applicable treatment standards and universal treatment standards (UTS) have been satisfied. Because treatment processes often tend to concentrate any inorganic constituents present in the feeds, the inorganic UHCs listed in IDAPA 58.01.05.011 (40 CFR 268.48) are typically measured via TCLP extraction followed by the appropriate analytical methods (except for fluorine, vanadium, and zinc). However, total and amenable cyanide analyses are included only for waste feeds carrying HWNs F006-F009, and are not performed on TCLP extracts. Compliance with the UTS for selected organic UHCs in the feed is also verified by analyses, with the organic UHCs comprised of those organic compounds that caused the original waste to be given either HWNs F001-F005 or D018-D043. The organic UHCs are included in final waste form analyses only until data are available to justify their elimination. The initial checks for compliance with organic UTSs are required to demonstrate that a “good-faith analytical effort” was attempted to achieve analytical detection limits for the organic UHCs that do not exceed the specified UTSs by an order of magnitude.

Secondary wastes generated from normal operations that undergo further treatment at the AMWTP waste management units are tested and/or process knowledge is used to determine if the waste mandates any additional LDR treatment standards. The MW generated is assumed to be restricted waste. Final determinations on whether the waste is restricted occur upon receipt of analytical results and/or upon completing process knowledge evaluations.

When sampling and analysis is used to determine if a MW meets LDR treatment standards, total analysis may be used for cyanide and organics while metals are determined via totals or TCLP extraction, and the appropriate analytical method, as specified in IDAPA 58.01.05.011 (40 CFR 268.40 and 268.48). Liquid/non-liquid determinations of waste generated are based on process knowledge, visual assessments, and/or testing using the paint filter liquids test.

C-3d(3) Sampling and Analytical Procedures [IDAPA 58.01.05.008 and 58.01.05.011; 40 CFR-264.13 and 268.7]

The sampling and analytical procedures used to characterize secondary wastes for LDR compliance verification are described in the AMWTP Waste Characterization QAPjP, located in the AMWTP HWMA/RCRA Permit and are designed to meet the expected receiving waste management unit's WAC and WAP.

C-3d(4) Frequency of Analysis [IDAPA 58.01.05.008 and 58.01.05.011; 40 CFR 264.13 and 268.7]

The frequency of analyses for final waste forms and secondary wastes is specified in Table C-6, unless changes are warranted based on trends shown in actual analyses. Analytical frequencies for LDR purposes are evaluated statistically per the AMWTP Waste Characterization QAPjP, or performed in accordance with the receiving waste management unit's WAP.

Table C-6. LDR Sampling and Analysis of Final Waste Forms

Waste Form	Sampling Method	Sampling Frequency	Analytes and Analytical Methods[a]
Final waste forms	Trier, thief, chisel, scoop, auger, impact hammer, rotating coring device to collect composite/grab sample	10 percent (%) of containers initially with statistical re-evaluation	Toxic metals/inorganic UHCs via TCLP: Antimony Arsenic Barium Beryllium Cadmium Chromium (total) Cyanide (total and amenable) Lead Mercury Nickel Selenium Silver Thallium Volatile and semi-volatile organic regulated hazardous constituents and UHCs

a. Analytical methods are performed in accordance with SW-846 or other EPA-approved methods.

SECTION D

PROCESS DESCRIPTION

(For Information Only)

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LIST OF EXHIBITS

D. PROCESS DESCRIPTION

D-1 Process Information

Originally, the TSA-1/TSA-R waste stack appeared as a mound of soil on the north end and tarp covered containers on the south end. The soil mound was relatively flat across the top, and it sloped down on all sides. The waste containers on TSA-1 consisted primarily of 55-gallon (gal) drums, and plywood boxes, while the waste containers on TSA-R consisted primarily of 55-gal drums, metal and fiberglass reinforced plywood (FRP) boxes, cargo containers with drums, and metal bins. The only waste remaining to be retrieved from the TSA-RE resides in Cells 1 and 2 of TSA-1, and in cargo containers stored on TSA-R. Due to the degraded condition of some of the waste containers in Cells 1 and 2 of TSA-1 and in the cargos stored on TSA-R, the retrieval contamination enclosure (RCE), inner contamination enclosure (ICE), and the contamination control enclosure (CCE) were constructed to provide contamination control during the retrieval of the degraded containers..

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. Waste boxes were used to outline the sides of each cell. 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 east/west edges of the asphalt pad, 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 soil. 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. See Exhibit D-1 for an example waste stack configuration.

TSA-R Cell 1 had a unique configuration in that it contained primarily cargo containers loaded with waste drums. The cargo containers were stacked two high. In addition, metal bins were stacked two high around the perimeter of this cell. Cell 1 was the only cell on TSA-R that was covered with wood, tarp, and soil; Cells 2 and 3 were covered only with plastic or a tarp.

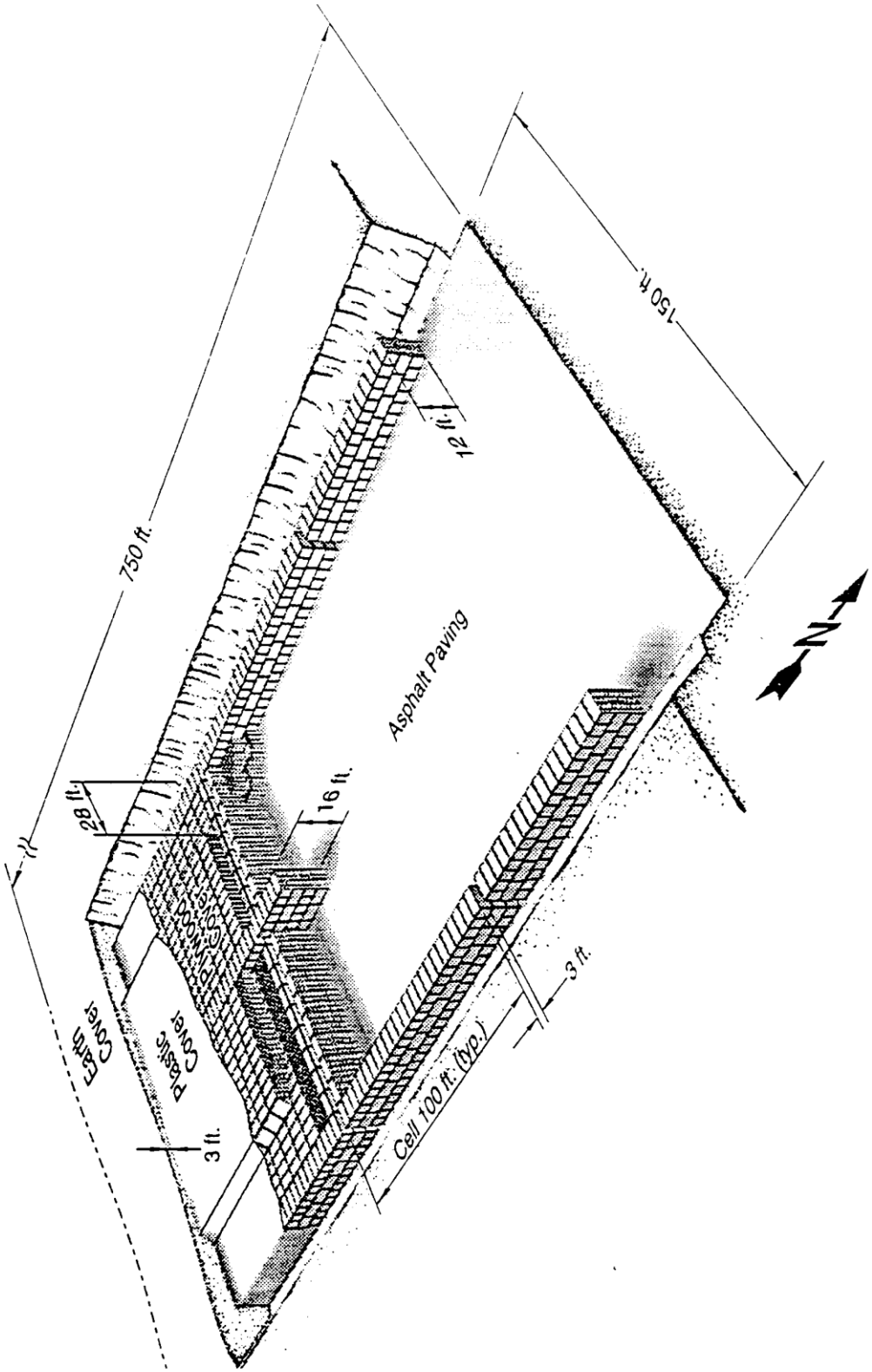

Exhibit D-1. Example Waste Stack Configuration.

The TSA IS Unit is used to retrieve, store, characterize, and treat ROW and MW. Wastes currently in storage at the AMWTP, as well as newly generated on-Site waste, may be moved to, stored, characterized, and/or treated in the TSA IS Unit (RCE/ICE, limited in CCE).

The TSA IS Unit houses a number of activities, which include:

- Soil removal activities, including sampling and analysis;
- Removal of plastic, tarp, wood, and other miscellaneous materials from the waste stack;
- Retrieval of containers with adequate or inadequate integrity within the RCE/ICE
- Retrieval of containers with adequate or inadequate integrity from cargo containers within the CCE;
- Receipt and storage of on-Site waste;
- Examination of waste through visual means;
- Radiological surveys of waste containers;
- Processing bulged containers, as required, where a High Efficiency Particulate Air (HEPA) filter is inserted to vent radiolytically generated hydrogen gas;
- Absorption of liquids in containers, as required in the RCE/ICE
- Decanting of liquids from containers, as required, in the RCE/ICE:
- Neutralization of liquids in a container, as required, in the RCE/ICE;
- Physical sizing of waste in the RCE/ICE, such that it meets size constraints for subsequent waste management activities;
- Repackaging of waste from one container into another container(s) in the RCE/ICE and CCE;
- Containerizing of waste from a degraded/breached container(s) into another container(s) in good condition in the RCE/ICE and CCE.

All liquids are managed within secondary containment systems, as described in the following sections.

D-2 Retrieval Activities within the RCE/ICE

The following sections describe how retrieval activities are conducted within the RCE/ICE.

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

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

D-2b Removal of Plastic, Tarp, Wood, and Miscellaneous Materials

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

D-2c Performing a HWD on RGW

A HWD is performed on all RGW managed during retrieval activities. This HWD is primarily based upon visual examination for evidence of contact with released MW (e.g., staining) from the containers in storage at the TSA IS Unit. Additionally, a HWD, including sampling and analysis as

required, is conducted to verify that the waste items themselves are not inherently hazardous. All HWD related documentation is maintained in the Operating Record.

All RGW is visually examined for evidence of staining at the point of generation, and the surrounding area is inspected to determine if any released MW has come into contact with the RGW. Visual evidence of staining from weathering (e.g., rainwater, condensation, etc.) or corrosion (e.g., rust) of containers that appears on RGW will not be considered MW or hazardous waste (HW) unless there is additional evidence to support a release. Additionally, a radiological survey is performed to determine if the RGW is contaminated with radiological constituents. Areas of radiological or hazardous constituent contamination may be fixed to the RGW using paint or other fixatives to prevent the spread of contamination during subsequent management activities. Based upon the visual examination and radiological survey results, a HWD is performed as described below:

- **Not Regulated Under HWMA/RCRA With No Radiological Contamination.** If there is no visual evidence of staining, no radiological contamination is detected, and the RGW is not inherently hazardous, then the RGW is not regulated as HWMA/RCRA waste, and will be dispositioned appropriately.

- **Regulated Under HWMA/RCRA With No Radiological Contamination.** If visual evidence of staining is found on the RGW and there is no evidence of radiological contamination, then that portion of the waste item with visual evidence of staining is declared as HW. At this point, the RGW may be sized to remove the HWMA/RCRA-regulated portion from the unregulated portion of the waste item. Sizing of RGW may include using a shredder or other mechanical means to size the waste, if required. Sized RGW is placed into an appropriate container pending further disposition (e.g., storage, treatment, additional sizing, etc.), and the HWMA/RCRA-regulated portion of the waste stream is assigned the applicable HWNs based upon process knowledge and analytical data, as applicable. The RGW that is not regulated by HWMA/RCRA is managed appropriately.

- **Regulated Under HWMA/RCRA With Radiological Contamination.** If radiological contamination and visual evidence of staining is found on the RGW, then that portion exhibiting evidence of staining and radiological contamination is declared MW. At this point, the RGW may be sized to remove the HWMA/RCRA regulated portion from the unregulated portion of the waste item. Sized MW is placed into appropriate containers pending further disposition, and the applicable HWNs are assigned to the HWMA/RCRA regulated portion based upon process knowledge and analytical data, as applicable. The RGW that is not regulated by HWMA/RCRA is managed appropriately.

- **RGW Declared MW.** If it is impractical, from an operational perspective, to use visual evidence of staining (i.e., it is difficult to determine if the staining on RGW is due to contact with MW, weather, or other degradation resulting from long term storage), then the RGW may be classified as MW and managed as described above, or sampling and analysis may be performed to confirm whether or not the RGW is MW.
- **Not Regulated Under HWMA/RCRA With Radiological Contamination.** If there is no visual evidence of staining, but radiological contamination is present, then the RGW may be managed as ROW.

D-2d Waste Container Handling within the RCE/ICE

Prior to construction of RCE/ICE, containers with adequate integrity were retrieved from Cells 1, 2, and 3 of TSA-1. Since completion of construction of the RCE, all containers remaining in the waste stack will be retrieved within the RCE. Containers that show significant deterioration (e.g., definitive container breaches, loss of container integrity through degradation) may be operationally retrieved within the ICE(s) or other equivalent containment structures, which provide additional contamination control.

Retrieval of waste containers is typically performed as follows:

- Survey the area around the container for radiation.
- Assess the integrity of the container. Visually inspect the container before lifting it off the stack. Evaluate conditions such as corrosion of the container, stains on wood, etc. Repair or overpack damaged containers as necessary.
- If the integrity of the container is breached or severely degraded, then the waste from the container may transferred to a container in good condition or managed in a way that complies with IDAPA 58.01.05.009, 40 CFR 265.171, and 40 CFR 270.1(c)(3).
- All external areas of a container that are suspected of being contaminated with hazardous constituents may be painted in order to fix the contamination to the container. Containers with large amounts of external contamination of hazardous constituents may be overpacked.
- Lift the container up a few inches to verify the integrity of the underside.
- Remove the container from the waste stack.

- Transfer the container from the dig face to the inspection station or to a retrieved waste storage area (RWSA). Containers with questionable integrity may be placed into an RWSA and secondary containment is provided, as applicable.
- Weigh box containers (e.g., boxes, bins) and enter relevant information into the Operating Record.
- Inspect the container for identification information.
- Perform rapid assay scanning, as applicable.
- Apply barcode labels and enter container identification information into the Operating Record. If original labeling can be used to identify the container, query the existing database to identify the radioactive and hazardous constituents in the waste container.

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

D-2e Container Integrity

During retrieval activities, any further management (e.g., container repair, container overpack) is based upon the visual examination of the container. Depending on the outcome of the visual examination, it may be desirable to repair the container integrity deficiencies (e.g., small breaches in container, structural defects, bulges, etc.) to the extent possible using various materials (e.g., adhesive tape, polyethylene patch with glue, wood, remote venting unit, etc.) without overpacking the container.

If the integrity of a container is such that it causes a threat of a release and this threat cannot be reduced such that AMWTP personnel can safely manage the container, then the waste will be containerized. Containerization includes those activities that comply with IDAPA 58.01.05.009, 40 CFR 265.171, and 40 CFR 270.1(c)(3) (e.g., overpacking, un-overpacking, or transferring the contents of a breached container or container with poor integrity into a container with good integrity, etc.)

One exception to the above processes is that containers identified as containing potential pyrophoric radionuclides may be repaired, but all containers, other than cargo containers, identified as containing potential pyrophoric radionuclides with suspect container integrity, shall be overpacked. Actions taken to repair the integrity of a container are recorded in the Operating Record.

D-2f Use of the Soft-Sided Overpack Container

Historically, carbon steel overpack containers (e.g., "cake boxes") have been used to overpack waste boxes that lack the structural integrity required to handle the containers safely, as they are retrieved, characterized, and stored, pending processing in the Advanced Mixed Waste Treatment Facility. In 2013, a soft-sided alternative was adopted to economize retrieval operations and reduce the amount of secondary waste generated.

The soft-sided overpack container (SSOP), or equivalent, meets the requirements of IDAPA 58.01.05.008 (40 CFR 264.171, .172, and .177) and is certified as a U.S. Department of Transportation (DOT) Industrial Package 1 (IP-1), (40 CFR 173.410). It is constructed of a woven and coated polypropylene fabric that provides contamination control and does not react with hazardous and/or radioactive waste constituents. The material of construction is compatible with all waste types at AMWTP.

The SSOP is comprised of three components: (1) a metal pallet that is fitted with tie-down straps; (2) a 12-inch-high, felt-lined, bottom pan, into which a sheet of Herculite® is placed under three, 3½-inch by 3½-inch cribbing boards; and (3) a cover, which is positioned over the container. Velcro is used to attach the cover to the bottom pan, and the seam is reinforced with 6-inch adhesive tape. The cribbing boards in the bottom pan provide for placement of the waste box into the pan using a forklift, and the felt lining provides for cushioning. The Herculite®, when folded up and taped to the sides of the waste box, forms an impermeable barrier, which contains small amounts of free liquids (if any) that may be released during storage. Once filled, the SSOP is secured to the metal pallet with the tie-down straps to facilitate safe handling (e.g. placement onto a flatbed truck for transfer to WMF-634 for characterization) with a forklift.

Due to the soft-sided construction of the SSOP, its application is limited to waste boxes that have sufficient structural integrity to reduce the potential for waste to slough and penetrate the fabric during container handling. Prior to overpacking, the integrity of the waste box is assessed by Operations personnel in consultation with an AMWTP Systems Engineer, in accordance with the box retrieval operating instruction. In the event a waste box lacks sufficient structural integrity, it is reinforced (e.g., with plywood sheets that are joined with Simpson Strong-Ties® system components, or equivalent), and any sharp corners and edges are padded (e.g., with sheets of Herculite®) before it is overpacked.

For severely degraded waste boxes, a custom-made plywood box is fabricated to fit around the three, exposed sides of the waste box before it is removed from the waste stack using a forklift that is fitted with the custom-designed box retrieval forklift carriage (BRFC). The BRFC, in combination with the 3-sided plywood box, engages the severely degraded waste box on three sides, as the forklift tilt

function is used to control the fourth side of the waste box as it is lifted from the waste stack. Once removed from the stack, the waste box is evaluated further, and a fourth plywood side is added to the plywood box, if necessary, before the container is placed into the pan of the SSOP. In the alternative, if the waste box is determined to be stable, it is placed into the pan before the fourth side is added to the plywood box. The top of the plywood box is then covered with Herculite® to soften any surface irregularities, before the SSOP cover is placed over the box. Finally, the seam between the bottom pan and the cover is reinforced with 6-inch adhesive tape, and the package is secured to the metal pallet using the tie-down straps.

Filled SSOPs are subjected to the normal process flow (i.e., characterization and interim storage, pending processing in the Advanced Mixed Waste Treatment Facility). During this time, they are stored in secondary containment and inspected against the daily and weekly HWMA/RCRA inspection criteria listed in Table F-1. Soft-sided overpack containers are not used for waste boxes that are known to contain large amounts of liquids (e.g., a 55-gallon drum of oil), and they are not stored in the Outside Storage Area.

D-2g Treatment

Treatment activities may be performed in the RCE/ICE in order to reduce the need to treat the waste in another AMWTP waste management unit. In addition, containers (e.g., cargo containers, oversized boxes, etc.) may be transported to the RCE/ICE for the purpose of performing treatment. All treatment activities shall be performed within the ICE(s) or a designated area within the RCE.

The designated area in the RCE shall be such that the area is divided into at least two separate sections. One section is used for providing a radiological buffer area between the outside of the RCE and the treatment area, and another section is used for performing the treatment operations. Air handling units feed outside air into the RCE. Air from the operating area of the RCE is vented through two stages of HEPA filters located on the south end of the RCE.

The methods of treatment allowed in the RCE/ICE include: absorption, decanting, and neutralization of liquids; the repackaging of waste; and the sizing of waste. The methods are performed individually and in conjunction with each other to treat the waste in the most effective manner possible. Treatment operations for the RCE/ICE typically include:

- Repackaging of waste from a container(s) into another container(s) to segregate prohibited items (e.g., aerosol cans);

- Physical sizing of waste, such that the waste may meet size constraints for subsequent waste management activities;
- Decanting of liquids into a container(s);
- Decanting of liquids into a container(s) with absorbent;
- Absorption of liquids in a container(s);
- Neutralization of liquids in a container(s);
- Simultaneous absorption and neutralization of liquids by adding a neutralizing absorbent to liquids (either prior to or after the liquid is added);
- Decanting followed by neutralization then absorption;
- Co-mingling of compatible liquids prior to neutralization and/or absorption; and
- Co-mingling of compatible absorbed liquids.

The methods of treatment are summarized below. When more than one treatment is performed on a waste, the individual operations may be combined. All treatment of liquids shall be performed in an area with adequate secondary containment. Forms of secondary containment may include spill pallet, spill pans or other secondary containment with enough containment capacity to contain either the greater of 10% of the volume of containers or 100% of the largest container.

Absorption. The treatment objective of absorption is to select a suitable absorbent material to absorb any free liquid waste. Prior to absorption, the compatibility of the liquid with the absorbent being used is addressed and documented, as required. Compatibility evaluations are typically performed through process knowledge and/or RTR examination. Absorbent materials are also checked for compatibility with the waste types and stored accordingly. The following are the general steps that are used during the absorption/treatment process.

- The volume of waste to be treated is estimated.
- The amount of appropriate absorbent [selected based upon visual examination, process knowledge, acceptable knowledge, or other appropriate means (e.g., water miscibility)] is estimated.
- The absorbent is added to the liquid.
- The absorbent and waste may be mixed.

- Treated waste is visually inspected for signs of free liquids. If no free liquids are present, the treatment is considered successful.
- If the absorption is not effective, the cause of the process failure is evaluated. If insufficient absorbent was used, the process may be repeated with additional absorbent.

The steps outlined for absorption are repeated no more than three consecutive times. If a treatment is unsuccessful after three attempts, the adequacy of the procedure is analyzed and continued treatment is handled on a case-by-case basis in consultation with the State of Idaho Department of Environmental Quality (DEQ).

Testing of absorbent materials has been conducted for a number of various commercially available materials in order to determine an appropriate material for the types of wastes present in the AMWTP inventory. The absorbents approved for use for AMWTP waste streams in the RCE/ICE are provided in Attachment 1.A of the AMWTP HWMA/RCRA Permit.

Decanting. The treatment objective of decanting is to remove a sufficient volume of free liquid so that the free liquid remaining in the original container can be treated through the addition of absorbent, as described above, and/or to transfer the decanted liquid into another container. The primary method for decanting liquids is to use equipment (e.g., disposable pipettes, pumps, ladles, cups, drip pans, etc.) to transfer liquid into a container that is located in a liquid containment device. Efforts will be made to minimize the spread of MW contamination during waste transfer. The decanted liquid is typically absorbed after selecting a suitable absorbent material. The following are the general steps that are used during the decanting treatment process:

- The volume of waste to be treated is estimated.
- The appropriate container size is estimated.
- The free liquid is decanted from the original container and placed into a second container. Absorbent is added to the second container either prior to or after the liquid waste is added to the container, if required.
- Additional absorbent is added to the treatment container, as required, and the absorbent and waste may be mixed.
- Any free liquids remaining in the original container is treated via absorption and/or neutralization.

Neutralization. The treatment objective of neutralization is to adjust the pH of liquid waste to a desired range for absorption. The desired pH, which depends on the waste type and determines the

specific absorption agent(s) to be used, is established prior to conducting treatment. The following information presents the general treatment steps that are used in neutralizing a liquid waste:

- The volume of liquid to be treated is estimated.
- A pH measurement is taken.
- The appropriate types and amounts of neutralizing agents are weighed/measured out and added. The primary acidic neutralizing agents include acids such as citric acid. The primary basic neutralizing agents include bases, such as calcium carbonate.
- The treatment agents and waste are mixed.
- A pH measurement is taken to verify results against the pH end-point established to confirm treatment effectiveness.
- If the neutralization is not effective, the case of the process failure shall be evaluated. If insufficient reagents were used, the process may be repeated with additional reagents.

The steps outlined for neutralization are repeated no more than three consecutive times. If a treatment is unsuccessful after three attempts, the adequacy of the procedure is analyzed and continued treatment is handled on a case-by-case basis in consultation with the DEQ.

Once neutralized, the liquid may be mixed with appropriate absorbents, unless the neutralizing agent is also an absorbent.

Repackaging. Repackaging is the segregation and packaging of waste or waste components where the segregation of the waste or waste components is conducted to facilitate waste processing or disposal (e.g., removal of prohibited items, segregation of combustible materials from potential pyrophoric radionuclides). For example, typical objectives of repackaging include:

- Transferring the contents from one container (e.g., box) into different container(s) in preparation for downstream processing (e.g., absorption, neutralization, etc.).
- Removing items prohibited from downstream AMWTP processes or items prohibited from disposal at the identified disposal facility.

Sizing. The treatment objective of sizing is to physically reduce the size of the waste such that the waste is acceptable for subsequent waste management activities. An item that maybe used for the sizing of waste includes, but is not limited to, shears, nibblers, scrapers, etc.

D-3 Retrieval Activities within the CCE

The following section describes retrieval activities associated with the CCE. The contents of the cargo stored on Pad-R will be retrieved in the CCE or equivalent containment structure.

D-3a Soil Removal

No soil removal is anticipated. If soils are encountered during retrieval See Section D-2a for information on soil removal activities.

D-3b Removal of Plastic, Tarp, Wood, and Miscellaneous Materials

Plastic, tarp, wood, and miscellaneous materials may be removed from the exterior or the interior of the cargo containers. If these materials are encountered during retrieval activities associated with the CCE, then the steps presented in Section D-2b are utilized.

D-3c Performing a HWD on RGW

A HWD for operations performed in the CCE are the same as those for operations performed outside of the CCE. See Section D-2c for additional information on performing a HWD on RGW.

D-3d Waste Container Handling within the CCE

During waste container handling operations, IS/IH and/or Radiological Controls will require appropriate PPE, which may include anti-contamination clothing and respiratory protection, such as powered air purifying respirators or air supplied respirators. Retrieval of the contents (e.g., containers) from the cargo containers shall typically be performed as follows:

- Survey the area around the container for radiation.
- Perform IS/IH monitoring of cargo contents to include monitoring for VOCs and infrared thermography.
- Assess the integrity of the container. Visually inspect the container before lifting. Evaluate conditions such as corrosion of the container, stains on wood, etc. Repair or overpack damaged containers as necessary.
- If the integrity of the container is severely degraded, then the waste from the container may transferred to a container in good condition or managed in a way that complies with IDAPA 58.01.05.009, 40 CFR 265.171, and 40 CFR 270.1(c)(3).

- All external areas of a container that are suspected of being contaminated with hazardous constituents may be painted in order to fix the contamination to the container. Containers with large amounts of external contamination of hazardous constituents may be overpacked.
- Lift the container up a few inches to verify the integrity of the underside.
- Remove the container from the cargo container, as applicable.
- Inspect the container for identification information.
- Perform rapid assay scanning, as applicable.
- Apply barcode labels and enter container identification information into the Operating Record. If original labeling can be used to identify the container, query the existing database to identify the radioactive and hazardous constituents in the waste container.

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

D-3e Container Integrity

During retrieval activities, any further management (e.g., container repair, container overpack) is based upon the visual examination of the container. Depending on the outcome of the visual examination, it may be desirable to repair the container integrity deficiencies (e.g., small breaches in container, structural defects, bulges, etc.) to the extent possible using various materials (e.g., adhesive tape, polyethylene patch with glue, wood, remote venting unit, etc.) without overpacking the container.

If the integrity of a container is such that it causes a threat of a release and this threat cannot be reduced such that AMWTP personnel can safely manage the container, then the waste will be containerized. Containerization includes those activities that comply with IDAPA 58.01.05.009, 40 CFR 265.171, and 40 CFR 270.1(c)(3) (e.g., overpacking, un-overpacking, or transferring the contents of a breached container or container with poor integrity into a container with good integrity, etc.)

One exception to the above processes is that containers identified as containing potential pyrophoric radionuclides may be repaired, but all containers, other than cargo containers, identified as containing potential pyrophoric radionuclides with suspect container integrity, shall be overpacked. Actions taken to repair the integrity of a container are recorded in the Operating Record.

D-3f Treatment

The primary activity to be conducted in the CCE is the retrieval of containers from the cargos. If necessary, treatment of waste may be conducted to facilitate the safe retrieval of the waste containers from the cargo containers. The treatment activities may include:

- Repackaging where the sorting and segregation of waste from a container(s) in the vicinity of an exposed roaster oxides is conducted to reduce the amount of combustible materials adjacent to the roaster oxide.

- Absorption of liquids in containers that is not associated with a spill/release as exempted in 40 CFR 270.1(c)(3) and/or adding absorbent material to waste or waste to absorbent in a container provided these actions occur at the time waste is first placed in a container per 40 CFR 265.1(c)(13).

All treatment of liquids shall be performed in an area with adequate secondary containment. Forms of secondary containment may include spill pallet, spill pans or other secondary containment with enough containment capacity to contain either the greater of 10% of the volume of containers or 100% of the largest container.

D-4 Other Operations Performed on the TSA IS Unit

The following operational processes may be performed at any location on the TSA IS Unit , unless otherwise specified.

D-4a Venting of Bulged Containers

Bulged containers may be identified during waste retrieval activities. Bulged containers may also be identified in a RWSA. In order to minimize various potential hazards (e.g., MW release, volatile gases, etc.) associated with a bulged container, a filter is required to be installed into a bulged container to control the release of the gases built up within the container. To accomplish this, AMWTP personal may use a remote venting system which attaches to the top of a container. Typically, the remote venting system is attached to the container near the point where the container was retrieved from the waste stack or the RWSA. This assists in minimizing the handling of the bulged container. Once the remote venting system has been attached to the container, AMWTP personnel evacuate the immediate area around the bulged container at a distance determined by AMWTP safety personnel. Once the area is clear, AMWTP personnel use a remote device to activate the venting system, which in turn pneumatically installs a

HEPA filter made of non-sparking material into the lid of the bulged drum. The HEPA filter is designed only to penetrate to the lid of the container, and not to penetrate an inner liner, if present.

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

D-4b Breached Container and Leak/Spill Management

During retrieval operations, it is expected that breached containers will be discovered on a routine basis. This expectation is based upon past experience and the condition of the waste remaining to be retrieved. Given the current condition of the waste remaining to be retrieved, it is expected that operations personnel will discover a breached container(s) on a daily basis. Due to the expectation that a breached container(s), and any subsequent releases resulting from a breach, are encountered daily, managing breached containers and any corresponding cleanup activities is considered a routine operation. Upon discovery of a release, routine retrieval operations within the immediate area will be temporarily suspended pending investigation into the extent of the release. AMWTP personnel will evaluate the parameters of the release and document all relevant information in the Operating Record. Typical items that may be documented include the location of the release, estimated volume of the release, correlation to container(s) involved in the release, activities performed and equipment used to manage the release, etc. Additionally, any methods used to clean, decontaminate, and/or fix a release to the asphalt pad of the TSA IS Unit will be noted in the Operating Record. A determination will then be performed to determine if the TSA IS HWMA/RCRA Contingency Plan must be implemented. Based upon the extent of the release, one of six responses will be taken:

- **Release of MW to soil, which requires the implementation of the TSA IS HWMA/RCRA Contingency Plan or notification of the DEQ.** If at any time, HWMA/RCRA-regulated constituents are released to the soil located off of the outside edges of the TSA IS Unit asphalt pad or to the soil located under the TSA IS Unit (through a crack in the asphalt pad) then the TSA IS HWMA/RCRA Contingency Plan will be implemented, or the DEQ will be otherwise notified of the proposed path forward, if the release is minor. The TSA IS HWMA/RCRA Contingency Plan is only implemented for “new” or observed releases to the

soil. Historical releases to the soil do not require the implementation of the TSA IS HWMA/RCRA Contingency Plan.

- **Small release to the TSA IS Unit managed under normal operating procedures, which does not require the implementation of the TSA IS HWMA/RCRA Contingency Plan.** If the release is small, localized, does not pose a threat to human health or the environment, and does not require the use of special safety equipment to facilitate cleanup (such as a containment tent for releases outside of the RCE/ICE), then implementation of the TSA IS HWMA/RCRA Contingency Plan is not required and normal operating procedures, which include a spill response procedure, may be used to address these small releases.

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

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

- **Fire or explosion that involves MW, which requires the implementation of the TSA IS HWMA/RCRA Contingency Plan.** This case involves a fire and/or explosion that occurs in the TSA IS Unit which involves MW or is in the immediate vicinity of MW, or threatens

human health and/or the environment. In this case, implementation of the TSA IS HWMA/RCRA Contingency Plan is required.

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

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

D-4c Decontamination of Equipment

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

D-4d RWSA

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

At any point in time, there may be up to five types of containers managed in a RWSA. Containers will not be tracked by container type, as described below, and all types of containers may be managed within the same RWSA as long as the segregation, separation, and secondary containment

requirements, as described below, are met. Type I containers are containers of waste that have been removed from the TSA IS Unit waste stacks and placed directly into a RWSA. A Type I container also includes containers that have been removed from the TSA IS Unit for fast assay on Pad 2 or on the asphalt pad near Pad R but is not part of the Pad R IS unit. In order to remain a Type I container for a container taken to Pad 2 for fast assay, the container will remain within the area on Pad 2 designated for performing fast assay no longer than 10 calendar days. Typically, limited information about a container's contents is known when the container is retrieved from a waste stack depending upon the condition of the container and the existing marking/labeling, including metal tags, security seals, etc., that provide information on the contents of the container. Based on this information, separation or segregation of containers is not performed unless information from any marking or labeling provides sufficient information to conclude that separation/segregation is required. See Section F-5 for additional information on separation/segregation requirements. Secondary containment is not provided for Type I containers unless the integrity of the container is degraded to a condition such that secondary containment is required to contain any potential releases from the container.

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

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

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

Type V containers contain existing waste received from AMWTP treatment processes or existing waste stored in the Type II Modules, WMF-636 Pad 2, and/or the Type I Module. Typically, these containers are received from activities such as sorting, sizing, absorbing, supercompacting, sampling,

packaging, etc. in the AMWTP MWMUs. Type V containers are separated, segregated, and/or provided with secondary containment, as required.

D-4e Waste Loading and Transport

Once a container has been retrieved and inspected and all appropriate information has been entered into the Operating Record, the container is then typically transported by conveyor or other container handling equipment to a loading area. This loading area may or may not be located on the asphalt pad of the TSA IS Unit. If a conveyor system is used, then all portions of the conveyor that are not located on the asphalt pad have a secondary containment system located directly under the conveyor. Containers located on a transport vehicle are not required to have secondary containment. The containers, staged off of the TSA IS Unit on the conveyor and associated transport vehicles/equipment, are subject to daily inspections for leaks/spills and may only be staged for a maximum of 10 calendar days. The 10-day staging period starts when a barcode is applied to a container and the barcode is scanned at an inspection station if a conveyor system is used. If a conveyor system is not used, then the 10-day staging period starts during the shift in which the container was moved from the TSA IS Unit. The container must be transferred to an approved HWMA/RCRA unit before the end of the 10^{th} calendar day.

D-4f Container Assay

Containers may be radioassayed within WMF-636 to estimate the amount of fissile material present in a given container. The machine used for performing the radioassay within the TSA-RE building is commonly referred to as a “fast” assay machine. It provides an estimate of the level of fissile material present in a container by passive means. The “fast” assay results are not used for waste characterization activities, but rather provide AMTWP personnel with a general idea if the container will characterize as TRU or low level waste (LLW) to allow for optimization of process operations. The “fast” assay machine may be either located on the TSA IS Unit; on the asphalt/concrete pad that is located to the south, east, and west of the Pad R asphalt pad that is not considered part of the Pad R IS storage unit; or on the Pad 2 container storage unit. See the AMWTP HWMA/RCRA Permit for additional information on the Pad 2 container storage unit requirements. If “fast” assay is performed on the asphalt pad off of the TSA-R storage unit, then a maximum of two containers may be at or near the area designated for performing the “fast” assay.

All containers located on the asphalt pad off of the TSA-R storage unit for the purpose of performing “fast” assay are actively managed during the time period that the “fast” assay activity is occurring. Upon completion of the assay, or if all personnel involved in the management of the containers depart the area other than for an emergency or evacuation, the containers must be returned to a

HWMA/RCRA-regulated storage unit. If personnel involved in the management of containers depart the area due to an emergency or evacuation of the area on the asphalt pad off of the TSA IS Unit, then the containers shall be inspected upon re-entry into the area to ensure that no leaks or spills have occurred.

D-4g MW Off-Site Shipment

Once a container has been characterized and determined to be MW, it may be processed for shipment to an off-Site facility in the TSA IS Unit. This process includes labeling, DOT packaging, storage, loading/unloading of transport packages and vehicles, and staging of transport packages and vehicles prior to off-Site shipment. For the purpose of this section, packaging is referred to as DOT approved packages (e.g., CONEX box, cargo container, etc.), and is not meant to imply a treatment process regulated by HWMA/RCRA. Loading of transport packages and vehicles may occur on or off the TSA IS Unit. Locations off of the asphalt pads include anywhere within the TSA-RE building structure covering the TSA-1/TSA-R storage unit, or any asphalted area outside but adjacent to Door #7 or #9 of the TSA-RE building structure. See Exhibit B-2 in Section B for additional information on the TSA-RE building structure door locations. Containers are loaded into transport packages, which may be staged on the ground, or onto transport vehicles, as necessary. Once loaded, transport packages and vehicles may be staged west of the TSA-RE building structure. All loaded transport packages will have a hazardous waste manifest for that transport package. To facilitate shipment activities, any single trailer or transport package may be stored for up to 10 calendar days. Three-ft aisle space is provided on all sides of each transport vehicle or transport package to allow personnel and/or equipment access for visual inspection, monitoring, and emergency response activities. The west side of the TSA-RE and the west side of the Type I Module are utilized to store TRU package transporters (TRUPACTs) loaded on trailers. See the AMWTP HWMA/RCRA Permit for additional information on the staging locations for the TRUPACTs loaded on trailers. The maximum staging capacity for the west side of the TSA-RE, the west side of the Type I Module, and the south side of Pad 2 of the TSA-RE is such that any combination of loaded transport trailers, transport packages, and loaded TRUPACTs on trailers may be staged, as long as the total number of trailers and transport packages does not exceed a total of 50 units (i.e., transport packages, loaded transport trailers, or loaded TRUPACTs on trailers) between the previously mentioned areas. Loaded TRUPACTs on trailers may not be staged on the asphalted areas adjacent to Door #7 or #9 of the TSA-RE. The trailers and transport packages are inspected each day for leakage, and corrective actions are initiated as required. If any leakage is noted, spill response will be completed in accordance with Section G and the closure of the trailer/transport package staging areas will be addressed during closure of the TSA IS Unit.

D-5 Building Structure

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

Base

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

Walls and Ceilings

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

Doors and Entry Structure

Twelve overhead doors are installed in the primary enclosure; eleven spaced along the west wall, and one in the east wall near the north corner. Two overhead doors are installed in the WMF-636 Pad 2 wing, one in the east wall, and one in the south wall. One portable entry structure is available and is designed to connect to the TSA-RE building, enclosing the overhead door and personnel access door nearest the active work area during retrieval operations. Eleven personnel access doors are located along the west wall of the primary enclosure, while seven personnel access doors are located along the east wall.

RCE Structure

The RCE structure consists of three large tensioned-fabric walls and modular steel walls with airlocks and other supporting rooms. The three fabric walls which are compliant with the National Fire Protection Agency (NFPA) requirements are located on the north, west, and south sides of the RCE. The fabric is suspended and tensioned through the use of structural steel. The east wall is a modular steel wall that separates the TSA-1 Unit and WMF-636 Pad 2. The north and south walls extend from the asphalt surface of the TSA-1 Unit to the ceiling of the TSA-RE building and are a combination of fabric and modular steel walls. The modular steel walls are used for the airlock, personnel areas, and the partition between the TSA-1 Unit and WMF-636 Pad 2 to the upper wall partition in order to isolate the RCE from WMF-636 Pad 2. Support rooms include equipment/personnel airlocks, a control room, operations support room(s) (e.g., radiological control, industrial health, industrial safety) and waste export airlocks. See Exhibit D-2 for an example of the RCE structure on the TSA-1 Unit. Secondary containment system(s) will be provided within the RCE in all areas that manage liquids.

ICE Structures

Within the RCE, mobile soft-sided contamination control systems known as the ICE, are used for the control of contamination during retrieval of significantly degraded containers and treatment activities. The ICE are mobile systems that may be moved to a specific location within the RCE. The ICE have a single stage HEPA filter that draws air from within the ICE(s) and vents into the RCE structure. Air handling units feed outside air into the RCE. Air from the operating area of the RCE is vented through two stages of HEPA filters located on the south end of the RCE. See Exhibit D-2 for the relative location of an ICE within the RCE.

CCE Structure

The CCE is a flame-retardant soft-sided enclosure (or similar structure, e.g., Perma-Con) with an equipment and personnel air lock and three stage HEPA unit(s) that exhaust to the main RCE ventilation duct. The HEPA unit(s) is configured to provide a negative atmospheric condition inside the CCE to ensure that air flows from the airlock end of the CCE, through the CCE, to the rear of the cargo container, and into the HEPA unit(s). The installation will establish airflow across the contaminated area, drawing contamination away from the workers inside the CCE. The CCE is used for the retrieval of waste in severely degraded containers, including the contents of metal cargo containers. See Exhibit D-2 for the relative location of the CCE within TSA-R.

Utilities

Utilities for the TSA-RE structure, including the RCE/ICE and CCE, include an electrical distribution; standby power; propane heating; lighting; instrument air; emergency notification; DMS access; potable water; heating, ventilation, and air conditioning (HVAC); breathing air units; and sewer systems.

Heating System

No general space heating is provided for the TSA-RE as a whole. Special purpose rooms that are routinely occupied by personnel, and/or rooms that house equipment that must be freeze protected are provided with locally mounted and controlled space heaters. The rooms in the change room area, the head-end room, the compressor room, and the fire riser rooms are all provided with space heaters, where required. The RCE structure is provided with a limited heating system for freeze protection. Personnel areas are also provided with heating systems for personnel comfort.

Ventilation System

An extensive ventilation system is installed for the TSA-RE building, but it is of limited capacity. The ventilation system for the TSA-RE building covers the storage areas (i.e., areas outside of the RCE/ICE and CCE) and exhausts to a stack located on the east side of the TSA-RE building.

In addition to the TSA-RE building ventilation system, a ventilation system specifically for the RCE/ICE is utilized for retrieval activities within these units. The RCE is filtered by dual-stage HEPA filters, which vent to a stack located on the west side of the TSA-RE building. The ICE(s) are filtered by a single-stage HEPA filter, which vents directly into the RCE, and the CCE is filtered by three stage HEPA filters, which vent to the RCE exhaust stack, see Exhibit D-2.

Fire Water Collection

Fire water collection for the TSA-RE is provided by a drainage system located on the north and east sides of the TSA-RE building. Cast-in-place concrete drainage troughs lead to collection basins, which are served by 12-in. diameter drainage pipes that end in fire water collection tanks. The fire water collection tanks are 20,000 gal double walled tanks located underground outside of the TSA-RE building. The drainage troughs are covered with metal grating over the full length, except at entrance doors, where fabricated steel or pre-cast concrete covers protect the troughs. Water collected in the tanks from a fire event is characterized for control and disposition in accordance with HWMA/RCRA requirements.

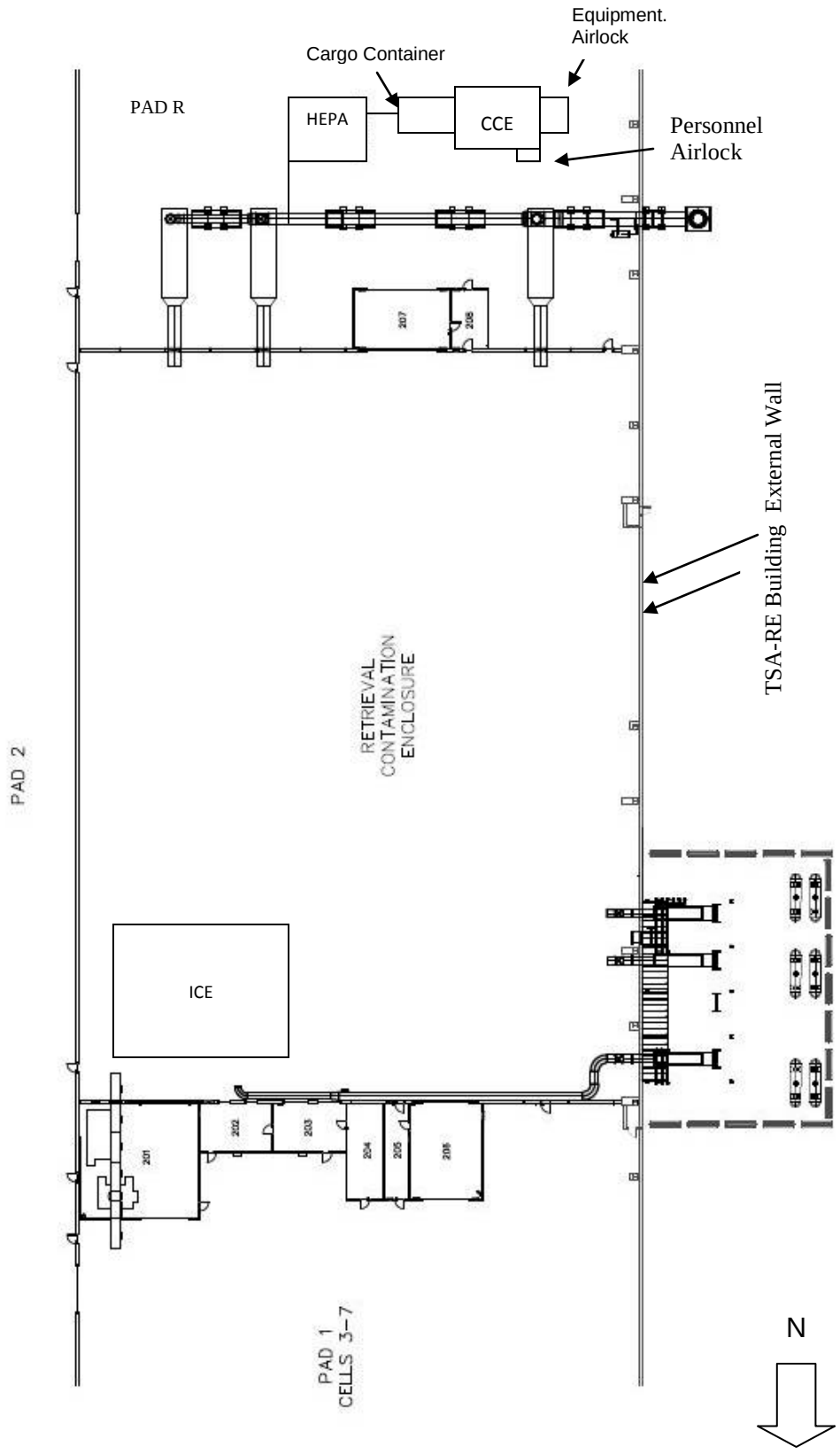

Exhibit D-2. RCE Floor Plan

D-6 Containers

D-6a Containers with Free Liquids

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

D-6b Description of Containers [IDAPA 58.01.05.009; 40 CFR 265.171 and .172]

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

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

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

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

1. The TRUPACT II Standard Waste Box (SWB) is a DOT 7A Type A, or equivalent, container, nominally 71-in. long by 55-in. wide by 37-in. high. This box is constructed of steel and has the lid bolted to the box.
2. The steel overpack box may be used for overpacking boxes. This box is constructed of carbon steel supported by an external framework of four 4-in. by 2-in. square tubing (container corners are reinforced with 2-in. angle stock). Two 2-in. by 1-in. steel channels support the container for forklift access. The dimensions of this box are 92-in. long by 56-in. wide by 55-in. high. A variety of other sizes may be used; special sizes are fabricated to handle a variety of overpack needs.
3. The UN1A2, or equivalent, 30-gal drum is a carbon-steel drum with a removable head, gasket, and bolt ring.
4. The UN1A2, or equivalent, 55-gal drum with 90-mil HDPE liner combination is a carbon-steel drum with a removable head, gasket, and bolt ring. The liner is constructed of 90-mil molded polyethylene and has an open head with a sealable positive closure lid.
5. The UN1A2, or equivalent, 55-gal drum is a carbon-steel drum with a removable head, gasket, and bolt ring.
6. The UN1A2, or equivalent, 83/85-gal overpack drum, that may include a roto-mold liner, is a carbon-steel drum with a removable head, gasket, and bolt ring.
7. The DOT 7A Type A, or equivalent, 71-gal drums are square steel drums with one of the following: a crimp type gasketed cover; removable head with gasket and bolt ring; or fully removable head with gasket and bolted closure.
8. The 55-gal Recycled Shielded Storage Container (RSSC), or equivalent, has stainless-steel inner and outer shells that encapsulate lead shielding with bolt-on end plates and rings. The RSSC is approximately 44.5-in. high by 36.1-in. maximum outside diameter.
9. The DOT 7A Type A, or equivalent, "B" series of filtered and non-filtered boxes come in various sizes, including the B-25 style bin (4.3-ft high by 4-ft wide by 6 ft-long) and B-52 style bin (3.5-ft high by 4.5-ft wide by 4.5-ft long).

10. The RH-TRU Shielded Overpack, or equivalent, are 30- and 55-gal drum overpack assemblies that are 25 in. inside diameter and 32 in. outside diameter steel cylinders with bolted steel flanges. This overpack design contains no lead as steel is used to provide shielding.

11. The AMWTP puck drum, or equivalent, is a carbon-steel container with a removable lid, gasket, and bolt ring. The drum is approximately 32-in. high with a 31-in. inner diameter. The puck drum has a capacity of approximately 100 gal and meets the WIPP stacking criteria.

12. The Ten-Drum Overpack (TDOP) is a welded steel, right circular cylinder, with a removable bolt lid on one end. The TDOP may be loaded directly or it may be loaded with 10 55-gal drums, up to six 85-gal drums, or one SWB.

13. The AMWTP LLW export box, or equivalent, is constructed of carbon steel. The container is approximately 96-in. wide by 48-in. high, and may be reinforced with steel bracing on the inside of the container.

14. The “slim” 55-gal overpack drum is a carbon-steel drum that may be loaded with 55-gal drums. The “slim” 55-gal overpack has dimensions slightly larger than that of a standard 55-gal drum.

15. A bag or plastic wrapping material that is secure and leak tight. Bags/plastic wrapping material may be used to store rigid waste (e.g., plywood, pallet, etc.) or non-rigid waste (e.g., PPE, radiological swipes, etc.). Bags/plastic wrapping material may only be used for storing waste that without treatment, the waste is not amenable for storage in any of the containers identified above.

16. The drum overpack box, which may contain up to six drums of various sizes. The drum overpack box has a flat bottom and all seams within the box other than the lid are sealed with a caulking material. The lid of the box is secured to the box with cargo tape, or equivalent. The drum overpack box is typically used for transporting drums into the box lines of WMF-676 for treatment.

17. The DOT Industrial Packaging – 2 (IP-2) cargo shipping container with an inner stainless steel liner. The cargo shipping container is constructed of carbon steel. The inner stainless steel liner is constructed from continuous welded stainless steel panels covering the sides, top, bottom and back end surfaces. The liner is constructed with a minimum thickness of 12 gauge stainless steel.

18. The AMWTP soft-sided overpack container (SSOP), or equivalent, meets the requirements of IDAPA 58.01.05.008 (40 CFR 264.171, .172, and .177) and is certified as a DOT-IP-1 package (40 CFR 173.410). It is constructed of a woven and coated polypropylene fabric that provides contamination control and does not react with hazardous and/or radioactive waste. For additional details, refer back to Section D-2f. In addition to being used to overpack waste boxes as they are retrieved from the waste stack inside the RCE/ICE, the SSOP may be used to overpack waste boxes that are stored anywhere in the TSA Interim Status Unit. The SSOP is designated for on-Site use, only.

19. Any other approved DOT container.

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

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

- Generator's name,
- Generator's address,
- Hazardous Waste,
- INL Tracking Numbers,
- Barcode (required),
- Awaiting analysis,
- Container pack date, and
- Generation date.

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

D-6c Container Management Practices [IDAPA 58.01.05.009; 40 CFR 265.173]

After retrieval, containers are managed and stored in a manner to prevent container rupture or leakage and to minimize radiation exposure to personnel. All containers are kept closed during retrieval, transfer, storage, and handling. AMWTP personnel follow procedures and instructions that establish operating practices designed to minimize the probability of accidents, which may result in a release of MW to the environment. Containers are visually inspected for integrity to determine if there are signs of pitting, leaks, or structural defects. Containers that fail this visual inspection for integrity are repaired, vented or overpacked, or containerized, as required. All repairs performed on a cargo container shall ensure the repair is sufficiently impervious to water intrusion. Actions to repair the integrity of a container are recorded in the Operating Record. Containers used by the AMWTP are compatible with the types of wastes managed at the AMWTP.

Containers identified as pyrophoric radionuclides (e.g.,. uranium that has not been completely oxidized, commonly known as roaster oxides) are physically separated from the general waste population. Containers identified as pyrophoric radionuclides are stored in a configuration of no more than two containers wide by two containers high by “n” containers long, allowing for aisle spacing requirements. Rows of containers identified as pyrophoric radionuclides shall not be stored adjacent to a row of containers that contains a container made of combustible material (e.g., plywood, cardboard, fiberglass reinforced plywood, etc.).

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

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

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

SECTION F

PROCEDURES TO PREVENT HAZARDS

(For Information Only)

TABLE OF CONTENTS

LIST OF EXHIBITS

LIST OF TABLES

F. PROCEDURES TO PREVENT HAZARDS

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

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

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

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

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

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

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

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

Physical security at the RWMC/AMWTP includes fencing of the entire area with locked or monitored gates. The perimeter fence and access gates are presented on the RWMC/AMWTP Topographic Map, located in the Part A Permit Application for the TSA IS Unit. The perimeter fence is designed as a deterrent to any unauthorized person attempting to enter or remove material from the RWMC and the AMWTP, and as a deterrent to livestock attempting to enter the RWMC and the AMWTP. The perimeter fence is constructed of either chain link or metal wire. Portions of the fence may be topped with barbed wire.

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

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

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

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

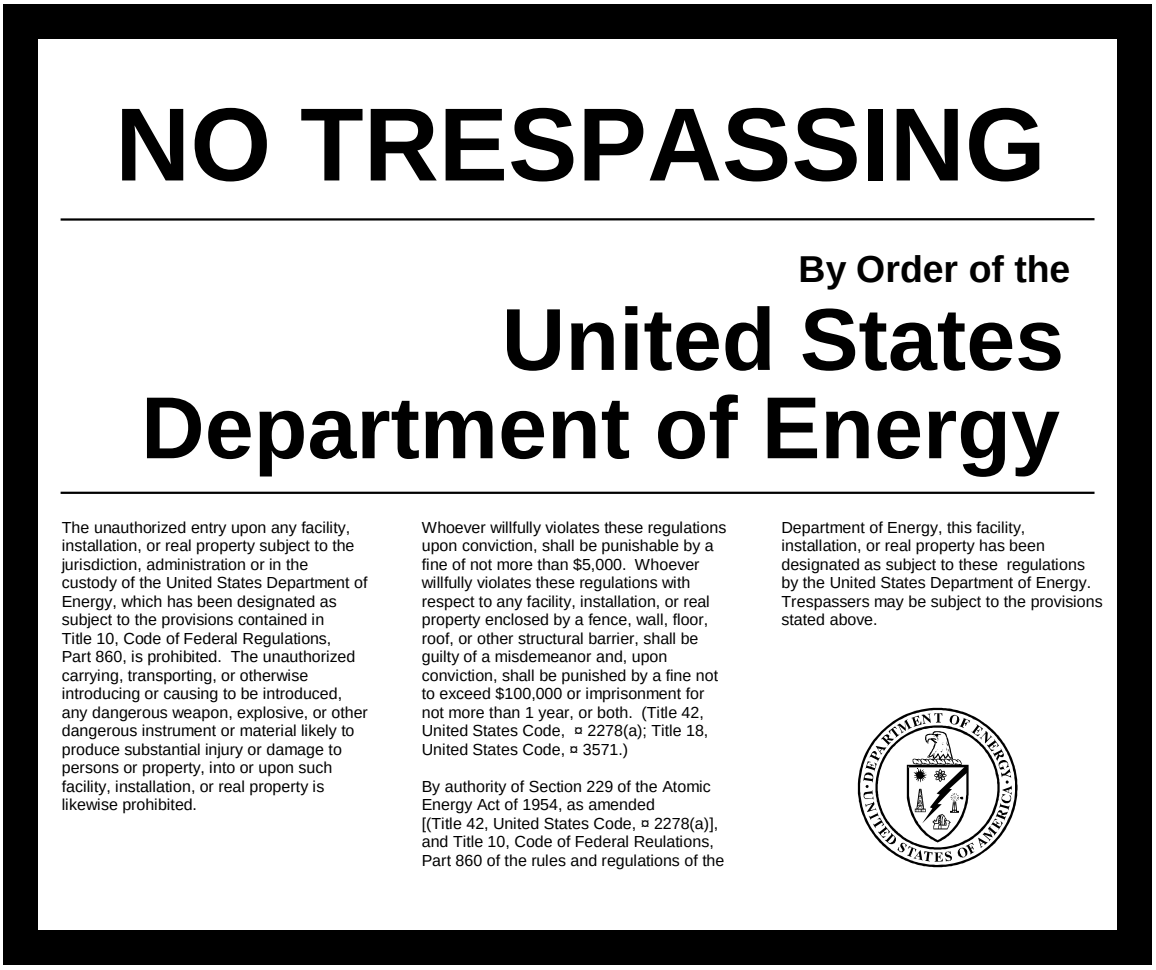

Exhibit F-1. Example INL Boundary No Trespassing Sign

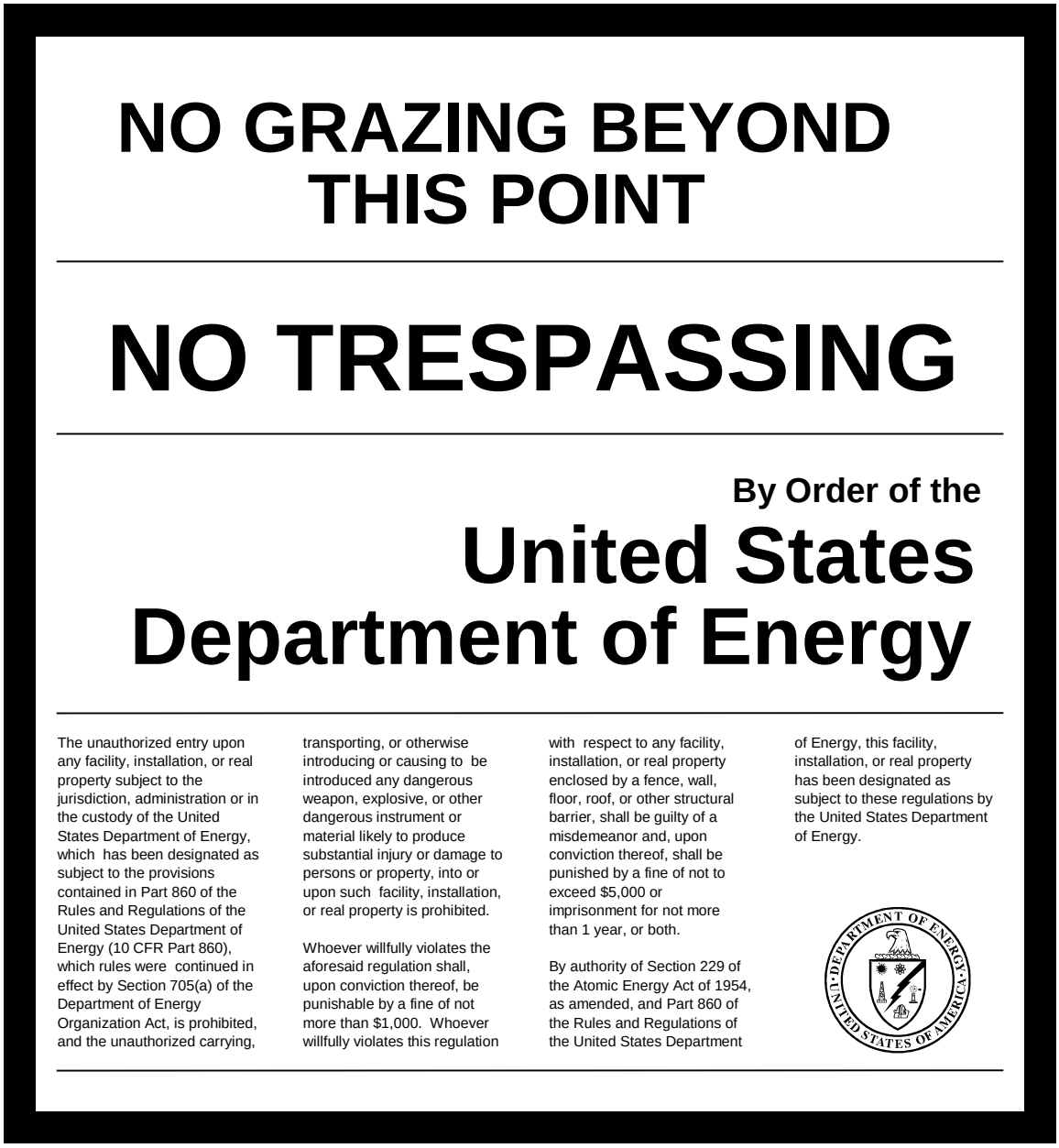

Exhibit F-2. Example INL Boundary No Grazing Sign

Exhibit F-3. Example of Warning Sign

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

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

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

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

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

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

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

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

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

- Fire control system components (e.g., fire sprinklers, fire water pumps, hydrants, etc.)
- Standby power generators
- Emergency response equipment
- Waste container handling equipment

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

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

AMWTP personnel conduct regular radiation surveys of the TSA IS Unit using appropriate instrumentation. These surveys enable the detection of changes in radiation levels related to the wastes in storage. The surveys are recorded on survey forms by the AMWTP personnel performing the survey. Whenever a container is dropped or otherwise mishandled, AMWTP personnel will conduct a radiation survey and inspect the container integrity.

Following completion of the above-described inspections, any problems requiring further action are corrected on a timely basis with full knowledge of the appropriate AMWTP management personnel. AMWTP personnel report and record all identified HWMA/RCRA deficiencies, status of corrective

actions, and completions of corrective actions. When a deficiency is identified, the appropriate corrective action and the urgency of the need is evaluated**.**

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

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

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

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

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

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

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

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

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

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	Problem: Spilled or leaking containers. Visually inspect base of soil mound/waste stack for evidence of leakage. Initiate corrective action, as required.
RWSA		
Leaks/Spills	W	Problem: Spilled or leaking containers. Visually inspect storage area for evidence of leaks and spills. Initiate corrective action, as required.
Container Position	W	Problem: Containers may be improperly stored or positioned based on the storage configuration. Check that containers are positioned properly and properly located in the storage configuration. Standard configuration: • 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. Planar array configuration: • Containers are no more than 4 wide by 1 high by 'n' long, allowing for appropriate aisle spacing. Containers in soft-sided overpacks: • Containers in soft-sided overpacks are no more than 1 container high. Repaired containers: • 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. Bag/Plastic wrap containers: • 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. Containers Identified as Pyrophoric Radionuclide Waste: • 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.

Table F-1. Inspection Schedule for the TSA IS Unit (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		Problem: Damaged or leaking containers and containers that are not closed. Visually inspect for any liquid present on or near the containers and for defective containers (e.g., metal containers that are visibly pitted, or show signs of metal fatigue, and soft-sided containers that are ripped or torn, or show signs of stress or strain) by visually scanning around the outside of each stack and down the aisles.
Aisle Space[c]	W	Problem: 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	Problem: 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	Problem: 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	Problem: 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.
TREATMENT AREAS		
Leaks/Spills	D	Problem: Spilled or leaking containers. Visually inspect for any liquids present in the treatment area, when treatment activities are occurring. Initiate corrective action as required.

Table F-1. Inspection Schedule for the TSA IS Unit (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)]**
TREATMENT AREAS (continued)		
Secondary Containment System Integrity	W	Problem: Cracks, gaps, or other degradation of the secondary containment system(s) used in treatment areas (as required). Liquid in spill containment system. Visually inspect 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.
SECURITY DEVICES (continued)		
TSA Fence Area	M	Problem: Fence has been damaged/breached. Check TSA fence for condition, deterioration, and identify areas requiring repair.
TSA Fence and Gate Warning Signs	M	Problem: Fence and gate warning signs missing, not in proper location, not visible, or not in good condition. Check TSA fence and gate warning signs for the condition of the signs. Ensure signs are visible, in good condition, and verify the location of the signs.
TSA Fence Gates and Locks	M	Problem: Gates not operating properly. Gates or locks missing. Check TSA fence gates and locks for condition, deterioration, and identification of items requiring repair.
Door Entrances	M	Problem: 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	Problem: 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.

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Table F-1. Inspection Schedule for the TSA IS Unit (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 Extinguishers[d]	M[e]	Problem: 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	Problem: Accumulation of flammable/combustible materials and the presence of ignition sources. Ensure all areas are free of fire hazards.
Fire Suppression Systems	A[e]	Problem: Fire suppression systems are not operational. Ensure fire suppression systems (e.g., hydrants, sprinkler systems, and supporting equipment) are present and ready for operation.
Fire Detection Systems and Alarms	A[e]	Problem: Fire detection systems or alarms not operational. Ensure fire detection systems/alarms are ready for operation.
Manual Fire Alarms	A[e]	Problem: Inoperable manual fire alarm systems/equipment. Ensure manual fire alarms are ready for operation.
Standby Generator	M	Problem: 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-2 of Section G.
e. Inspection frequencies determined by the NFPA 10, 25, and/or 72.

F-3 Preparedness and Prevention Requirements

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

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

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

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

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

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

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

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

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

External communication to summon emergency assistance is typically made via the AMWTP telephone system, vehicle two-way radios, hand-held two-way portable radios, and automatic alarms. In the event of an emergency, the following organizations that may be contacted include: security personnel, the INL Fire Department, and/or the Emergency Operations Center (EOC). See Section G for additional information on reporting requirements. The WCC summons by telephone or pager system any outside emergency response organizations (EROs), as requested by the AMWTP.

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

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

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

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

Fire protection in the TSA-RE which covers the RCE/ICE and CCE is provided through a combination of smoke detectors, remote and local alarms, automatic fire extinguishing systems (sprinklers), and portable fire extinguishers. The TSA-RE consists of eight dry pipe sprinkler systems, which provide coverage for the TSA IS Unit and WMF-636 Pad 2.

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

The appropriate fire extinguishing media for a fire involving pyrophoric radionuclides will be decided by the INL Fire Department. The INL Fire Department is notified of all locations where containers with pyrophoric radionuclides are stored/handled at the AMWTP.

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

Fire Water Storage Tanks

The approximately 250,000-gal fire water storage tank (WMF-727) is the primary RWMC water storage tank and is maintained to provide a minimum 2-hour (hr) water supply to meet RWMC's worst case fire demand. Water is discharged directly into the fire water distribution piping system. Both the tank level and water temperature are monitored by the RWMC fire alarm system. A circulation pump/water heating system is provided to move and heat the tank water as needed.

A second approximately 250,000-gal fire water storage tank (WMF-743) serves as a backup fire water tank. Both the tank level and water temperature are monitored as part of the RWMC fire alarm system. A circulation pump/water heating system is provided to move and heat the tank water as needed.

Potable Water Storage Tank

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

Water Storage Tank Feed (Deep-Well Pump)

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

Fire Water Distribution System

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

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

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

F-4 Prevention Procedures, Structures, and Equipment

This section is not applicable per 40 CFR 265.

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

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

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

The following are examples of the precautions that are taken to prevent the reaction or ignition of waste managed in the TSA IS Unit. According to historical records, pyrophoric waste is stored inside the cargo containers located on Pad R. Precautions (as listed below) utilized in retrieval operations of pyrophoric radionuclide metals assist in preventing accidental ignition of the waste by identifying containers with elevated temperatures using thermograph scanning, isolating potential pyrophoric radionuclide metals from sources of ignition, and reducing worker exposure to potential ignitable waste.

- Pyrophoric radionuclide metals are physically separated from the general waste population.
- Liquids collected from wastes are removed and treated as appropriate (e.g., neutralization or absorption). Residual liquids are cleaned up from a treatment unit (e.g., RCE/ICE) before receiving wastes from an incompatible waste IDC/WG or unknown.
- Ensuring the integrity of containers identified as pyrophoric radionuclide metals is such that the container is sufficiently impervious to air and water intrusion. Ensuring that the outer most container of a pyrophoric radionuclide metal waste stream is un-vented or has a vent that is sufficiently impervious to water intrusion.
- Segregated storage of waste known to be incompatible in the RWSA after retrieval from the waste stacks. Typically, incompatibles are only known after a container has been characterized and the contents of the container have been identified; however, a container may be retrieved with sufficient markings/labeling to provide information on the contents of the container. If this is the case, then containers with known incompatibles will be segregated. Segregated storage shall be attained through the use of physical barriers (e.g., dike, berm, wall, etc.) in order to prevent wastes from co-mingling.
- Separated storage of “true unknown wastes” through the use of distance in order to prevent waste from co-mingling. “True unknown wastes” are identified as waste with unknown IDCs or WGs following RTR examination or wastes with known IDCs/WGS, but unknown HWNs. Retrieved wastes pending transfer out of the TSA IS Unit for characterization are not segregated or separated, unless they are known incompatibles.

- Most stationary equipment used is grounded, as are the AMWTP units, thereby preventing sparking. Portable electric tools are double insulated, battery operated, or have ground fault interrupter (GFI) circuit protection.
- Open flame, cutting, welding, or other similar spark or ignition sources are not allowed inside the TSA IS Unit unless repair is required on a piece of equipment, or receives Fire Marshal or designee approval, in which case the equipment and the open flame or spark source are isolated to the extent feasible from the waste in storage. All such work is conducted in accordance with a specific procedure or under a cutting and welding permit reviewed by safety personnel. Gas hoses for welding are equipped with flashback prevention.
- All electrical wiring and equipment complies with applicable NFPA codes.
- Restricting sizing operations to metal shears, nibblers, and other mechanical equipment that minimizes the generation of sparks unless evaluation of the waste present in the area indicates that ignition sources are unlikely to be a safety concern.
- When processing ignitable or incompatible wastes, treatment areas are visually inspected and residual waste is cleaned up and removed between incompatible sequences.
- Unknown wastes are sequenced through treatment areas as if they are incompatible wastes. AMWTP personnel are required to visually inspect and clean up residues before and after unknowns or incompatibles are handled.

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

In addition, the following practices may also be used to prevent the reaction or ignition of waste, but not limited to:

- Thermograph scanning cargo containers prior to and during retrieval with notification and/or suspension of work requirement if elevated temperature are observed. The AMWTP suspension process will be utilized for response and recovery actions.
- Pre-incident fire plans.
- Pre-staged fire fighting materials including Class D fire extinguishers and smothering agents (e.g., magnesium oxide, soil, etc)] for use on pyrophoric fires
- Conservative drum handling techniques such as processing one drum at a time to minimize initiating events.
- Blast shields on equipment.
- Management of combustibles/fire loading in accordance with procedures.

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

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

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

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

- If additional incompatibilities are identified or data review/waste characterization eliminates potential incompatibles, additional precautions are implemented or certain separation/segregation practices may be relaxed, as warranted.
- Any leaks or spills that occur during waste processing are detected through the inspection program or by personnel present during operations. Personnel clean up incidental spills in a timely manner.
- The presence and oversight of personnel during waste handling and processing activities ensures quick detection and mitigation of leaks, spills, equipment failure, or other events that could present a hazardous situation.
- Treatment areas are emptied prior to receiving waste from a different IDC/WG, unless the characterization information or capability determinations allow mixing of wastes.
- If known incompatible wastes are stored at the TSA IS Unit, they are segregated appropriately.
- All equipment and wiring are Underwriters Laboratory (UL) listed and comply with applicable NFPA codes. Portable electric tools are double insulated, battery-operated, or have GFI circuit protection.
- Welding or other open flames are not allowed near the stored waste unless necessary to accomplish repairs and special safety precautions have been taken.
- Routine inspections of the storage areas provide regular assessment of storage conditions and early identification of potentially hazardous situations.

- Ventilation systems in the TSA IS Unit prevent buildup of toxic gasses [e.g., carbon monoxide (CO)] from equipment operation.
- Ventilation systems in the retrieval enclosures (RCE, ICE, and CCE) remove toxic mists, dusts, or gases from the contamination enclosure reducing potential harm to human health.
- Malfunctioning equipment is tagged and either locked out or isolated. Tagged equipment is entered onto a tagout/lockout record and indexed to track the date tagged and the date cleared.
- Should a fire develop in the TSA IS Unit, there are detection systems and sprinkler systems that automatically begin operation and, in parallel, summon the INL Fire Department.
- Wastes are stored in containers that are kept closed at all times, except when adding or removing waste.

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

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

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

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

- Waste characterization information is reviewed to ensure incompatible wastes are not placed in the same container during operations.
- Any waste containerized or repackaged at the TSA IS Unit is placed into new or clean containers.
- When liquids are encountered in process areas, the liquids may be collected in separate containers and separated/segregated, if required, or absorbed in place. Collected liquids may also be placed back into the original waste stream/container.
- Process areas, from which unknown liquids have been collected and removed, are cleaned up prior to receipt of additional waste, unless the compatibility determinations allow mixing of liquids between containers of the same IDC/WG.

- Waste shall not be placed in an unwashed container that previously held an incompatible waste or material.

SECTION G

CONTINGENCY PLAN

(For Information Only)

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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 Unit. Emergency actions addressed include the protection of human health, the environment, and RWMC/AMWTP buildings and equipment in an event originating from or affecting the TSA IS Unit. 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 Unit, 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.

The Contingency Plan applies to all AMWTP personnel who are assigned to the TSA IS Unit, support personnel who work at the TSA IS Unit, 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 Document is modified;
- The plan fails in an emergency;
- The design, construction, operation, maintenance, or other circumstances involving the TSA IS Unit 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 EAMs changes; or
- The list of emergency equipment changes.

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

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

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

Due to the shift-work structure and remoteness of the AMWTP, it is not possible or practical for one individual to assume "primary" responsibilities. Rather, responsibility is best assigned through "redundant primary" EAMs. The EAM is at the AMTWP at all times or on call. When on call, the EAM must be available to respond to emergencies by reaching the facility within a short period of time. If an incident overlaps more than one shift, the active EAM shall maintain the command until responsibility is officially passed to the oncoming EAM.

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

The EAM, or designee, is responsible for:

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

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

The provisions of the Contingency Plan are implemented immediately whenever there is a fire or explosion within the TSA IS Unit, or there is a release of MW constituents that could threaten human health or the environment. The Contingency Plan will also be implemented whenever there is a fire outside of a MWMU that has the potential to involve MW or a MWMU. Minor incidents (those that can be controlled with on-Site resources and do not threaten human health or the environment) are managed by trained personnel according to the provisions of this plan and Section D. Such responses are routinely not considered activation of the Contingency Plan.

G-4 Emergency Response Procedure

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

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

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

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

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

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

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

The agencies that may be notified are:

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

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

The notification includes the following information:

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

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

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

The Operating Record contains information on the waste received at the TSA IS Unit. The Operating Record includes information, to the extent known, relative to the content of each waste container, the generator of the waste, volumes of waste, and locations of waste containers within the TSA IS Unit. The Operating Record is used to assist in the identification of waste materials involved in an emergency at the TSA IS Unit.

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

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

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

As feasible, and as safety conditions warrant, information shall be gathered near the scene of the incident to aid in the assessment of an actual or imminent fire, explosion, or significant release of MW so that the appropriate protective actions can be implemented. INL firefighters approach the affected area if incident assessment information is essential to the control of the incident, and only if adequately safe conditions are present and can be maintained. Typically, the AMWTP EAM and supporting personnel gather assessment information, when feasible, from remote locations.

Based on conservative estimates of the potential source term(s) at the AMWTP, emergency action levels (EALs) have been developed for fires, explosions, radiological releases, and other emergency events. EALs are specific, predetermined, observable criteria used for determining the emergency classification and initial protective actions for emergencies. These EALs provide guidance for activating the INL EROs at the appropriate level in response to an incident. The EALs specify the initial protective actions (e.g., evacuation, take shelter, etc.) to be taken in response to the event.

The emergency assessment requires determination of hazards involving evaluation of several criteria, including the following:

- Nature of the accident – Known or probable cause, current/projected status of the affected area, facility conditions, status of containment boundaries/systems, and type(s) and quantities of hazardous waste/material (non-radiological and radiological) involved in the incident.
- Weather conditions, present and expected – Wind speed and direction, precipitation, time of day, stability class, weather forecast, anticipated dispersion pattern, direction of travel and width of plume, and locations affected.
- Exposure – Magnitude of actual or potential exposure to employees, the general public and the environment, the duration of human and environmental exposure, and pathways of exposure.
- Toxicity – Types of adverse health or environmental effects associated with exposures, and the relationship between the magnitude of exposure and adverse effects.
- Reactivity – Hazardous materials or waste involved in an incident will be assessed to determine its reactivity and the method(s) for managing such waste.
- Effects – Direct and indirect effects of the release, fire, or explosion (e.g., the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface water run-off from water or chemical agents used to control a fire or explosion).
- Uncertainties – Considerations for undeterminable or future exposures, and uncertain or unknown health effects including future health effects.

If the assessment indicates no real or potential threat to human health or the environment, then the occurrence will be considered a minor incident. Minor incidents do not require further activation of the Contingency Plan.

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

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

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

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

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

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

Significant Release of MW. A significant release of MW constituents at the TSA IS Unit could result in an exposure to personnel or contamination of the surrounding environment. A significant release could occur from a spill of the MW during retrieval, storing, treatment, and/or moving operations. Also, water used to fight fires may become contaminated with MW constituents, imposing additional considerations when disposing of the water. Safe work practices are implemented to further reduce the potential of a MW release. Due to the nature of the conditions under which the containers on the TSA IS Unit have been stored, it is expected that releases are a common operational occurrence. For the purposes of this document, a significant release of MW constituents shall require the implementation of this HWMA/RCRA Contingency Plan. Releases within the TSA-RE and TSA IS Unit are classified in various groups, as defined in Section D. See Section D for further information on the classification of a release

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

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

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

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

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

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

Fires. The TSA IS Unit has many pre-engineered features that reduce the likelihood for a fire to occur, recur, or spread to other wastes contained within the building. The TSA IS Unit including the RCE/ICE is equipped with a fire extinguishing system (sprinklers, except for ICE), fire extinguishers, and manual fire alarms. The CCE is protected by an ABC staged fire extinguisher at the CCE, one ABC "Cease Fire" fire extinguisher mounted from a Gantry Crane at the tent/cargo container interface, and fire retardant curtains at the tent/cargo container interface (or position most likely to experience a fire event.) Class D fire extinguishers are also staged on Pad-R, and a smothering agent (e.g., magnesium oxide, soil, etc.) is staged inside the CCE and exterior to WMF-636, which are appropriate extinguishing or smothering agents for use on a pyrophoric fires. Additional measures include careful management of

flammable, combustible, and oxidizable waste or building materials; safe isolation of ignitable sources; and the establishment of safe work practices.

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

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

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

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

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

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

In the event of a significant waste release, the EAM or his/her designee ensures that no wastes are received, treated, or stored in the affected areas until cleanup operations have been completed. This procedure ensures that incompatible wastes are not present in the vicinity of the significant release.

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

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

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

The AMWTP EAM or his/her designee does not allow MW operations to resume in the TSA IS Unit if significant amounts of incompatible wastes/materials have been released, before ensuring that necessary post-emergency cleanup operations to remove potentially incompatible wastes/materials are completed. Operations not associated with a leak/spill in a specific area may continue while the leak/spill is mitigated. For example, should a leak/spill occur on the south side of Pad R, operations may still be able to continue on Pad 1.

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

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

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

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

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

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

Treatment/storage areas and containers at the TSA IS Unit are inspected per a set schedule, as described in Section F-2. Corrective or mitigative action is taken when container integrity is significantly deteriorated or compromised, as required. The RCE/ICE and CCE are designed to handle significantly deteriorated containers as part of routine operations. See Section D for additional information.

Additionally, AMWTP personnel can repair, or overpack a leaking container, or place it in a drip pan before repairing, or overpacking, or transfer the contents to a container that is in good condition to prevent continued leakage into a storage area that may affect other stored wastes. Damaged or leaking containers are repaired, overpacked, or the contents transferred to a container that is in good condition before acceptance for storage in the TSA IS Unit.

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

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

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

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

The TSA IS Unit fire protection systems consist of a combination of smoke detectors, remote and local alarms, automatic sprinkler systems, and/or fire hydrants. Fire alarms are triggered either automatically in response to a fire or manually at a pull box. Once activated, the fire alarm system activates a local alarm and transmits an alarm signal to the INL Fire Department.

Table G-2. Emergency Equipment for the TSA IS Unit

Location	Equipment
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 R (Near CCE) Pad 1 (Near Door 20) Pad 1 (Near Door 22)	Fire Extinguishers (ABC Type)
Next to each overhead access door into Pad 1 and Pad R West of Pad R Inside the CCE during retrieval operations of potential pyrophoric radionuclides	Class D Fire Extinguishing Media[a] • Class D Fire Extinguishers • Smothering agents (e.g., magnesium oxide, soil, etc.)
Pad R (Center of South Wall) RCE (Outside on North Wall)	Spill Response Equipment • Acid Neutralizer, • Caustic Neutralizer, • Solvent Absorber, • Vermiculite/absorbent, • Spill Disposal Plastic Bags, • Scraper/scoop, • pH Paper, • Shovel/Broom, • Spill Pads

a. Class D fire extinguishing media is required when containers identified as pyrophoric radionuclides are stored or handled within a MWMU. The total quantity and location of Class D fire extinguishing media is determined either by the AMWTP Fire Marshall or the INL Fire Department. A minimum of one Class D fire extinguisher will be provided adjacent to each row of containers that contain pyrophoric radionuclides.

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

The AMWTP has access to INL resources, such as on-Site security, medical, and fire assistance, on a 24-hr basis. The INL Fire Department would be the primary initial responder to an emergency event originating at the TSA IS Unit. The INL Fire Department is notified of the storage location of all pyrophoric radionuclides stored/handled at the AMWTP.

If additional resources are necessary, off-Site assistance is requested through the AMWTP and/or INL ERO. Off-Site interfaces for providing emergency response support are coordinated through DOE-ID. DOE-ID has mutual aid agreements in place with federal, state, local, and tribal agencies that define cooperative emergency policies and procedures and the roles of the participants.

Appropriate information from the Contingency Plan is provided to the following agencies through the Memorandum of Understandings (MOUs) and Memorandum of Agreements (MOAs) with the DOE-ID.

- Bingham, Bonneville, Butte, Clark, and Jefferson County Sheriff's Departments.
- Rexburg City/Madison County, City of Ammon, Hamer Volunteer, West Jefferson, City of Arco, City of American Falls, City of Blackfoot, City of Chubbuck, City of Pocatello, City of Rigby, and City of Idaho Falls Fire Departments.
- Jefferson Central, Lost River, South Custer Rural, North Custer Rural, and Shelly/Firth Fire Districts.
- Fort Hall Fire Protection District.
- Portneuf Medical Center, Eastern Idaho Regional Medical Center, Bingham County Memorial Hospital, and Lost River District Hospital.
- Bingham County Emergency Management Services, Bonneville County Emergency Management Services, Butte County Emergency Services, Clark County Civil Defense, and Jefferson County Emergency Management.
- Shoshone-Bannock Tribes.
- Bureau of Land Management, National Park Service, and Department of Agriculture.
- State of Idaho and Idaho Transportation Department.
- Naval Reactors Facility.

The AMWTP has limited capabilities for immediate response for emergencies that occur under controlled conditions (e.g., confined spill/leak that has the potential to affect human health or the environment). The INL Fire Department is the primary responder to all fire and emergency situations at the AMWTP. The INL Fire Department operates separately from the AMWTP, but their activities are

coordinated with the EAM. DOE-ID maintains MOUs and MOAs with local and outside agencies that make additional equipment and emergency personnel available if outside assistance is required. In addition, as a DOE facility, the AMWTP can call upon additional resources of the INL ERO for assistance. Assistance includes, but is not limited to, local agencies (such as outside medical facilities or state and local law enforcement agencies) and other federal agencies.

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

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

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

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

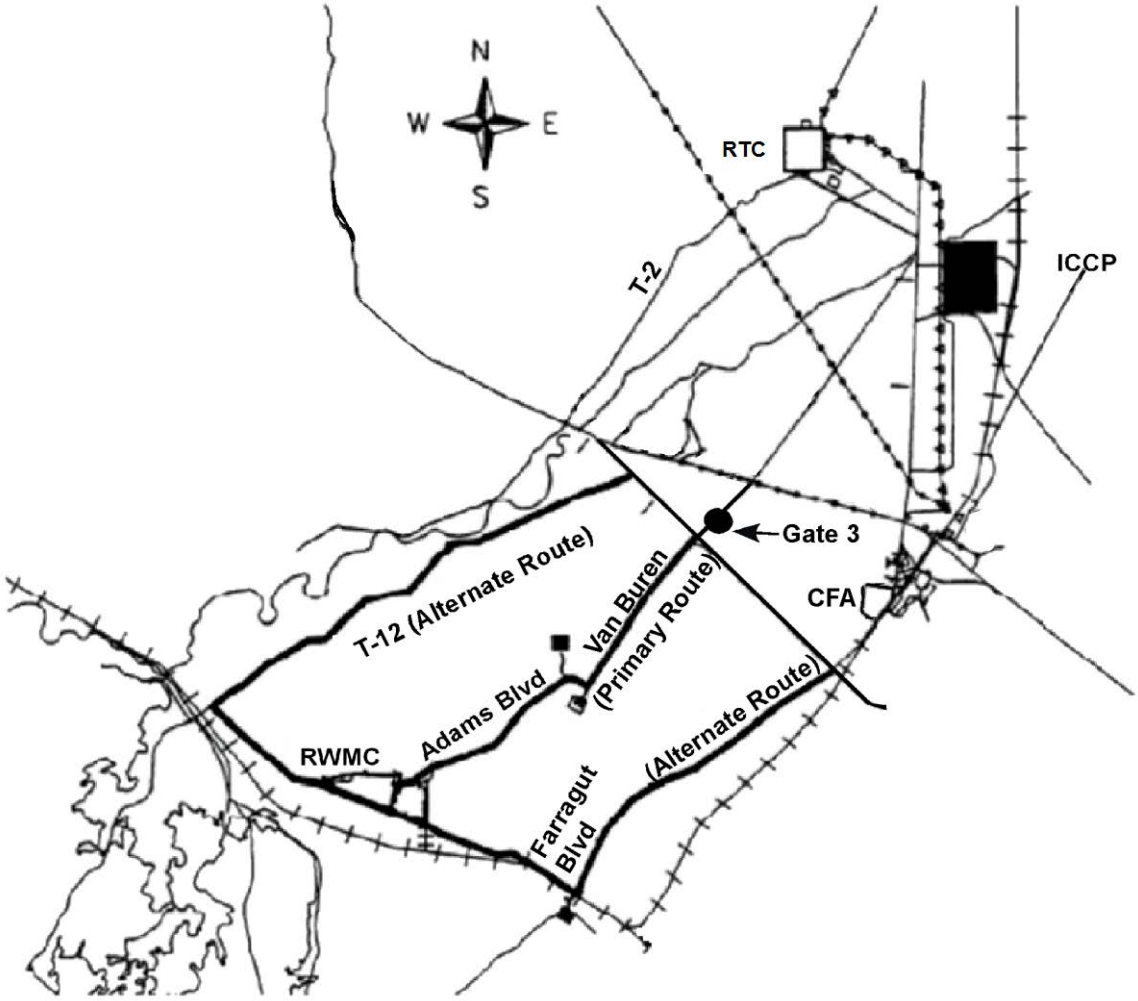

Exhibit G-1. AMWTP Evacuation Routes

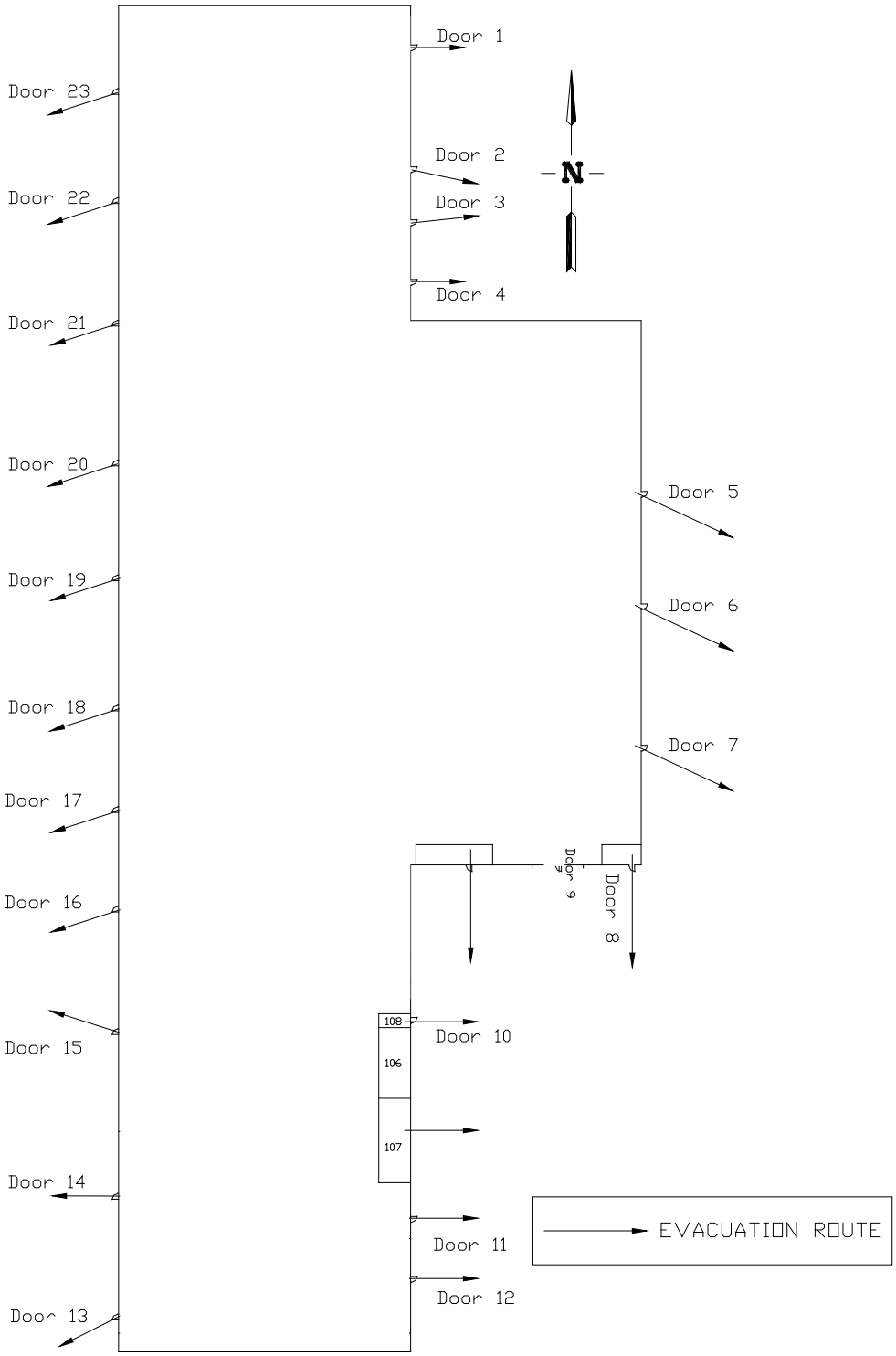

Exhibit G-2. Evacuation Routes for the TSA IS Units

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

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

Such reports include, as a minimum, the following:

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

SECTION H

PERSONNEL TRAINING

(For Information Only)

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

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

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

- General description of the TSA IS Unit,
- Waste management activities performed in the TSA IS Unit,
- Contingency Plan contents,
- Access and security requirements, and
- Hazards associated with the TSA IS Unit.

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

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

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

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

- Respirator use and fit test,
- Radiation worker training,
- First aid, and

- Cardiopulmonary resuscitation (CPR).

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

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

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

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

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

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

The Training Director, or designated trainers, is/are qualified to instruct AMWTP personnel about the subject matter that is being presented in training. Such trainers have satisfactorily completed a Training Plan for teaching the subject(s), or they have the academic credentials and instructional experience necessary for teaching the subject(s).

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

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

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

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

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

- Job description,
- Qualifications, and
- Training requirements.

Profiles identify typical qualification and certification requirements. Some positions may require specialized training (e.g., HWMA/RCRA Secondary Containment System Repair Procedure, Container Repair Procedure, etc.). Special-case training is documented in the training records. Profiles include requirements for hazardous and MW management and emergency response training. The AMWTP

Training Director, or designee, is responsible for monitoring the status of personnel qualifications and certifications.

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

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

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

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

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

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

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

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

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

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

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

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

SECTION I

Closure Plan
(For Information Only)

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SECTION I

LIST OF TABLES

I. CLOSURE REQUIREMENTS [IDAPA 58.01.05.009; 40 CFR Part 265, Subpart G]

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

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

- Qualified AMWTP personnel supervise and perform closure activities in compliance with established safety procedures,
- Personnel are equipped with appropriate PPE and trained in applicable safety procedures, and
- The use of established radiological control procedures to ensure personnel and equipment are clean of radiological contamination before leaving any contaminated area.

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

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

This section of the Plan describes the closure process, closure performance standards, inventory removal, and activities related to decontamination, disposal, and sampling, and analysis. The design and

operation of the TSA IS Unit and the waste types managed are detailed in Sections B, C, and D of the TSA IS document.

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

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

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

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

Closure of the TSA IS Unit is conducted in accordance with the closure performance standards specified at IDAPA 58.01.05.009 (40 CFR 265.111). Furthermore, all HWMA/RCRA-regulated waste and waste constituents removed during closure of the TSA IS Unit are managed in accordance with the applicable requirements of IDAPA 58.01.05.005 through 58.01.05.012 (40 CFR Parts 261 through 270). Refer to Table I-1 for the specifics on how closure of the TSA IS Unit satisfies the standards at IDAPA 58.01.05.009 (40 CFR 265.111).

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

The estimated total maximum HWMA/RCRA-regulated waste inventory at the TSA IS Unit is 76,608 m^3 (20,237,720 gal). HWMA/RCRA-regulated waste is stored in a variety of containers as described in Section D of the TSA IS Document. Details on the methods for removing, transporting, treating, storing, or disposing of HWMA/RCRA-regulated waste is found in Section I-1d of this Plan.

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

Because operational methods at the TSA IS Unit place emphasis on the containment and timely response to spills, and because of the TSA IS Unit design, releases to the environment from the TSA IS Unit is unlikely. Therefore, disposal of contaminated soils located off the TSA IS Unit pursuant to this Plan is not anticipated. However, if soil contamination is found underlying the TSA IS Unit, or other unexpected

locations, it shall be addressed via the Federal Facilities Agreement/Consent Order under the direction of DOE-ID with concurrence from the DEQ. The following subsections provide a description of the actions necessary to manage the disposal or decontamination of equipment or structures contaminated with HWMA/RCRA-regulated waste or waste constituents. Before beginning closure activities, all waste will be removed from the TSA IS Unit.

I-1d(1) Sampling and Analysis

All sampling and analysis performed for closure is performed in accordance with the quality standards established in a Closure Quality Assurance Project Plan (QAPP), which will be submitted with the closure notification 45 days before closure of the TSA IS Unit begins. The Closure QAPP will detail sampling and analysis procedures in accordance with the current edition of the EPA SW-846, the ASTM Annual Book of ASTM Standards, or other EPA-approved methods.

I-1d(2) Disposal of Equipment

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

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

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

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

To be protective of human health and the environment, ancillary equipment and structures designated for reuse are decontaminated to meet the closure performance standard, as verified by sampling and analysis. An assessment of the Operating Record will be conducted to determine the extent of potential contamination. Contaminated equipment and structures are decontaminated to meet the closure performance standard as

verified by confirmatory sampling and analysis (as described in the Closure QAPP). The following section provides additional details for closure of the TSA IS Unit.

I-1d(4) TSA IS Closure Procedures

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

Closure of Fire Water Collection Tanks. As discussed in Section F, 20,000 gal double-walled tanks used for the collection of fire water are located underground outside of the TSA-RE building. These fire water collection tanks are not intended to collect any run-off of spills/leaks of MW from WMF-636 operations. Rather the tanks are provided to collect fire water in accordance with NFPA requirements. Therefore, closure of the fire water collection tank under the HWMA/RCRA requirements is not anticipated at this time. In the event that a spill/leak of MW enters the fire water collection tanks or a fire occurs that involves MW which results in MW contaminated fire water entering the fire water collection tanks, then the Closure Plan will be amended per Section I-1e. Upon closure of WMF-636, the Operating Record will be reviewed to ensure that no MW leaks/spills have occurred which could result in MW contamination of the fire water collection tanks.

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

After operations cease and all waste remaining in the TSA IS Unit has been removed, the TSA IS Unit shall be thoroughly cleaned. The asphalt pads are swept or vacuumed using vacuum cleaners equipped with HEPA filters, if required.

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

Cleaning/decontamination verification. Confirmatory sampling and analysis (as outlined in the Closure QAPP) will follow cleaning/decontamination of the TSA IS Unit, until it is established that decontamination actions have removed hazardous constituents of concern to the closure performance standard. If verification testing detects hazardous constituents of concern above the closure performance

standard, the contaminated equipment, structure, or areas are decontaminated again, followed by confirmatory sampling and analysis. Closure is achieved when the TSA IS Unit satisfies the standards at IDAPA 58.01.05.009 (40 CFR 265.111).

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

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

Decontamination materials and equipment. Spent decontamination materials and residues (e.g., swabs, wipes, PPE, sampling equipment and residue, HEPA vacuum cleaner filters) are characterized per process knowledge or sampled and analyzed in accordance with the Closure QAPP. Based on the results of analysis, closure wastes are managed to ensure proper handling, treatment, storage, and disposal. Equipment used for closure cleanup/decontamination is managed using the same methods and standards described above.

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

I-1d(5) Order of Closure

To the extent practicable, closure activities associated with the closure of the TSA IS Unit are accomplished utilizing other HWMA/RCRA-permitted facilities at the AMWTP, including treatment or storage at other AMWTP waste management units. Decontamination activities are performed in a step-wise fashion to maximize the use of the AMWTP waste management units and thereby minimize the quantity of

HWMA/RCRA-regulated decontamination wastes requiring subsequent management. The major steps in the closure of the TSA IS Unit include:

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

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

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

- At the time of closure to address the schedule for closure, changes to regulatory standards for cleanup, sampling based on the Operating Record, decontamination methods/technologies to be employed, changes to how and where disposal of equipment and structures will take place, and other changes necessary to accomplish the closure performance standard specified at IDAPA 58.01.005.009 (40 CFR 265.111);
- If it becomes desirable or necessary to close the TSA IS Unit in advance of the schedule included in the Plan;
- Whenever changes in the TSA IS Unit's operating plans or design affect the Plan;
- If there is a change in the expected year of closure;
- If, when conducting closure activities, an unexpected event requires an amendment;
- If a change in HWMA/RCRA regulations require amending the Plan; or
- At the request of the Director.

The Permittee will submit a written notification that includes a copy of the amended Plan to the Director 60 days before a proposed change in the operation or design of the TSA IS Unit that affects the

Closure Plan; or no later than 60 days after an unexpected event occurs that affects the Plan; or no later than 30 days after an unexpected event occurs during closure.

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

The AMWTP will complete its mission in approximately 2018. The following schedule assumes closure in 2019; if the decision is made to operate the TSA IS Unit beyond that date, this Plan will be amended as previously described. The Director will be notified at least 45 days before the planned start of 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
The owner or operator must close the facility in a manner that: a) Minimizes the need for further maintenance.	Prior to and during closure all HWMA/RCRA-regulated waste and waste constituents will be removed from the TSA IS Unit. No waste will be accepted in the TSA IS Unit once closure has commenced.
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.	The TSA IS Unit 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 Unit.
c) Complies with the closure requirements of IDAPA 58.01.05.009 (40 CFR §§ 265.197, .228, .258, .280, .310, .351, and .1102).	The Plan describes the processes used to close the TSA IS Unit 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 Unit.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Pursuant to IDAPA 58.01.05.009 [40 CFR 265.140(b)], the HWMA/RCRA post-closure financial requirements at 58.01.05.009 (40 CFR 265.144 through .146) are not applicable to the TSA IS Unit.

Summary of Page Changes for the AMWTP HWMA/RCRA
TSA Interim Status Document

September 17, 2014

The table below lists, section-by-section, replacement of revised pages.

Permit Section	New Page/Drawing	Replaces
Cover/Spine	Cover/Spine with September 17, 2014 revision date.	Cover/Spine November 25, 2013 revision date.
Approval Letters	DEQ approval letter dated September 17, 2014.	N/A - Add to the front of tabbed section.
Acronyms & Abbreviations	Entire section with September 17, 2014 revision date.	Entire section.
Section B	Entire section with September 17, 2014 revision date.	Entire section.
Section D	Entire section with September 17, 2014 revision date.	Entire section
Section F	Pages i, 6, 13, 15 thru 21, with September 17, 2014 revision date.	Pages i, 6, 13, 15 thru 21, with March 21, 2011 revision date.
Section G	Pages i, 9 thru 12, and 14 thru 15 with September 17, 2014	Pages i, 9 thru 12, and 14 thru 15 with March 21, 2011
Summary of Page Changes	Summary of Page Changes dated September 17, 2014 (this page)	N/A - Add to front of tabbed section.

Summary of Page Changes for the AMWTP HWMA/RCRA
TSA Interim Status Document

November 25, 2013

The table below lists, section-by-section, replacement of revised pages.

Permit Section	New Page/Drawing	Replaces
Cover/Spine	Cover/Spine with November 25, 2013 revision date.	Cover/Spine September 08, 2011 revision date.
Approval Letters	DEQ approval letter dated November 25, 2013.	N/A - Add to the front of tabbed section.
Part A Permit Application	Entire section with November 25, 2013 revision date.	Entire section.
Acronyms & Abbreviations	Entire section with November 25, 2013 revision date.	Entire section.
Section C	Pages 2 through 10 were revised with November 25, 2013 revision date. Due to pagination entire section is being replaced	Entire section
Section D	Entire section with November 25, 2013 revision date.	Entire section
Section F	Pages 10, and 11, with November 25, 2013 revision date.	Pages 10, and 11, with March 21, 2011 revision date.
Section G	Page 3, with November 25, 2013 revision date.	Page 3, with March 21, 2011 revision date.
Summary of Page Changes	Summary of Page Changes dated November 25, 2013 (this page)	N/A - Add to front of tabbed section.

Summary of Page Changes for the AMWTP HWMA/RCRA
TSA Interim Status Document

September 8, 2011

The table below lists, section-by-section, replacement of revised pages.

Permit Section	New Page/Drawing	Replaces
Cover/Spine	Cover/Spine with September 8, 2011 revision date.	Cover/Spine with March 21, 2011 revision date.
Approval Letters	DEQ approval letter dated with September 8, 2011	N/A. Add to the front of tabbed section.
Part A Permit Application	Entire section with September 8, 2011 revision date.	Entire section.
Acronyms & Abbreviations	Entire section with September 8, 2011 revision date.	Entire section.
Summary of Page Changes	Summary of Page Changes with September 8, 2011 (this page)	NA. Add to front of tabbed section.

Summary of Page Changes for the AMWTP HWMA/RCRA TSA Interim Status Document

March 21, 2011

The table below lists, section-by-section, replacement of revised pages.

Permit Section	New Page/Drawing	Replaces
Cover/Spine	Cover/Spine with March 21, 2011 revision date.	Cover/Spine with November 30, 2009 revision date.
Approval Letters	DEQ approval letter dated March 21, 2011.	N/A. Add to the front of tabbed section.
Table of Contents	Table of Contents with March 21, 2011 revision date.	Table of Contents with August 2002 revision date.
Part A Permit Application	Entire section with March 21, 2011 revision date.	Entire section.
Acronyms & Abbreviations	Entire section with March 21, 2011 revision date.	Entire section.
Section B	Entire section with March 21, 2011 revision date.	Entire section.
Section C	Entire section with March 21, 2011 revision date.	Entire section.
Section D	Entire section with March 21, 2011 revision date.	Entire section.
Section F	Entire section with March 21, 2011 revision date.	Entire section.
Section G	Entire section with March 21, 2011 revision date.	Entire section.
Summary of Page Changes	Summary of Page Changes dated March 21, 2011 (this page)	NA. Add to front of tabbed section.

Summary of Page Changes for the AMWTP HWMA/RCRA TSA Interim Status Document

November 11, 2009 and November 30, 2009

The table below lists, section-by-section, replacement of revised pages.

Permit Section	New Page/Drawing	Replaces
Cover/Spine	Cover/Spine with November 30, 2009 revision date.	Cover/Spine with July 09, 2009 revision date.
Approval Letters	DEQ approval letter dated November 17, 2009.	NA. Add to front of tabbed section.
Section D	Pages 8, 8a, 10, and 10a with November 30, 2009 revision date.	Pages 8 and 10 with July 09, 2009 revision date.
Section G	Page 17 with November 11, 2009 revision date.	Page 17 with July 09, 2009 revision date.
Summary of Page Changes	Summary of Page Changes dated November 11, 2009 and November 30, 2009 (this page)	NA. Add to front of tabbed section.

Summary of Page Changes for the AMWTP HWMA/RCRA TSA Interim Status Document

July 09, 2009

The table below lists, section-by-section, replacement of revised pages.

Permit Section	New Page/Drawing	Replaces
Cover/Spine	Cover/Spine with July 09, 2009 revision date.	Cover/Spine with February 25, 2009 revision date.
Approval Letters	DEQ approval letter dated July 09, 2009.	N/A. Add to the front of tabbed section.
Part A Permit Application	Entire section with July 09, 2009 revision date.	Entire section.
Acronyms & Abbreviations	Entire section with July 09, 2009 revision date.	Entire section.
Section B	Entire section with July 09, 2009 revision date.	Entire section.
Section C	Entire section with July 09, 2009 revision date.	Entire section.
Section D	Entire section with July 09, 2009 revision date.	Entire section.
Section F	Entire section with July 09, 2009 revision date.	Entire section.
Section G	Entire section with July 09, 2009 revision date.	Entire section.
Section H	Entire section with July 09, 2009 revision date.	Entire section.
Section I	Entire section with July 09, 2009 revision date.	Entire section.
Summary of Page Changes	Summary of Page Changes dated July 09, 2009 (this page)	NA. Add to front of tabbed section.

Summary of Page Changes for the AMWTP HWMA/RCRA
TSA Interim Status Document

February 25, 2009

The table below lists, section-by-section, replacement of revised pages.

Permit Section	New Page/Drawing	Replaces
Cover/Spine	Cover/Spine with February 25, 2009 revision date.	Cover/Spine with April 15, 2008 revision date.
Section C	Entire section with February 25, 2009 revision date.	Entire section with May 31, 2007 and October 5, 2007 revision dates.
Section D	Entire section with February 25, 2009 revision date.	Entire section with October 5, 2007 and April 15, 2008 revision dates.
Section F	Entire section with February 25, 2009 revision date.	Entire section with October 5, 2007 revision date.
Section G	Pages 4, 18, and 19 with February 25, 2009 revision date.	Page 4 with October 5, 2007 revision date. Pages 18 and 19 with May 31, 2007 revision date.
Section I	Pages 4 – 7 with February 25, 2009 revision date.	Pages 4 – 7 with June 27, 2005 revision date.
Summary of Page Changes	Summary of Page Changes dated February 25, 2009 (this page)	NA. Add to front of tabbed section.

Summary of Page Changes for the AMWTP HWMA/RCRA
TSA Interim Status Document

April 15, 2008

The table below lists, section-by-section, replacement of revised pages.

Permit Section	New Page/Drawing	Replaces
Cover/Spine	Cover/Spine revised April 15, 2008	Cover/Spine revised October 05, 2007
Section D	Pages 10, 10a, 18, and 19 with April 15, 2008 revision date.	Pages 10, 18, and 19 with October 05, 2007 revision date.
Summary of Page Changes	Summary of Page Changes dated April 15, 2008 (this page)	NA. Add to front of tabbed section.

Summary of Page Changes for the AMWTP HWMA/RCRA TSA Interim Status Document

October 05, 2007

The table below lists, section-by-section, replacement of revised pages.

Permit Section	New Page/Drawing	Replaces
Cover/Spine	Cover/Spine revised October 05, 2007	Cover/Spine revised May 31, 2007
Section B	Entire Section	Entire Section
Section C	Page 1 dated October 05, 2007	Page 1 dated May 31, 2007
Section D	Entire Section	Entire Section
Section F	Entire Section	Entire Section
Section G	Page 4 dated October 05, 2007	Page 4 dated May 31, 2007
Summary of Page Changes	Summary of Page Changes dated October 05, 2007 (this page)	NA. Add to front of tabbed section.

Summary of Page Changes for the AMWTP HWMA/RCRA TSA Interim Status Document

November 07, 2005

The table below lists, section-by-section, replacement of revised pages.

Permit Section	New Page/Drawing	Replaces
Cover/Spine	Cover/Spine revised November 07, 2005	Cover/Spine revised June 27, 2005
Acronyms & Abbreviations	Entire Section	Entire Section
Section B	Entire Section	Entire Section
Section C	Entire Section	Entire Section
Section D	Entire Section	Entire Section
Section F	Entire Section	Entire Section
Section G	Entire Section	Entire Section
Summary of Page Changes	Summary of Page Changes November 07, 2005 (this page)	NA. Add to front of tabbed section.

Summary of Page Changes for the AMWTP HWMA/RCRA TSA Interim Status Document

June 27, 2005

The table below lists, section-by-section, replacement of revised pages.

Permit Section	New Page/Drawing	Replaces
Cover/Spine	Cover/spine revised June 27, 2005	Cover/spine revised April 6, 2005
Approval Letters	DEQ approval letter dated May 27, 2005	NA. Add to front of tabbed section
Acronyms	Entire Section	Entire Section
Section B	Entire Section	Entire Section
Section C	Entire Section	Entire Section
Section D	Entire Section	Entire Section
Section F	Entire Section	Entire Section
Section G	Entire Section	Entire Section
Section H	Entire Section	Entire Section
Section I	Entire Section	Entire Section
Summary of Page Changes	Summary of Page Changes June 27, 2005 (this page)	NA. Add to front of tabbed section.

Summary of Page Changes for the AMWTP HWMA/RCRA TSA Interim Status Document

May 2005

The table below lists, section-by-section, replacement of revised pages.

Permit Section	New Page/Drawing	Replaces
Cover/Spine	Cover/spine Revised May 2005	Cover/Spine Revised August 4, 2003
Approval Letters	DEQ approval letter dated April 6, 2005	NA. Add to front of tabbed section.
Part A Permit	Entire Section	Entire Section
Summary of Page Changes	Summary of Page Changes May 2005 (this page).	NA. Add to front of tabbed section.

Summary of Page Changes for the AMWTP HWMA/RCRA TSA Interim Status Document

August 2003

The table below lists, section-by-section, replacement of revised pages.

Permit Section	New Page/Drawing	Replaces
Cover/Spine	Cover/Spine Revised August 4, 2003	Cover/spine Revised November 15, 2002
Acronyms & Abbreviations	Entire Section	Entire Section
Section B	Entire Section	Entire Section
Section C	Entire Section	Entire Section
Section D	Entire Section	Entire Section
Section F	Entire Section	Entire Section
Section G	Entire Section	Entire Section
Section H	Entire Section	Entire Section
Section I	Entire Section	Entire Section
Summary of Page Changes	Summary of Page Changes August 2003 (this page).	NA. Add behind *the Summary of Page Changes* tab in front of other pages.

Summary of Page Changes for the AMWTP HWMA/RCRA TSA Interim Status Document

March 2003

The table below lists, section-by-section, replacement of revised pages.

Permit Section	New Page/Drawing	Replaces
Section F	Page 9 and 10	Page 9 and 10
Section G	Page 20	Page 20
Summary of Page Changes	Summary of Page Changes March 2003 (this page).	NA. Add behind *the Summary of Page Changes* tab in front of other pages.

Summary of Page Changes for the AMWTP HWMA/RCRA
TSA Interim Status Document

December 12, 2002

The table below lists, section-by-section, replacement of revised pages.

Permit Section	New Page/Drawing	Replaces
	Yellow Control Page	NA. Place in the font of your binder.
	Issue Record Sheet tab and Change Issue No. 001 & 002.	NA. Add behind the Control Page.
Approval Letters	5 DEQ & BNFL letters dated 1/3/01, 12/19/00, 11/14/00, 10/27/00, & 10/3/00.	NA. Add behind DEQ approval letter dated 11-15-02.
	Summary of Page Changes tab and Summary of Page Changes dated 11/19/02 & 11/15/02	NA. Add at the end of the binder.
Summary of Page Changes	Summary of Page Changes, December 12, 2002 (this page).	NA. Add behind *the Summary of Page Changes* tab in front of other 2 pages.

Summary of Page Changes for the AMWTP HWMA/RCRA TSA Interim Status Document

November 19, 2002

The table below lists, section-by-section, replacement of revised pages.

Permit Section	New Page/Drawing	Replaces
Section G	Table G-1, AMWTP Emergency Coordinators, page 4	Table G-1, AMWTP Emergency Coordinators, page 4
Summary of Page Changes	Summary of Page Changes, November 19, 2002 (this page).	Not Applicable. Place behind the Summary of Page Changes tab.

Summary of Page Changes for the AMWTP HWMA/RCRA TSA Interim Status Document

November 15, 2002

The table below lists, section-by-section, replacement of revised pages.

Permit Section	New Page/Drawing	Replaces
Cover/spine	New cover /spine with revised date November 15, 2002	Old cover/spine with Issue date August 2002
	Add new tab "Approval Letters" and insert the DEQ approval letter, dated November 15, 2002, behind it.	NA. Add before "Table of Contents" tab
Part A Permit Application	Approved and signed Part A Permit Application	One page placeholder
Summary of Page Changes	Summary of Page Changes, November 15, 2002 (this page).	Not Applicable. Place behind the Summary of Page Changes tab.