IDAHO
DEPARTMENT OF ENVIRONMENTAL QUALITY

HWMA STORAGE and TREATMENT PERMIT for the

IDAHO NUCLEAR TECHNOLOGY and ENGINEERING CENTER, and the RADIOACTIVE WASTE MANAGEMENT COMPLEX

on the

IDAHO NATIONAL LABORATORY

EPA ID NO. ID4890008952

Effective Date: April 27, 2009
Revision Date: August 19, 2016
Book 1 of 3

Permittee: Department of Energy (DOE) and DOE-Designated Contractors,
Idaho National Laboratory
Partial Permit Number: EPA ID# ID4890008952

INTRODUCTION AND SIGNATURE PAGE

Pursuant to the Idaho Hazardous Waste Management Act of 1983 (HWMA), Idaho Code §§ 39-4401 *et seq*., and the "*Rules, and Standards For Hazardous Waste*," as amended, IDAPA 58.01.05.000 *et seq*., specifically IDAPA 58.01.05.012 [40 CFR § 270.1(c)(4)], a Partial Permit (for less than the entire facility) is hereby issued to the United States Department of Energy (DOE) and DOE-designated contractor (see Permit Definitions), hereinafter called the Permittee, at the Idaho National Laboratory (INL), to operate a hazardous waste treatment and storage facility at the Idaho Nuclear Technology and Engineering Center, located in Butte County, Idaho.

The Permittee shall comply with all of the terms and conditions of this Partial Permit (Permit) and Attachments 1 through 10 of this Permit. The Permittee shall comply with all applicable state regulations, including IDAPA 58.01.05.004 through 58.01.05.013 [40 Code of Federal Regulations (CFR), Parts 124, 260 through 266, 268, and 270], and as specified in this Permit.

Applicable state regulations are those which are in effect on the date of final administrative disposition of this Permit and any self-implementing statutory provisions and related regulations which, according to the requirements of the Hazardous and Solid Waste Amendments (HSWA), are automatically applicable to the Permittee's hazardous waste management activities, notwithstanding the conditions of this Permit.

This Permit is based upon the administrative record, as required by IDAPA 58.01.05.013 [40 CFR § 124.9]. The Permittee's failure, in the application or during the permit issuance process, to fully disclose all relevant facts, or the Permittee's misrepresentation of any relevant facts, at anytime, shall be grounds for the termination or modification of this Permit and/or initiation of an enforcement action, including criminal proceedings. To the extent there are inconsistencies between the Permit and the attachments the language of the permit shall prevail. The Permittee must inform the Director of the Idaho Department of Environmental Quality (hereinafter referred to as "Director") of any deviation from the permit conditions or changes in the information on which the application is based, which would affect the Permittee's ability to comply or actual compliance with the applicable regulations or permit conditions, or which alters any permit condition in any way. The Director shall enforce all conditions of this Permit, which are designated in this Permit as state requirements. Any challenges of any permit condition that concern requirements shall be appealed to the Director, in accordance with IDAPA 58.01.05.996 and the Idaho Department of Environmental Quality Rules and Regulations 58.05.03.000 *et seq.*, "Rules Governing Contested Cases and Declaratory Rulings."

The United States Environmental Protection Agency (EPA) shall maintain an oversight role of the state-authorized program and in such capacity, shall enforce any permit condition based on state requirements if, in the EPA's judgment, the Director should fail to enforce that permit condition. Any challenges to the EPA-enforced conditions shall be appealed to the EPA, in accordance with 40 CFR § 124.19.

This Permit is effective as of April 27, 2009 and shall remain in effect until April 26, 2019 unless, in accordance with IDAPA 58.01.05.012, the Permit is revoked and reissued [40 CFR § 270.41], modified [40 CFR § 270.42, Appendix I.A.6], terminated [40 CFR § 270.43], or continued [40 CFR § 270.51].

Date	Toni Hardesty, Director Idaho Department of Environmental Quality

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LIST OF ATTACHMENTS

The following documents are excerpts from the Permittee's Administrative Record, *i.e.*, Volume 18 of the INL Applications, supplemental reports, and other documents contained in the Department's supporting file for the draft permit. The Director, as deemed necessary, modified specific language in the Attachments. These modifications are described in the permit conditions (Modules I through VII), and thereby supersede the language of the original Attachments. If the language of the Permit conflicts with either the attachments or the original application, the language in the Permit shall prevail.These incorporated Attachments are enforceable conditions of this Permit as modified by the specific permit condition.

BOOK 1

ATTACHMENT 1 FACILITY and PROCESS DESCRIPTION, consisting of:

INL PART A PERMIT APPLICATION, of Volume 18, Book 1, EPA Form 8700-12, 8700-13 A/B RCRA Subtitle C Site Identification Form, Modified Date:March 10, 2015; and EPA Form 8700-23 Hazardous Waste Permit Information Form, Modified Date: February 12, 2016

FACILITY DESCRIPTION, Section B, of Volume 18, Book 1, Modified Date: February 12, 2016

PROCESS DESCRIPTION, Section D including Appendices D-1, D-2, and D-3, of Volume 18, Book 1, Modified Date: February 12, 2016.

ATTACHMENT 1a CPP-1617 FACILITY and PROCESS DESCRIPTION, consisting of:

FACILITY DESCRIPTION, Section B, of Volume 18, Book 1, Modified Date: February 12, 2016

PROCESS DESCRIPTION, Section D, of Volume 18, Book 1, Modified Date: February 12, 2016

ATTACHMENT 2 WASTE ANALYSIS PLAN consisting of:

WASTE ANALYSIS PLAN, Section C (including Tables, Figures and Waste Analysis Plan Appendices), of Volume 18, Book 1, Modified Date: February 12, 2016.

ATTACHMENT 3 SECURITY, consisting of:

PROCEDURES TO PREVENT HAZARDS, Section F, of Volume 18, Book 1, Modified Date: August 7, 2013.

SECURITY, Section F-1, of Volume 18, Book 1, Modified Date: August 7, 2013

ATTACHMENT 4 INSPECTIONS, consisting of:

INSPECTIONS SCHEDULE, Section F-2 (Including Appendices F-1 and F-2), of Volume 18, Book 1, February 12, 2016.

ATTACHMENT 5 PERSONNEL TRAINING, consisting of:

PERSONNEL TRAINING, Section H, of Volume 18, Book 1, Modified Date: February 12, 2016.

ATTACHMENT 6 PROCEDURES TO PREVENT HAZARDS, consisting of:

PREPAREDNESS and PREVENTION DOCUMENTATION, Sections F-3 through F-5, of Volume 18, Book 1, Modified Date: February 12, 2016.

ATTACHMENT 7 CONTINGENCY PLANS, consisting of:

INTEC CONTINGENCY PLAN, Section G, of Volume 18, Book 1, Modified Date: August 19, 2016.

ATTACHMENT 8 CLOSURE PLANS, consisting of:

CLOSURE AND POSTCLOSURE REQUIREMENTS, Section I, of Volume 18, Book 1, Modified Date: May 19, 2015.

ATTACHMENT 8a RADIOACTIVE MIXED WASTE STAGING FACILITY (CPP-1617) CLOSURE PLAN, consisting of:

CLOSURE AND POST CLOSURE REQUIREMENTS, Section I, of Volume 18, Book 1, February 12, 2016

ATTACHMENT 9 WASTE PILE DESIGN EXEMPTION, consisting of:

REQUEST FOR WAIVER TO DESIGN AND OPERATING REQUIREMENTS FOR WASTE PILES, of Volume 18, Book 1, April 27, 2009.

ATTACHMENT 10 PERMIT REVISION LOG, consisting of:

PERMIT REVISION LOG, of Volume 18, Book 1, Modified Date: August 19, 2016

BOOK 2
ATTACHMENT 1 APPENDICES INFORMATION

APPENDIX 1 FACILITY PHOTOS, of Volume 18, Book 2, Modified Date: July 2, 2015.

APPENDIX 2 FACILITY DRAWINGS, of Volume 18, Book 2, Modified Date: July 2, 2015.

APPENDIX 3 CONCRETE CONSTRUCTION SPECIFICATIONS, of Volume 18, Book 2, April 27, 2009.

APPENDIX 4 STRUCTURAL Steel Specification, of Volume 18, Book 2, April 27, 2009.

APPENDIX 5 PHYSICAL PROPERTIES AND CHEMICAL RESISTANCE FOR SERIES 300 STAINLESS STEEL, of Volume 18, Book 2, April 27, 2009.

APPENDIX 6 PROFESSIONAL ENGINEER'S CERTIFICATION OF SINKS, ULTRASONIC CLEANER, AND HOLDUP/COLLECTION TANKS, of Volume 18, Book 2, April 27, 2009.

APPENDIX 7 PROFESSIONAL ENGINEER'S ASSESSMENT OF THE HFLS TANK DESIGN, of Volume 18, Book 2, April 27, 2009.

APPENDIX 8 PROFESSIONAL ENGINEER'S ASSESSMENT OF THE HFLS INSTALLATION, of Volume 18, Book 2, April 27, 2009.

APPENDIX 9 FDP SLAB TANK CERTIFICATIONS, of Volume 18, Book 2, April 27, 2009.

BOOK 3A WASTE STORAGE AND TREATMENT at the RWMC SDA

ATTACHMENT 1 FACILITY and PROCESS DESCRIPTION, consisting of:

INL PART A PERMIT APPLICATION, of Volume 18, Book 3A, RWMC SDA, Revision Date: August 19, 2016

FACILITY DESCRIPTION, Section B - FACILITY DESCRIPTION and SECTION D - PROCESS DESCRIPTION, of Volume 18, Book 3A, RWMC SDA, Revision Date: August 19, 2016

ATTACHMENT 2 WASTE ANALYSIS PLAN consisting of:

WASTE ANALYSIS PLAN, Section C, of Volume 18, Book 3A, RWMC SDA, Revision Date: August 19, 2016

ATTACHMENT 3 SECURITY, consisting of:

Security, Section F-1, of Volume 18, Book 3A, RWMC SDA, Revision Date: February 12, 2016

ATTACHMENT 4 INSPECTIONS, consisting of:

INSPECTION SCHEDULE, Section F-2 (Including Appendices F-1 and F-2), of Volume 18, Book 3A, RWMC SDA, Revision Date: August 19, 2016

ATTACHMENT 5 PERSONNEL TRAINING, consisting of:

PERSONNEL TRAINING, Section H, of Volume 18, Book 3A, RWMC SDA, Revision Date: February 12, 2016

ATTACHMENT 6 PROCEDURES TO PREVENT HAZARDS, consisting of:

PREPAREDNESS and PREVENTION DOCUMENTATION, Sections F-3 through F-5, of Volume 18, Book 3A, RWMC SDA, Revision Date: February 12, 2016

ATTACHMENT 7 CONTINGENCY PLANS, consisting of:

RWMC CONTINGENCY PLAN, Section G, of Volume 18 Book 3A, RWMC SDA, Revision Date: August 19, 2016

ATTACHMENT 8 CLOSURE PLANS, consisting of:

CLOSURE AND POSTCLOSURE REQUIREMENTS, Section I, of Volume 18, Book 3A, RWMC SDA, Revision Date: February 12, 2016

ATTACHMENT 9 PERMIT REVISION LOG, consisting of:

PERMIT REVISION LOG, of Volume 18, Book 3A, RWMC SDA, Revision Date: August 19, 2016

BOOK 3B APPENDICES INFORMATION
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APPENDIX 1 RWMC FACILITY DRAWINGS, of Volume 18, Book 3B, RWMC SDA, Revision Date: August 19, 2016

APPENDIX 2 100-YEAR FLOODPLAIN AND 25-YEAR RUNOFF ANALYSES FOR THE RADIOACTIVE WASTE MANAGEMENT COMPLEX AREA AT THE IDAHO NATIONAL ENGINEERING AND ENVIRONMENTAL LABORATORY (INEEL/EXT-02-00093), of Volume 18, Book 3B, RWMC SDA, Revision Date: October 18, 2012

APPENDIX 3 CCP-AK-INL-005 CENTRAL CHARACTERIZATION PROJECT ACCEPTABLE KNOWLEDGE SUMMARY REPORT FOR ROCKY FLATS IMMOBILIZED ORGANIC LIQUIDS STORED AT THE IDAHO

DEFINITIONS

For purposes of this Permit, the following definitions shall apply:

a. "Application" shall mean the following:
The HWMA/RCRA Part B Permit Application for the Idaho National Engineering and Environmental Laboratory, Volume 18, for the Idaho Nuclear Technology and Engineering Center, Books 1 and 2, Revision 3, dated December 1999 and all DEQ approved Permit Modification Requests as detailed in Attachment 10, Permit Revision Log.

b. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986.

c. "Days" shall mean calendar day(s) unless otherwise specified. Any requirement of submittal under the terms of this Permit that would be due on a Saturday, Sunday, or a federal or state holiday shall be due on the following business day.

d. "Debris" means solid material exceeding a 60 mm particle size that is intended for disposal and that is: a manufactured object; or plant or animal matter; or natural geologic material. However, the following materials are not debris: any material for which a specific treatment standard is provided in Subpart D, Part 268, namely lead acid batteries, cadmium batteries, and radioactive lead solids; Process residuals such as smelter slag and residues from the treatment of waste, wastewater, sludges, or air emission residues; and Intact containers of hazardous waste that are not ruptured and that retain at least 75% of their original volume. A mixture of debris that has not been treated to the standards provided by § 268.45 and other material is subject to regulation as debris if the mixture is comprised primarily of debris, by volume, based on visual inspection.

e. "Department" shall mean the Idaho Department of Environmental Quality.

f. "Director" shall mean the Director of the Department of Environmental Quality, or his designee, or authorized representative.

g. "Discovery (discovered)" shall mean the initial identification of a SWMU or other Area of Concern, which has the potential to release hazardous waste or hazardous waste constituents to the environment.

h. "DOE" shall mean the United States Department of Energy.

i. "Facility" shall mean all contiguous land, structures, other appurtenances, and improvements under the control of the Department of Energy at the Idaho National Laboratory for a total of approximately 890 square miles, or 601,260 acres. The metes and bounds of the INL are set forth in the November 21, 1989, Federal Register at 54 FR48184.

j. “HSWA” shall mean the Hazardous and Solid Waste Amendments of 1984.

k. “HWMA” shall mean the State of Idaho, Hazardous Waste Management Act of 1983, as amended.

l. “Hazardous and/or Mixed Waste and Debris” shall mean any combination of hazardous waste, mixed waste, hazardous debris, or mixed debris.

m. “Hazardous debris” means debris that contains a hazardous waste listed in 40 CFR Part 261, or that exhibits a characteristic of hazardous waste identified in 40 CFR Part 261.

n. “INL Site Treatment Plan” shall mean the plan prepared by the United States Department of Engergy in 1995, which identifies how DOE proposes to treat INL’s mixed waste with existing technologies or develop technologies where technologies do not exist or need modification, as approved by DEQ pursuant to the Federal Facility Compliance Act of 1992, Pub. L. 102-386, 106 Stat. 1505 (1992). It allows for updates at quarterly meetings and annual revisions that involve public comment.

o. “Hazardous Waste” shall mean a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, or chemical, or infectious characteristics may cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed [See Public Law 98-616 Section 1004(5)].

p. “Hazardous Waste Constituent” shall mean any constituent identified in Appendix VIII of IDAPA 58.01.05.005 (40 CFR Part 261), or any constituent identified in Appendix IX of IDAPA 58.01.05.008 (40 CFR Part 264).

q. “Hazardous Waste Management Unit” shall mean those operable units subject to the requirements of IDAPA 58.01.05.012 [40 CFR § 270.14-.25].

r. “IDAPA” shall mean the Idaho Administrative Procedures Act, Chapter 52, Title 67, Idaho Code.

s. “INL” shall mean the Idaho National Laboratory, the Facility.

t. “Mixed Debris” shall mean debris that is both hazardous and radioactive.

u. “Mixed Waste” shall mean waste that is both hazardous and radioactive.

v. “Off-Site” shall mean off the “facility” as defined in Subpart i of this section.

w. “Operator” shall mean the DOE Designated Contractor that has operational responsibilities and control of the HWMU. The DOE Designated Contractor, as operator for INTEC and RWMC, is Fluor Idaho, LLC (Fluor Idaho). Fluor Idaho reports to the DOE-ID.

x. “On-Site” shall mean on the “facility” as defined in Subpart i of this section.

y. “Owner” shall mean the United States Department of Energy (DOE).

z. “Permittee” shall mean both the DOE, as owner, and the DOE Designated Contractor.

aa. “Process Vent” means any open-ended pipe or stack that is vented to the atmosphere either directly, through a vacuum-producing system, or through a tank (e.g., distillated receiver, condenser, bottoms receiver, surge control tank, separator tank, or hot well) associated with hazardous waste distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations.

bb. “RCRA” shall mean the Resource Conservation and Recovery Act of 1976, as amended by HSWA in 1984.

cc. “Readily retrievable” shall mean requested documents/information can be procured in hard copy in a time frame that meets the needs of a DEQ inspector or other person needing the data. At a minimum, requested documents must be available at the start of the next business day.

dd. “Release” shall mean any spilling, leaking, pouring, emitting, emptying, discharging, injecting, pumping, escaping, leaching, dumping, or disposing of hazardous and/or mixed wastes (including hazardous and/or mixed waste constituents) into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing hazardous and/or mixed wastes or hazardous and/or mixed waste constituents).

ee. “Remote-Handled (RH) Waste Disposition Project” shall mean the project described in the Site Treatment Plan that collects RH waste from storage areas at the INL site and prepares them for shipment and disposal. This project shall manage RH mixed transuranic (TRU) waste and RH mixed low-level waste (MLLW). There are contaminants within these waste streams that present significant challenges, specifically sodium and sodium/potassium (NA and NaK), which will require treatment prior to disposal.

ff. “Secondary Waste” shall mean waste generated as a result of hazardous waste operations (e.g., PPE, filters, plastic sheeting, etc.).

gg. “Sodium Deactivation and Sodium Distillation” in this document are inclusive for sodium and sodium potassium alloy (NaK)

hh. “Solid Waste Management Unit” (SWMU) shall mean any discernable unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous wastes. Such units include any area at a facility at which solid wastes have been routinely and systematically released.

ii. “Storage” shall mean holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed of, or stored elsewhere.

jj. “Treatment Area” shall mean the area where treatment is conducted.

kk. Volume 18 shall mean the *HWMA/RCRA part B Permit Reapplication for the Idaho National Laboratory, Volume 18 – Idaho Nuclear Technology and Engineering Center: Debris Treatment Proces; Holdup and Collection Tanks; CPP-659/-1659 Storage; CPP-666 FDP Cell Container Storage and Slab Tank Storage; CPP1617 Container Storage, EPA ID No. ID4890008952, Books 1 and 2 of 2, December 2008. Additionally Volume 18 shall mean Books 3A and 3B - Radioactive Waste Management Complex – WMF-1617 Storage and Treatment Units (S01, X02, X99), WMF-1619 Storage and Treatment Units (S01, X99), and WMF-698 Storage Unit (S01).*

NOTE: Books 1-2 of this Volume 18 Pemit are applicable to INTEC storage and treatment units. Books 3A and 3B of this Permit are only applicable to RWMC storage and treatment units. The Permit Conditions of this Permit are applicable to both the INTEC and RWMC units, unless otherwise specified in the Permit Condition.

All definitions contained in IDAPA 58.01.05.004, .008, and .010 through .013 (40 CFR Parts 260, 264, 266, 268, 270, and 124) are hereby incorporated, in their entirety, by reference into this Permit, except that any of the definitions used above shall supersede any definition of the same term given in IDAPA 58.01.05.000 et seq. Where terms are not defined in the regulations or the Permit, the meaning associated with such terms shall be defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

ACRONYMS AND ABBREVIATIONS

ACI	American Concrete Institute
AEA	Atomic Energy Act
AISC	American Institute of Steel Construction
AK	Acceptable Knowledge
ALARA	As Low As Reasonably Achievable (Radiation Exposures)
AMWTP	Advanced Mixed Waste Treatment Project
ANSI	American National Standards Institute
APHA	American Public Health Association
ARP	Accelerated Retrieval Project
ARS	Argon Repackaging Station
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AVAS	Automatic Voice Annunciating System
AWS	American Welding Society
BTU	British Thermal Unit
CBT	Computer Based Training
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFA	Central Facilities Area
cfm	Cubic Feet per Minute
CFR	Code of Federal Regulations
CH-TRU	Contact Handled Transuranic (elements)
CITRC	Critical Infrastructure Test Range Center
CP	Contingency Plan
CPP	Chemical Processing Plant
º	Degrees
D&D	Decontamination and Decommissioning
DEQ	Department of Environmental Quality
DMS	Data Management System
DOE	Department of Energy
DOE-ID	Department of Energy - Idaho Falls Field Office
DOT	Department of Transportation
DQO	Data Quality Objective
DTU	Debris Treatment Unit
DU	Depleted Uranium
EAL	Emergency Action Level
EAM	Emergency Action Manager
EC	Emergency Coordinator
ECC	Emergency Command Center
ED	Emergency Director
EDMS	Electronic Document Management System
EMT	Emergency Medical Technician
ENS	Emergency Notification System
EOC	Emergency Operations Center
EP	Emergency Plan
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act

EPIP	Emergency Plan Implementing Procedures
ERO	Emergency Response Organization
ES&H	Environmental, Safety, and Health
FAST	Flourinel Dissolution Process and Fuel Storage
‘	Feet or Minutes
FD	Fire Department
FDP	Fluorinel Dissolution Process
FFA/CO	Federal Facilities Agreement/Consent Order
FFCA	Federal Facilities Compliance Act of 1992
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FS	Facility Supervisor
GC	Gas Chromatograph
gpm	Gallons per Minute
HDPE	High-density Polyethylene
HEPA	High-Efficiency Particulate Air
HFLS	HEPA Filter Leaching System
HLLWE	High Level Liquid Waste Evaporator
HOC	Halogenated Organic Compound
HP	Health Physics (Or Health Physicist)
HSP	Health and Safety Plan
HSWA	Hazardous and Solid Waste Amendments of 1984
HVAC	Heating, Ventilation, and Air Conditioning
HWMA	Hazardous Waste Management Act of 1983, as amended
HWMU	Hazardous Waste Management Unit
HWN	Hazardous Waste Numbers
“	Inch(es) or Seconds
IDENT	Identification
IDHW	Idaho Department of Health and Welfare
INL	Idaho National Laboratory
INTEC	Idaho Nuclear Technology and Engineering Center
IRT	Incident Response Team
ISC	Interim Storage Container
IWTS	Integrated Waste Tracking System
LDR	Land Disposal Restrictions
LEPC	Local Emergency Planning Committee
LLW	Low-Level Waste
LWFC	Liquid Waste Facilities Closure
M&O	Management and Operations
MLLW	Mixed Low-Level Waste
MOU	Memorandum of Understanding
MSDS	Material Safety Data Sheet
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
No.	Number
NRC	Nuclear Regulatory Commission
NWCF	New Waste Calcining Facility
OJT	On-the-Job Training
OSHA	Occupational Safety and Health Administration
PCB	Polychlorinated Biphenyl

PE	Professional Engineer
PEWE	Process Equipment Waste Evaporator
PM	Preventive Maintenance
ppm	Parts per Million
ppmw	Parts per Million weight percent
POTW	Publicly Owned Treatment Works
PPE	Personal Protective Equipment
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
RA	Radiological Assay
RCRA	Resource Conservation and Recovery Act
RCT	Radiological Control Technician
RH	Remote Handled
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
RWDP	Remote-Handled Waste DispositionProject
RWMC	Radioactive Waste Management Complex
RMWSF	Radioactive Mixed Waste Staging Facility
RWMIS	Radioactive Waste Management Information System
RTC	Reactor Technology Complex
RTR	Real Time Radiography
SAP	Sampling and Analysis Plan
SAT	Systematic Approach to Training
SARA	Superfund Amendments and Reauthorization Act of 1986
SCBA	Self Contained Breathing Apparatus
SDA	Subsurface Disposal Area
SDS	Sodium Distillation System
SOP	Standard Operating Procedure
SPCC	Spill Prevention, Control, and Countermeasures
SPERT	Special Power Excursion Reactor Test
SRC	Shipment Request and Certification
SRP	Sludge Repackage Project
SS	Shift Supervisor
SSS	Secondary Sodium System (located at MFC-766)
SST	Stainless Steel Tray
STP	INL Site Teratment Plan
SW-846	Test Methods for Evaluating Solid Waste: Physical/Chemical Methods
SWMU	Solid Waste Management Unit
TCLP	Toxicity Characteristic Leaching Procedure
TFF	Tank Farm Facility
TLD	Thermoluminescent Dosimeter
TMI	Three-Mile Island
TOC	Total Organic Carbon
TRU	Transuranic
TSCA	Toxic Substances Control Act
TSD	Treatment, Storage, and/or Disposal
TSS	Total Suspended Solids
UBC	Uniform Building Code
UL	Underwriters Laboratories
UPS	Uninterruptible Power Supply
USGS	United States Geological Survey

VO	Volatile Organic
VOC	Volatile Organic Compound
WAC	Waste Acceptance Criteria
WAP	Waste Analysis Plan
WCC	Warning Communications Center
WDDF	Waste Determination and Disposition Form
WIPP	Waste Isolation Pilot Project
WTS	Waste Technical Specialist

MODULE I - STANDARD PERMIT CONDITIONS

I.A. EFFECT OF PERMIT

The Permittee is allowed to store hazardous and mixed debris and/or waste in accordance with the conditions of this Partial Permit. The Permittee may also treat hazardous and mixed debris in accordance with the conditions of this Partial Permit. Any storage or treatment of hazardous and mixed debris and/or waste in the Hazardous Waste Management Units (HWMU) described herein, not authorized in this Permit, is prohibited.

Pursuant to IDAPA 58.01.05.012 [40 CFR § 270.4], compliance with this Permit generally constitutes compliance, for purposes of enforcement, with the Idaho Hazardous Waste Management Act (HWMA), as amended, except for the requirements not included in this Permit, which become effective by future statute or regulatory changes, to include those requirements promulgated under IDAPA 58.01.05.011 [40 CFR Part 268] restricting the placement of hazardous and/or mixed waste in or on the land. Issuance of this Permit does not convey any property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of state or local law or regulations.

I.A.1. DOE is the owner and is responsible for the activities that include policy, programmatic, funding and scheduling decisions, as well as general oversight.

I.A.2. The DOE Designated Contractor, as operator, is responsible for the day-to-day operations of the assigned permitted units, and for all permitted activities related to the assigned units, for which the DOE Designated Contractor, its agents, employees, or subcontractors have operational control, including waste characterization and handling, monitoring, record keeping, reporting, and contingency planning.

I.B. ENFORCEABILITY

The terms and conditions of this Permit are enforceable pursuant to the HWMA or any other applicable federal, state, or local law. Violations of this Permit may result in civil penalties in accordance with the HWMA (Idaho Code § 39-4414), and the HWMA Civil Penalty Policy.

I.B.1. Any person who knowingly makes any false statement or representation in any application, label, manifest, record, report, permit, or other document filed, maintained or used for the purposes of complying with the provisions of Idaho Code § 39-4415 shall be guilty of a misdemeanor and subject to a fine of not more than ten thousand dollars ($10,000) or to imprisonment not to exceed one (1) year, or to both, for each separate violation or for each day of a continuing violation.

I.C. OTHER AUTHORITY

The Department expressly reserves any right of entry provided by law and any authority to order or perform emergency or other response activities as authorized by law.

I.D. PERMIT ACTIONS

I.D.1. This Permit may be modified, revoked and reissued, or terminated for cause as specified in IDAPA 58.01.05.012 [40 CFR §§ 270.41, 270.42, or 270.43].

I.D.2. The filing of a request for a permit modification, revocation and reissuance, or termination, or the notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any permit condition.

I.D.3. The Director may modify this Permit when the standards or regulations on which the Permit was based have been changed by statute, amended standards or regulations, or by judicial decision after the effective date of this Permit.

I.D.4. Except as provided by specific language in this Permit or except for the Director's approval of a Class 1 or 2 Permit Modification, in accordance with IDAPA 58.01.05.012 [40 CFR § 270.42(a) and (b)], any modifications which substantially alter the INL or its operation as covered by this Permit shall be administered as a Class 3 Permit Modification prior to such change taking place, in accordance with IDAPA 58.01.05.012 [40 CFR § 270.42(c)].

I.D.5. Within 45 days of a permit modification being put into effect or approved, the Permittee shall provide clean copies of the relevant portions of the Permit and attachments to incorporate the change (if not already reflected/provided in the change pages submitted with the permit modification request), reprint the documents (as necessary), and submit them to the Director.

I.D.6. The Permittee shall ensure that Attachment 10 is current, consistent with Permit Condition I.D.5.

I.E. SEVERABILITY

The provisions of this Permit are severable, and if any provision of this Permit, or the application of any provision of this Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this Permit shall not be affected thereby. Invalidation of any state or federal statutory or regulatory provision, which forms the basis for any condition of this Permit, does not affect the validity of any other state or federal statutory or regulatory basis for said provision.

I.F. DUTIES TO COMPLY

I.F.1. The Permittee shall comply with all conditions of this Permit, except to the extent and for the duration such noncompliance is authorized by an emergency permit issued in accordance with IDAPA 58.01.05.012 [40 CFR § 270.61]. Any permit noncompliance, other than noncompliance authorized by an emergency permit, constitutes a violation of HWMA, and is grounds for enforcement action for permit termination, revocation and reissuance, or modification of the Permit, or denial of a permit renewal application.

I.F.2. Compliance with the terms of this Permit does not constitute a defense to any order issued or any action brought under §§ 3007, 3008, 3013, or 7003 of RCRA [42 U.S.C. §§ 6927, 6928, 6934 and 6973], §§ 104, 106(a), or 107 of CERCLA [42 U.S.C. §§ 9604, 9606(a), or 9607], as amended by the Superfund Amendments and Reauthorization Act of 1986, or any other state or federal law providing for protection of public health or the environment from any imminent and substantial endangerment to human health or the environment.

I.G. DUTY TO REAPPLY

If the Permittee wishes to continue an activity allowed by this Permit after the expiration date of this Permit, the Permittee shall submit a new application a minimum of one hundred eighty (180) calendar days prior to the expiration of this Permit, in accordance with IDAPA 58.01.05.012 [40 CFR §§ 270.10(h) and § 270.30(b)].

I.H. PARTIAL-PERMIT EXPIRATION

Except as renewed, modified, revoked, reissued, or terminated by the Department, this Permit shall automatically expire ten (10) years from the effective date of this Permit.

I.I. CONTINUATION OF EXPIRING PERMIT

This Permit and all conditions herein shall continue in force until the effective date of a new permit, if the Permittee has submitted a timely and complete application, in accordance with IDAPA 58.01.05.012 [40 CFR §§ 270.10, 270.13 through 270.29], and through no fault of the Permittee, the Director has neither issued or denied a new permit under IDAPA 58.01.05.013 [40 CFR § 124.5] on or before the expiration date of this Permit.

I.J. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit, as specified in IDAPA 58.01.05.012 [40 CFR § 270.30(c)].

I.K. DUTY TO MITIGATE

In the event of noncompliance with this Permit, the Permittee shall take all reasonable steps to minimize releases to the environment resulting from the noncompliance, and shall carry out such measures as are reasonable, to prevent significant adverse impacts on human health or the environment, as specified in IDAPA 58.01.05.012 [40 CFR § 270.30(d)].

I.L. PROPER OPERATION AND MAINTENANCE

The Permittee shall, at all times, properly operate and maintain all facilities and controls (and related appurtenances), which are installed or used by the Permittee to achieve compliance with the conditions of this Permit, as specified in IDAPA 58.01.05.012 [40 CFR § 270.30(e)]. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary equipment or similar systems only when necessary, to achieve compliance with the conditions of this Permit.

I.M. DUTY TO PROVIDE INFORMATION

The Permittee shall furnish to the Department and/or the Director, within a reasonable time, any relevant information which the Department and/or the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Permit, or to determine compliance with this Permit, as specified in IDAPA 58.01.05.012 [40 CFR § 270.30(h)]. The Permittee shall also furnish to the Department and/or the Director upon request, copies of records required to be kept by this Permit.

I.N. INSPECTION AND ENTRY

Pursuant to IDAPA 58.01.05.012 [40 CFR § 270.30(i)], the Permittee shall allow the Department, the Director, and/or their authorized officers, employees, or representatives, upon the presentation of credentials and other documents as may be required by law, to:

I.N.1. Enter, at reasonable times, upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records are kept as required by the conditions of this Permit;

I.N.2. Have access to and copy, at reasonable times, any records that are kept as required by the conditions of this Permit;

I.N.3. Inspect at reasonable times any portion of the Facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and

I.N.4. Sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the HWMA or RCRA, any substances or parameters at any location.

I.O. MONITORING AND RECORDS

I.O.1. The Permittee shall retain copies of all reports required by this Permit, the certification required by IDAPA 58.01.05.008 [40 CFR § 264.73(b)(9)], and records of all data used to complete the application for this Permit for a period of at least three (3) years from the date of the report, record, or certification unless a longer retention period for certain information is required by other conditions of this Permit.

I.O.2. Pursuant to IDAPA 58.01.05.012 [40 CFR § 270.30(j)(3)], records of monitoring information shall specify:

I.O.2.a. The date(s), exact place, and times of sampling or measurements;

I.O.2.b. The name(s) of individuals who performed the sampling or measurements;

I.O.2.c. The date(s) analyses were performed;

I.O.2.d. The name(s) of individuals who performed the analyses;

I.O.2.e. The analytical techniques or methods used; and

I.O.2.f. The results of such analyses, including the Quality Assurance/Quality Control summary.

I.O.3. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the debris and/or waste to be analyzed shall be the appropriate method from IDAPA 58.01.05.005 [40 CFR Part 261, Appendix I], or an equivalent method approved by the Director. Laboratory methods shall be those specified in <u>Test Methods for Evaluating Solid Waste: Physical/Chemical Methods SW-846</u> (hereinafter, referred to as SW-846), <u>Standard Methods for the Examination of Water and Wastewater</u> (prevailing edition), or other alternate methods approved in this Permit, or an equivalent method in accordance with Permit Condition I.O.4. of this Permit.

I.O.4. The Permittee may substitute analytical methods, which are equivalent or superior to those specifically approved for use in this Permit, in accordance with the following:

I.O.4.a. The Permittee submits to the Director a request for substitution of analytical method(s) specifically approved for use in this Permit. The request shall provide information demonstrating that the proposed method(s), requested to be substituted, are equivalent or superior in terms of sensitivity, accuracy, and precision (i.e., reproducibility); and

I.O.4.b. The Permittee receives a written approval from the Director for the substitution of analytical method(s). Such approval shall not require a permit modification under IDAPA 58.01.05.012 [40 CFR § 270.42].

I.P. REPORTING PLANNED CHANGES

The Permittee shall give notice as soon as possible to the Director of any planned physical alteration or additions to the permitted Facility, in accordance with IDAPA 58.01.05.012 [40 CFR § 270.30(l)(1)].

I.Q. REPORTING ANTICIPATED NONCOMPLIANCE

The Permittee shall give advance notice to the Director of any planned changes in the permitted Facility or activity, which may result in noncompliance, with requirements of this Permit, in accordance with IDAPA 58.01.05.012 [40 CFR § 270.30(l)(2)]. Advance notice shall not constitute a defense for any noncompliance.

I.R. CERTIFICATION OF CONSTRUCTION OR MODIFICATION

I.R.1. The Permittee may not commence storage or treatment of hazardous and mixed debris and/or waste in a new permitted Hazardous Waste Management Unit or in a modified portion of an existing permitted Hazardous Waste Management Unit, except as provided in IDAPA 58.01.05.012 [40 CFR § 270.42], until the Permittee has submitted to the Director by certified mail, express mail, or hand-delivered letter, along with the attachments required under Permit Condition II.A.2., signed by the Permittee and a registered professional engineer certifying that the permitted unit(s) at the INL have been constructed or modified, in accordance with the approved plans and specifications in compliance with this Permit (IDAPA 58.01.05.012 [40 CFR § 270.30(l)]); and,

I.R.2. The Director has reviewed and inspected (if deemed appropriate) the modified or newly constructed unit(s), and has notified the Permittee in writing that the unit(s) were found in compliance with the conditions of this Permit; or

I.R.3. If within fifteen (15) calendar days after the date of submission of the letter, in Permit Condition I.R.1. of this Permit, the Permittee has not received notice from the Director of the intent to inspect, prior inspection is waived; and the Permittee may commence storage of hazardous and/or mixed waste and debris or treatment of hazardous and mixed debris in the permitted unit(s), certified in accordance with Permit Condition I.R.1. of this Permit.

I.S. TRANSFER OF PERMIT

This Permit shall be transferred to a new owner or operator only if it is modified or revoked and reissued, pursuant to IDAPA 58.01.05.012 [40 CFR § 270.40]. Prior to transferring ownership or operation of the Facility during its operating life, the Permittee shall notify the new owner or operator, in writing, of the requirements of IDAPA 58.01.05.008 and 58.01.05.012 [40 CFR Parts 264 and 270] and this Permit.

I.T. TWENTY-FOUR HOUR REPORTING

I.T.1. In accordance with IDAPA 58.01.05.012 [40 CFR § 270.30(l)(6)], the Permittee shall verbally report to the Idaho State Communications Center any noncompliance with this Permit which may endanger human health or the environment, within twenty-four (24) hours from the time the Permittee becomes aware of the noncompliance, including:

I.T.1.a. Noncompliance with Permit Condition II.A.1. of this Permit; or

I.T.1.b. Information concerning a release of any mixed waste that may endanger public drinking water supplies; or

I.T.1.c. A release or discharge of mixed waste, or of a fire or explosion at the INL that could threaten human health or the environment outside the Facility.

I.T.2. The description of the occurrence and its cause shall, at a minimum, include:

- Name, title, and telephone number of the individual reporting;
- Name, address, and telephone number of the owner or operator;
- Name, address, and telephone number of the Facility;
- Date, time, and type of incident;
- Location and cause of the accident;
- Name and quantity of materials involved;
- The extent of injuries, if any;
- An assessment of actual or potential hazards to the environment and human health, where this is applicable;
- Description of any emergency action taken to minimize possible threat(s) to human health and the environment;
- Estimated quantity and disposition of recovered material that resulted from the incident; and,
- Any other information necessary to evaluate the situation fully, and to develop an appropriate course of action.

I.T.3. Within five (5) calendar days after the Permittee is required to provide verbal notification, as specified in Permit Condition I.T.2. of this Permit, the Permittee shall provide to the Director a written submission.

I.T.3.a. The written submission shall include, but not be limited to, the following:

- Name, address, and telephone number of the individual reporting;
- A description (include cause, location, extent of injuries, if any, and an assessment of actual or potential hazard(s) to the environment and human health outside the INL, where this is applicable) of the incident (noncompliance and/or release);
- The period(s) in which the incident (noncompliance and/or release) occurred (including exact dates and times);
- Whether the results of the incident remain a threat to human health and the environment (whether the noncompliance has been corrected and/or the release has been adequately remediated); and

- If not, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance, and/or the steps taken or planned to adequately remediate the release.

I.T.4. The Permittee need not comply with the five (5) calendar day, written notice requirement if the Director waives the requirement and the Permittee submits a written report, within fifteen (15) calendar days from the time the Permittee is required to provide verbal notification, as specified in Permit Condition I.T.1. of this Permit.

I.T.5. If the facility stops operations in response to a fire, explosion, or release, a report must be submitted within 15 days that includes the following information:

- Name, title, and telephone number of the individual submitting the report;
- Date, time and type of incident;
- Location and suspected cause of the incident;
- Name and quantity of materials involved, if any;
- Any leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment;
- All changes made to the operation of the facility to ensure that the event does not recur.

I.T.5.a. If the required information is provided electronically or verbally within 24 hours of the incident, DEQ, at its' discretion, may provide a written waiver of this reporting requirement.

I.U. OTHER NONCOMPLIANCE

The Permittee shall report all other instances of noncompliance not otherwise required to be reported, in accordance with Permit Condition I.T. of this Permit, on a semi-annual basis from the effective date of the Permit. (Reports shall be due on February 1 and August 1 of each year.) The reports shall contain the information, as applicable, listed in Permit Condition I.T. of this Permit. Reporting shall not constitute a defense for any noncompliance.

I.V. OTHER INFORMATION

Whenever the Permittee becomes aware that any relevant information was omitted in the Permit Application or incorrectly submitted in the Permit Application, or in any report to the Director, the Permittee shall promptly submit such facts or information to the Director in accordance with Permit Condition I.Y. of this Permit.

I.W. SIGNATORY REQUIREMENT

All applications, reports, or information requested by or submitted to the Director shall be signed and certified, in accordance with IDAPA 58.01.05.012 [40 CFR § 270.11].

I.X. CONFIDENTIAL INFORMATION

Pursuant to Title 9, Chapter 3, of the Idaho Code, IDAPA 58.01.05.012 [40 CFR § 270.12], or any other applicable federal, state, or local law, the Permittee may assert a claim of confidentiality regarding any information required to be submitted pursuant to this Permit. The Department shall determine whether said information is exempt from disclosure, pursuant to applicable law.

I.Y. REPORTS, NOTIFICATIONS, AND SUBMISSIONS

All reports, notifications, or other submissions, which are required by this Permit and IDAPA 58.01.05.012 [40 CFR § 270.5], shall be sent or given to the Director in duplicate by certified mail, express mail, or hand-delivered to:

Director
c/o Hazardous Waste Program Manager
Department of Environmental Quality
1410 North Hilton
Boise, Idaho 83706-1255
Telephone No. (208) 373-0502

Twenty-four (24) hour telephone number 1-800-632-8000

The addresses and telephone numbers listed above are current as of the effective date of this Permit and may be subject to change.

I.Z. DOCUMENTS TO BE MAINTAINED AT THE FACILITY

I.Z.1. The Permittee shall maintain until closure is completed and certified by a registered, professional engineer, the following documents and amendments and revisions or modifications to these documents:

I.Z.1.a. A complete copy of this Permit including Attachments and Tables.

I.Z.1.b. Waste Analysis Plan(s) for each HWMU of this Permit, as required by IDAPA 58.01.05.008 [40 CFR § 264.13] and this Permit.

I.Z.1.c. Operating Record, as required by IDAPA 58.01.05.008 [40 CFR § 264.73] and this Permit.

I.Z.1.d. Inspection Procedures, Schedules, Logs, and Records for each HWMU of this Permit, as required by IDAPA 58.01.05.008 [40 CFR §§ 264.15(b)(2), 264.73(b)(5)] and this Permit.

I.Z.1.e. Personnel training requirements for each position, and personnel training records for each individual involved with management or treatment of mixed and hazardous waste at each HWMU in this Permit, as required by IDAPA 58.01.05.008 [40 CFR § 264.16(d)] and this Permit.

I.Z.1.f. The Site-wide Contingency Plan and Contingency Plan(s) for each HWMU of this Permit, as required by IDAPA 58.01.05.008 [40 CFR § 264.53(a)] and this Permit.

I.Z.1.g. Closure Plan(s) for each HWMU of this Permit, as required by IDAPA 58.01.05.008 [40 CFR § 264.112(a)] and this Permit.

I.Z.2. Documents as specified by this permit may be maintained at INTEC records storage, RWMC records storage, records storage in Idaho Falls, and/or Electronic Document Management System [EDMS] Records Vault in a readily retrievable manner. These documents may be maintained solely using an electronic format, as long as the documents are readily retrievable to obtain a printed copy.

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MODULE II - GENERAL FACILITY CONDITIONS

II.A. DESIGN AND OPERATION OF FACILITY

II.A.1. The Permittee shall construct, maintain and operate all permitted Hazardous Waste Management Units included in this partial permit to minimize the possibility of a fire, explosion, or any unplanned, sudden or non-sudden release of hazardous and mixed waste or hazardous and mixed waste constituents to the air, soil, groundwater, or surface water which could threaten human health and/or the environment.

II.A.2. The Permittee shall construct and/or maintain all Hazardous Waste Management Units in accordance with the approved designs, specifications, and maintenance schedules that are included as Attachments 1 through 9 of this Permit. Minor deviations from the approved designs or specifications, necessary to accommodate proper construction and the substitution of equivalent or superior materials or equipment, shall be noted on the as-built drawings, and the rationale for those deviations shall be provided in narrative form. After completion of construction or modification of each new Hazardous Waste Management Unit, the Permittee shall submit final as-built drawings and the narrative report to the Director as part of the construction certification documentation specified in Permit Condition I.R.

II.A.3. The Permittee shall comply with all applicable requirements of the Land Disposal Restrictions of IDAPA 58.01.05.011 [40 CFR § 268].

II.B. RECEIPT OF HAZARDOUS AND/OR MIXED WASTE AND DEBRIS

II.B.1. At the INTEC only (not applicable to the RWMC units identified in Books 3A and 3B of this Permit), the Permittee shall not accept hazardous and/or mixed waste and debris generated off-Site that has not been verified in accordance with the waste analysis plan requirements of IDAPA 58.01.05.008 [40 CFR § 264.13(c)].

II.B.2. At the INTEC only (not applicable to the RWMC units identified in Books 3A and 3B of this Permit), the Permittee may receive hazardous and/or mixed waste and debris as follows:

II.B.2.a. The Permittee shall only receive hazardous waste and hazardous debris in containers with a design capacity smaller than 0.1 m^3, or

II.B.2.b. The Permittee shall only receive hazardous waste and hazardous debris that is exempt from IDAPA 58.01.05.008 (40 CFR 264 Subpart CC), as provided in IDAPA 58.01.05.008 (40 CFR § 264.1082).

II.B.3. The Permittee may accept hazardous and/or mixed waste and debris generated within the INL Facility boundaries in accordance with the Part A in Attachment 1 of this Permit, and the waste acceptance criteria in Attachment 2 of this Permit.

II.B.4. At the INTEC only (not applicable to the RWMC units identified in Books 3A and 3B of this Permit), the Permittee may receive off-Site waste as follows:

II.B.4.a. The Permittee shall only receive off-Site waste in accordance with the Part A in Attachment 1 of this Permit, and the waste acceptance criteria in Attachment 2 of this Permit.

II.B.4.b. The Permittee shall receive and verify off-Site waste in accordance with IDAPA 58.01.005.008 [40 CFR § 264.13(a)(4)], and Attachments 1 and 2 of this Permit.

II.B.4.c. The Permittee may receive off-Site wastes, which have been previously verified at the generator's site, in accordance with Attachments 1 and 2 of this Permit.

II.B.5. At the INTEC only (not applicable to the RWMC units identified in Books 3A and 3B of this Permit), the Permittee may receive shipments from DOE-related, conditionally exempt small quantity generators provided the Permittee accepts responsibility as the generator of the waste.

II.B.6. At the INTEC only (not applicable to the RWMC units identified in Books 3A and 3B of this Permit), when the Permittee is to receive hazardous and/or mixed waste from an off-site source (except where the Permittee is also the generator), the Permittee shall inform the generator (in writing) that the Permittee has the appropriate permit(s) for, and shall accept, the waste the generator is shipping.

II.B.7. At the INTEC only (not applicable to the RWMC units identified in Books 3A and 3B of this Permit), the Permittee shall keep copies of the written notices, and all other documents associated with acceptance of off-site mixed and hazardous waste streams required by Permit Condition II.B.4.a.

II.B.8. The Permittee may reject, and return to the generator, entire shipments or single containers of waste that are not in accordance with the waste characterization, the manifest, or the specific container requirements specified in Attachment 2 of this Permit.

II.C. WASTE ANALYSIS PLAN

The Permittee shall comply with the procedures and requirements of the Waste Analysis Plan (Attachment 2) provisions, in accordance with IDAPA 58.01.05.008 and 58.01.05.011 [40 CFR §§ 264.13 and 268.7] and as follows:

II.C.1. The Permittee shall collect representative samples of waste to be analyzed in accordance with IDAPA 58.01.05.005, 58.01.05.008, and 58.01.011 (40 CFR Part 261, Appendix I and 40 CFR §§ 264.13(a) and 268.7), and as specified in Attachment 2 of this Permit.

II.C.2. At a minimum, the Permittee shall maintain proper functional instruments, use approved sampling and analytical methods, verify the validity of sampling and analytical procedures, and perform correct calculations. If the Permittee uses a contract laboratory to perform analyses, the Permittee shall notify the laboratory in writing of the waste analysis conditions it is to meet, in order that waste analysis conditions of the Permit are met.

II.C.3. The Permittee may use process knowledge (i.e., Acceptable Knowledge) for characterization as specified in Attachment 2 of this Permit. AK documentation shall be maintained in an auditable record (i.e., Operating Record) and confirmed using visual examination.

II.D. SECURITY

The Permittee shall comply with the Security Provisions of IDAPA 58.01.05.008 [40 CFR § 264.14] and the INL site-specific security measures described in Attachment 3 of this Permit.

II.E. INSPECTION PLAN

The Permittee shall comply with the inspection provisions of IDAPA 58.01.05.008 [40 CFR § 264.15] and as follows:

II.E.1. The Permittee shall maintain and retain the Inspection Procedures, Inspection Schedules, Inspection Logs and Records required by Permit Condition II.E., in accordance with Permit Condition I.Z.1.d. and I.Z.2.

II.E.2. The Permittee shall comply with the Inspection Schedules and Logs for the INL, as included in Attachment 4 of this Permit.

II.E.3. The Permittee shall remedy, as required by IDAPA 58.01.05.008 [40 CFR § 264.15(c)], any deterioration or malfunction discovered by an inspection.

II.E.4. The Permittee shall record inspections on the Inspection Logs and Inspection Log Sheets, required by Permit Condition II.E., as specified in IDAPA 58.01.05.008 [40 CFR § 264.15(d)]. At a minimum, the following information shall be recorded:

- The date and time of the inspection,
- The name of the inspector,
- A notation of the observations made, and the date and nature of any repairs or other remedial actions.

II.F. TRAINING PLAN

II.F.1. The Permittee shall comply with the INL Personnel Training Plan, as included in Attachment 5 of this Permit and in accordance with IDAPA 58.01.05.008 [40 CFR § 264.16], until each HWMU is fully closed and certified.

II.F.2. The Permittee shall ensure that all personnel who handle hazardous/mixed waste are trained in hazardous/mixed waste management, safety, and emergency procedures, as applicable to their job description, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.16] and the Personnel Training Plan included in Attachment 5 of this Permit.

II.F.3. The Permittee shall maintain the Personnel Training Plan in Attachment 5 of this Permit and documentation of personnel training received, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.16(e)] and Permit Condition I.Z.1.e. and I.Z.2. of this Permit.

II.G. PREPAREDNESS AND PREVENTION

The Permittee shall comply with the Preparedness and Prevention Provisions of IDAPA 58.01.05.008 [40 CFR § 264 Subpart C] and as follows:

II.G.1. The Permittee shall operate the permitted INTEC/RWMC Units so as to minimize the possibility of a fire, explosion or sudden or non-sudden releases to the air or soil, which could threaten human health or the environment, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.31] and Attachment 6 of this Permit.

II.G.2. At a minimum, the Permittee shall perform preventative maintenance and repair of the INL emergency equipment, safety devices, and miscellaneous equipment included in the attachments of this Permit, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.33] and the manufacturer's specifications. The Permittee shall maintain records of these preventative maintenance and repair activities on this equipment and schedules, reflecting minimum and planned performance of these preventative maintenance activities in the Operating Record at the Facility, in accordance with Permit Condition I.Z.1.c. and I.Z.2. of this Permit.

II.G.3. The Permittee shall maintain access to the communications and alarm systems, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.34] and Attachment 6 of this Permit.

II.G.4. The Permittee shall maintain arrangements with state and local authorities, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.37] and Attachment 7 of this Permit. If state or local officials refuse to enter into preparedness and prevention arrangements with the Permittee for a given HWMU, the Permittee must document this refusal in the Operating Record for the excluded unit.

II.G.5. The Permittee shall maintain the aisle space necessary to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.35] and Attachment 6 of this Permit.

Due to restricted personnel and emergency equipment access and the waste type stored, it is not necessary to maintain adequate aisle space in Room 205 (Hot Sump Tank Removal and Access Cell), Room 216 (Filter Cell/Valve Cubicle), Room 306 (Equipment Decon Storage Room), Room 308 (Remote Decon Cell), and Room 309 (Filter Handling Cell) in Building CPP-659/-1659 and the FDP Cell in Building CPP-666.

II.H. CONTINGENCY PLAN

The Permittee shall comply with the Contingency Plan matrix provisions of IDAPA 58.01.05.008 [40 CFR § 264 Subpart D] and as follows:

II.H.1. The Permittee shall comply with the Contingency Plan included in Attachment 7 of this Permit.

II.H.2. The Permittee shall review and amend, as necessary, the Contingency Plan, pursuant to IDAPA 58.01.05.008 and IDAPA 58.01.05.012 (40 CFR § § 264.54 and 270.42) and Permit Conditions I.D.4. and I.D.5. of this Permit within fourteen (14) calendar days of the following events:

II.H.2.a. This Permit is revised;

II.H.2.b. The plan fails in an emergency;

II.H.2.c. The Permittee changes the INL design, construction, operation, maintenance, or other circumstances in a way that materially increases the potential for fires, explosions, or releases of mixed waste or mixed waste constituents, or changes the response necessary in an emergency;

II.H.2.d. The list of emergency coordinators changes; or

II.H.2.e. The list of emergency equipment changes.

II.H.3. The Permittee shall assure that a trained Emergency Coordinator or equivalent is available at all times in case of an emergency, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.55] and Attachment 7 of this Permit.

II.H.4. The Permittee shall submit a copy of the Contingency Plan, and all revisions to the plan, to all local police departments, fire departments, hospitals, and state and local emergency response teams that may be called upon to provide emergency services, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.53(b)] and Attachment 7 of this Permit.

II.H.5. The Permittee shall document in the Facility Operating Record the time, date, and details of any incident that requires activating the Contingency Plan. Within 15 days after the incident, the Permittee shall submit a written report on the incident to the Director, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.56(j)] and Attachment 7 of this Permit. Said report shall include, at a minimum, the items in Permit Condition I.T.3.a. of this Permit.

II.I. MANIFEST SYSTEM

The Permittee shall comply with the manifest requirements of IDAPA 58.01.05.008 [40 CFR § 264, Subpart E].

II.J. RECORD KEEPING AND REPORTING

In addition to the record keeping and reporting requirements specified elsewhere in this Permit, the Permittee shall comply with the following:

II.J.1. The Permittee shall maintain a written Operating Record at the INL, in accordance with Permit Condition I.Z.1.c., I.Z.2., and IDAPA 58.01.05.008 [40 CFR § 264.73(a)], for all records identified in IDAPA 58.01.05.008 [40 CFR § 264.73(b)(1) through (b)(16)].

II.J.2. The Permittee shall, by March 1 of each year, submit to the Director a waste minimization certification, pursuant to IDAPA 58.01.05.008 [40 CFR 264.73(b)(9)], that the Permittee has a program in place to reduce the volume and toxicity of hazardous waste that he generates to the degree determined by the Permittee to be economically practicable; and the proposed method of treatment, storage, or disposal is that most practicable method currently available to the Permittee which minimizes the present and future threat to human health and the environment.

II.J.3. The Permittee shall, by March 1 of each even numbered year, submit to the Director a biennial report covering the Facility activities pursuant to IDAPA 58.01.05.008 [40 CFR 264.75(a) through (j)].

II.J.4. The Permittee shall conduct and complete a source reduction evaluation review and written plan in accordance with the procedures and format provided in the "EPA Waste Minimization Opportunity Assessment Manual" (EPA/626/7-88/003). The review and plan shall be completed in compliance with Permit Condition II.J.5. of this Permit and include, at a minimum, the following general operating and reporting requirements:

II.J.4.a. The Permittee shall submit to the Director detailed descriptions of any programs the Permittee may have to assist generators of hazardous waste in reducing the volume or quantity and toxicity of wastes they produce.

II.J.4.b. The Permittee shall submit the following information to the Director and shall submit revisions or changes to the Director within thirty (30) calendar days after those revisions or changes:

II.J.4.b.1. A list of generators who received information from the Permittee according to Permit Condition II.J.4.a of this Permit.

II.J.4.b.2. A list of generators who used the Permittee's contractor services on a waste minimization program.

II.J.4.b.3. A list of generators known to the Permittee who have a waste minimization program in place and any known results (i.e. has there been a reduction in wastes submitted for treatment, recycling or disposal).

II.J.5. A waste minimization review and plan shall be submitted to the Director by March 31, 2011 and every four (4) years thereafter, in accordance with Permit Condition II.J.4. of this Permit. The review and plan shall address the entire INL, unless otherwise approved by the DEQ.

II.J.6. All reports, notifications, applications, or other materials, required to be submitted to the Director, shall be submitted in accordance with Permit Condition I.Y. of this Permit.

II.K. CLOSURE

II.K.1. The Permittee shall meet the general closure performance standard, as specified in IDAPA 58.01.05.008 [40 CFR § 264.111], during closure of all permitted Hazardous Waste Management Units at the INTEC and RWMC.

II.K.2. The Permittee shall perform a hazardous waste determination on all solid waste generated during closure including, but not limited to, contaminated process equipment, building components, tanks and ancillary equipment, scrap metal, etc., in accordance with IDAPA 58.01.05.006 [40 CFR § 262.11] and Attachment 2 of this Permit.

II.K.3. The Permittee shall amend the Closure Plans, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.112(c)] and Attachments 8 and 8a of this Permit whenever necessary.

II.K.4. The Permittee shall commence closure of the RWMC Hazardous Waste Management Units, in accordance with IDAPA 58.01.05.08 [40 CFR 264.113(a)], no later than ninety (90) calendar days after the completion of waste storage and treatment activities, as specified in Book 3A/B and Attachment 8.

II.L. EQUIVALENT MATERIALS/INFORMATION

II.L.1. If certain equipment, materials, and administrative information (such as names, phone numbers, addresses) are specified in this Permit, the Permittee is hereby authorized to use equivalent or superior items. Use of such equivalent or superior items shall not be considered a modification of this Permit, but the Permittee shall place in the Operating Record (prior to the institution of such revision) the revision, accompanied by a narrative explanation, and the date the revision became effective. The Director may judge the soundness of the revision during inspections of the Facility, and take appropriate action. The format of tables, forms, and figures are not subject to the requirements of this Permit, and may be revised at the Permittee's discretion.

II.L.2. If the Department determines that the substitution was not equivalent to the original, it will notify the Permittee that the Permittee's claim of equivalency has been denied, the reasons for the denial, and that the original material or equipment must be used. If the product substitution is denied, the Permittee shall comply with the original approved product specification, find an acceptable substitution, or apply for a permit modification, in accordance with Permit Condition I.D.4.

II.M. APPLICABLE LAND DISPOSAL RESTRICTION SPECIAL REQUIREMENTS

II.M.1 The Permittee shall comply with all applicable Land Disposal Restriction (LDR) requirements set forth in IDAPA 58.01.05.011 [40 CFR § 268] for all non-WIPP destined waste and the INL Site Treatment Plan (STP) (10/31/95), as applicable and amended.

II.N. AIR EMISSION STANDARDS FOR PROCESS VENTS

II.N.1. The CPP-666 Sodium Distillation System (SDS) is located in Room SB-8. The SDS off-gas is vented to the FDP Cell, through the FDP Cell Off-Gas and CPP-666 HEPA filters, and discharged to the CPP-666 stack through a process vent, therefore, IDAPA 58.01.05.008 [40 CFR § 264.1031] is applicable.

II.N.2. The Permittee shall determine the applicability of IDAPA 58.01.05.008 [40 CFR Part 264 Subpart AA] by documenting the total organic concentration in all feed sources to the SDS.

II.N.2.a. If the SDS manages only mixed hazardous waste with total organic concentrations less than 10 ppmw, then IDAPA 58.01.05.008 [40 CFR Part 264 Subpart AA] does not apply.

II.N.2.b. If the SDS manages mixed hazardous waste with total organic concentrations greater than or equal to 10 ppmw, then IDAPA 58.01.05.008 [40 CFR Part 264 Subpart AA] applies.

II.N.3. The Permittee shall document compliance with the IDAPA 58.01.05.008 [40 CFR Part 264 Subpart AA] standards by:

II.N.3.a. Reducing the input total organic concentrations to the SDS to less than 10 ppmw for all wastes processed; or

II.N.3.b. Reducing total organic emissions from all affected process vents at INL below 1.4 kg/h (3.0 lb/hr) and 2.8 Mg/yr (3.1 tons/yr); or

II.N.3.c. Reducing, by means of a control device, total organic emissions from all affected process vents at INL by 95 weight percent.

II.N.4. The Permittee shall record the following information in the Facility Operating Record, in accordance with IDAPA 05.01.008 [40 CFR § 264.1035]:

II.N.4.a. Up-to-date documentation of the applicability and/or compliance with the process vent standards in Permit Conditions II.N.3., including:

II.N.4.a.1. Information and data identifying all affected process vents, annual throughput and operating hours of each affected unit, estimated emission rates for each affected vent and for the overall facility [i.e., the total emissions for all affected vents at the facility, and the approximate location within the facility of each affected unit (e.g., identify the hazardous waste management units on a facility plot plan)].

II.N.4.a.2. Information and data supporting determinations of vent emissions and emission reductions achieved by add-on control devices based on engineering calculations or source tests. For the purpose of determining compliance, determinations of vent emissions and emission reductions must be made using operating parameter values (e.g., temperatures, flow rates, or vent stream organic compounds and concentrations) that represent the conditions that result in maximum organic emissions, such as when the waste management unit is operating at the highest load or capacity level reasonably expected to occur. If any action is taken (e.g., managing a waste of different composition or increasing operating hours of affected waste management units) that would result in an increase in total organic emissions from affected process vents at the facility, then a new determination is required.

II.N.5. Records of the monitoring, operating, and inspection information, required by Permit Condition II.N.4., shall be maintained in accordance with Permit Conditions I.Z.1.c. and I.Z.2.

II.N.6. Information and data used to determine whether any other INL process vents are subject to the requirements of IDAPA 58.01.05.008 [40 CFR Part 264 Subpart AA] shall be kept in the Operating Record.

II.N.6.a. The Operating Record shall be updated within thirty (30) days of a change in INL operations that potentially involve regulated process vents.

II.N.6.b. INL process vent data shall be reviewed at least annually for compliance with the IDAPA 58.01.05.008 [40 CFR §§ 264.1030 and .1035].

II.N.7. The Permittee shall modify this permit as necessary to ensure compliance with Permit Condition II.N.3. whenever:

II.N.7.a. The Permittee identifies additional hazardous waste process vents; or

II.N.7.b. The Permittee determines that the SDS is subject to the requirements of IDAPA 58.01.05.008 [40 CFR Part 264 Subpart AA].

II.O. COMPLIANCE SCHEDULE

II.O.1. TREATMENT PROCESS FOR REMOTE-HANDLED (RH) WASTE

II.O.1.a. The permittee shall prepare and submit to the Department a report of the known inventory of Remote-Handled Waste Disposition Project (RWDP) waste stored at the INL within six (6) months of the revision date of this permit. This information shall be updated annually, each November 15 via the Annual Update to the INL Site Treatment Plan (STP) and the Annual STP Report. This information will include the following information, at a minimum:

II.O.1.a.i By waste stream

- Site Treatment Plan ID
- Site Treatment Plan Waste Stream Name
- Waste Type (low-level or transuranic)
- Detailed Waste Description

II.O.1.a.ii By container:

- Generation Date
- Container Description
- Number of Containers
- Stored Volume (gallons)
- Stored Weight (pounds)
- Expected Generation (gallons/year)
- Generation Duration (years)

II.O.1.b. The Permitee shall take all necessary steps to maintain continuous RWDP operations at INTEC in compliance with the provisions of this permit until the waste backlog has been eliminated. Waste operations activities shall be those actions necessary to prepare, characterize, store, treat, and package RH mixed or hazardous waste for off-site disposal. Routine repair, replacement and maintenance shall not be deemed operations. A backlog treatment schedule for RWDP waste shall be provided as required through the STP.

II.O.1.c. If, upon continued technical evaluation of the RWDP waste stored at the INL, the Permittee identifies waste that cannot be treated within the existing facilities, the Permittee shall provide to the Department an alternatives analysis that specifies options for performing treatment of the waste within six (6) months of identification of such waste. If the alternatives analysis identifies that a Permit Modification Request (PMR) is necessary, the Permittee shall submit a PMR for treatment of the waste within 18 months of identification,

II.O.1.d. The Permittee shall submit to the Department exery six (6) months, in conjunction with the STP quarterly meetings, a report summarizing RWDP operations over the previous six (6) months and the schedule for the following six (6) months.

II.O.1.e. If for any reason operations are interrupted for a period of greater than 6 months, prior to completing treatment of the RWDP backlog identified in the STP, the Department shall be notified in writing, provided a justification for the interruption, and given a schedule for resuming operations.

II.P. SODIUM-POTASSIUM ALLOY (NaK) OR NaK CONTAINING WASTE SPECIAL REQUIREMENTS

II.P.1. The Permittee shall not manage sodium-potassium alloy (NaK) or NaK containing waste outside of a container, the Sodium Distillation tank system or the Argon Repackaging Station (ARS) miscellaneous unit.

MODULE III – CONTAINER STORAGE AND CONTAINER TREATMENT

III.A. PERMITTED CONTAINER STORAGE AND CONTAINER TREATMENT AREAS

Subject to the terms of this Permit, the Permittee may store and treat hazardous and mixed debris and/or hazardous and mixed waste, as specified in Permit Condition III.B. of this Permit, in the container storage and treatment areas of the following buildings:

III.A.1. The New Waste Calcine Facility (NWCF), Building CPP-659/1659. CPP-659 is a six-level building constructed of steel-reinforced concrete, and is approximately 250' long by 145' wide. CPP-1659 is annexed to the west wall of CPP-659 and consists of a single, ground-level floor measuring approximately 56' 7" long by 34' wide. The building is further described in Book 1, Attachment 1 of this Permit.

III.A.2. The Fluorinel Dissolution Process and Fuel Storage (FAST) Facility, Building CPP-666. The FAST is a multiple-level, steel-reinforced concrete structure approximately 571' long by 196' wide. The building is further described in Book 1, Attachment 1 of this Permit.

III.A.3. The Radioactive Mixed Waste Staging Facility (RMWSF) consists of a 40 ft x 20 ft (CPP-1617) metal building and a 227 ft x 280 ft partially paved, fenced external storage area. The RMWSF and Building CPP-1617 are further described in Book 1, Attachment 1a of this Permit.

III.A.4. The Radioactive Waste Management Complex (RWMC) Building WMF-698 is an ARP storage enclosure and is a tension-membrane building, measuring 130 ft x 160 ft with a 20-ft-minimum interior clearance at the eaves. The building is further described in Book 3, Attachment 1.

III.A.5. RWMC Building WMF-1617 (also known as ARP V) is a free-standing single large tension-membrane building which covers the exhumation footprint in Pit 9. This enclosure measures approximately 380 ft x 165 ft and 53 ft in height at the tallest point. The airlock enclosure is 88 ft. x 120 ft. The building is further described in Book 3A, Attachment 1.

III.A.6. The Outside Storage Areas at WMF-1617, WMF-1619, WMF-1621, and WMF-698 are external storage areas to the buildings listed. An additional Outside Storage Area is located next to the bridge which connects to the Advanced Mixed Waste Treatment Project Area. These areas are further described in Book 3A, Attachment 1.

III.A.7. RWMC Building WMF-1619 (also known as ARP VII) is a free standing single large tension membrane building. This enclosure measures approximately 135 ft x 243 ft x 45 ft. The airlock enclosure is 89 ft x 136 ft. The building is further described in Book 3A, Attachment 1.

III.B. PERMITTED AND PROHIBITED WASTES IN THE CONTAINER STORAGE AND CONTAINER TREATMENT AREAS

III.B.1. <u>Container Storage Units in the NWCF</u>

The Permittee may provide container storage in the NWCF for those wastes identified for container storage in Book 1, Attachment 1 of this Permit, and as follows:

III.B.1.a. Storage of hazardous and/or mixed waste and debris is authorized as follows:

III.B.1.a.(1) The Permittee shall only store hazardous waste and hazardous debris in containers with a design capacity smaller than 0.1 m^3, or

III.B.1.a.(2) The Permittee shall only store hazardous waste and hazardous debris that is exempt from IDAPA 58.01.05.008 (40 CFR 264 Subpart CC), as provided in IDAPA 58.01.05.008 (40 CFR § 264.1082).

III.B.1.b. Waste must meet the unit-specific waste acceptance criteria in Attachment 2 of this Permit.

III.B.1.c. The maximum permitted capacity for container storage in the NWCF is 541,578 gallons, with the maximum waste volume for each room set as follows:

ROOM	MAXIMUM (S01) STORAGE VOLUME
Room 205 – Hot Sump Tank Removal & Access Cell	54,200 gallons
Room 206 – Adsorber Cell	12,400 gallons
Room 207 – Off-Gas Cell	11,600 gallons
Room 214 – Calciner Cell	9,800 gallons
Room 215 – Blend & Hold Cell	8,200 gallons
Room 216 – Filter Cell/Valve Cubicle	10,300 gallons
Room 218 – Manipulator (PaR) Parking Area	3,200 gallons
Room 306 – Equipment Decontamination Storage Room	4,800 gallons
Room 308 – Remote Decon Cell	5,800 gallons
Room 309 – Filter Handling Cell	4,800 gallons
Room 323 – Crane Maintenance & Transfer Area	3,400 gallons
Room 326 – Transfer Area	1,300 gallons
Room 415 – Low Level Decontamination Room	23,500 gallons
Room 416 – Shielded Storage Room	5,300 gallons
Room 417 – Vehicle Entry Way	78,200 gallons
Room 418 – Equipment Decontamination Room	166,700 gallons
Room 419 – Transfer Room	26,400 gallons
Room 421 – Decontamination Room	10,039 gallons
Room 422 – Decontamination Room	10,039 gallons
Room 428 – Crane Maintenance Area	4,400 gallons
CPP-1659 – Contaminated Equipment Maintenance Area	87,200 gallons

III.B.2. Container Storage Units in the FAST (Building CPP-666)

The Permittee may provide container storage in the FAST for those wastes identified for container storage in Book 1, Attachment 1 of this Permit, and as follows:

III.B.2.a. Storage of hazardous and mixed debris is authorized as follows:

III.B.2.a.(1) The Permittee shall only store hazardous debris in containers with a design capacity smaller than 0.1 m^3, or

III.B.2.a.(2) The Permittee shall only store hazardous debris that is exempt from IDAPA 58.01.05.008 (40 CFR § 264 Subpart CC), as provided in IDAPA 58.01.05.008 (40 CFR § 264.1082).

III.B.2.b. Storage of hazardous and mixed waste containing free liquids is authorized as follows:

III.B.2.b.(1) The permittee may store liquid bearing wastes at all container storage areas (except Room SB-8) in building CPP-666.

III.B.2.c. Waste must meet the unit-specific waste acceptance criteria in Attachment 2 of this Permit.

III.B.2.d. The maximum permitted capacity for container storage in Building CPP-666 is 43,774.0 gallons, with the maximum waste volume for each room set as follows:

ROOM	MAXIMUM (S01) STORAGE VOLUME
CPP-666 – FDP Cell	37,300 gallons
CPP-666 – Room 301	4,304 gallons
CPP-666 – Room 114C	1,000 gallons
CPP-666 – Room 115	1,000 gallons
CPP-666 – Room 180	55 gallons
CPP-666 – Room B-4	55 gallons
CPP-666 – Room B-5	55 gallons
CPP-666 – Room SB-8 (VES-FC-85A Collection Vessel)	5.0 gallons
Total Container Storage Volume for CPP-666:	43,774.0 gallons

III.B.3. Container Storage Units in the RMWSF:

The Permittee may provide container storage in the RMWSF for those wastes identified for container storage in Book 1, Attachment 1a of this Permit, and as follows:

III.B.3.a. Storage of hazardous and mixed waste/debris is authorized as follows:

III.B.3.a.(1) The Permittee shall only store hazardous waste/debris in containers with a design capacity smaller than 0.1 m^3; or

III.B.3.a.(2) The Permittee shall only store hazardous waste/debris that is exempt from IDAPA 58.01.05.008 (40 CFR 264 Subpart CC), as provided in IDAPA 58.01.05.008 (40 CFR § 264.1082).

III.B.3.b. Waste must meet the unit-specific waste acceptance criteria in Book 1, Attachment 2 of this Permit.

III.B.3.c. The maximum permitted storage capacity for hazardous and mixed waste/debris at the RMWSF is 2,244,156 gallons, with the maximum waste volume for each area set as follows:

AREA	MAXIMUM (S01) STORAGE VOLUME
RMWSF (CPP-1617)	2,244,156 gallons

III.B.3.d. The Permittee may store containers containing ignitable liquids in the heated cargo containers within the CPP-1617 fenced area provided the cargo containers are equipped with explosion-proof fixtures. {IDAPA 58.01.05.008 [40 CFR § 264.17(a)]}.

III.B.3.e. Spacing between containers in the RMWSF shall be maintained such that the line-of-sight viewing angle for inspection is not less than 30 degrees, and there is adequate illumination. The Permittee shall use appropriate assistive devices (such as mirrors, magnifying lenses and light sources), as needed to improve the angle of vision and to assist examination.

III.B.4. Container Storage Units at the RWMC

The Permittee may provide container storage at the RWMC for those wastes identified for container storage in Book 3A, Attachment 1 of this Permit, and as follows:

III.B.4.a. Storage of mixed waste/debris is authorized as follows:

III.B.4.a.(1) The Permittee shall only store mixed waste/debris that is exempt from IDAPA 58.01.05.008 (40 CFR 264 Subpart CC), as provided in IDAPA 58.01.05.008 (40 CFR § 264.1082).

III.B.4.b. Waste must meet the unit-specific waste acceptance criteria in Book 3A, Attachment 2 of this Permit.

III.B.4.c. The maximum permitted storage capacity for mixed waste/debris at the RWMC is 306,146 gallons, with the maximum waste volume for each area set as follows:

AREA	MAXIMUM (S01) STORAGE VOLUME
WMF-698	108,515 gallons
WMF-1617	
Rooms 101/102/103 (Service Bay Area)	1,787 gallons
Room 104 (Equipment Airlock)	2,090 gallons
Room 105 (DPS Room)	330 gallons
Room 106 (Utility Area)	17,600 gallons
WMF-1619	
Rooms 101/102/103 (Service Bay Area)	3,190 gallons
Room 104 (Equipment Airlock)	2,695 gallons
Room 105 (DPS Room)	330 gallons
Room 106 (Utility Area)	3,245 gallons
Outside Storage Areas treated/solid waste only:	
Near WMF-1617	
3 Trailers @ 16 boxes at 90ft^3/box (=10,772 gal/trailer)	32,316 gallons
4 Cargo Containers @ 9,574 gal each	38,298 gallons
16 boxes @ 90 ft^3	10,772 gallons
Near WMF-698	
2 Trailers @ 16 boxes at 90ft^3/box (=10,772 gal/trailer)	21,544 gallon
Near Bridge	
1 Trailer @ 16 boxes at 90ft^3/box (=10,772 gal/trailer)	10,772 gallons
Near WMF-1619	
3 Trailers @ 16 boxes at 90ft^3/box (=10,772 gal/trailer)	32,316 gallons
1 Cargo Container @ 9,574 gal	9,574 gallons
Near WMF-1621	10,772 gallons
1 Trailer @ 16 boxes at 90ft^3/box (=10,772 gal/trailer)	

III.B.5. <u>Container Treatment Units in the NWCF:</u>

The Permittee may provide container treatment in the NWCF for those wastes identified for container treatment in Book 1, Attachment 1 of this Permit, and as follows:

III.B.5.a. Container treatment of hazardous and mixed debris is authorized.

III.B.5.b. Waste must meet the unit-specific waste acceptance criteria in Book 1, Attachment 2, and the receipt and storage prohibitions in Permit Conditions II.B., III.B.1.a., and III.B.2.a. of this Permit.

III.B.5.c. Container treatment may be performed in the portable treatment containers (portable soak tanks) VES-NCD-138, TK-NCD-139, and TK-NCD-137.

III.B.5.d. Treatment in the portable treatment containers shall consist of chemical extraction by soaking debris in treatment solutions for extended periods of time.

III.B.5.e. The portable treatment containers may be used in the Steam Spray Booth (Room 418), Decon Cubicles (Rooms 421 and 422), and Decon Cell (Room 308), in Building CPP-659/-1659.

III.B.5.f. The portable treatment containers shall be drained, sludge (if any) removed, rinsed with an appropriate solvent, flushed and completely drained after treatment and before removal from the Steam Spray Booth, Decon Cubicles, and Decon Cell in accordance with Attachment 1 of this Permit.

III.B.5.g. The portable treatment containers shall be rinsed with an appropriate solvent, any sludge removed, flushed, and completely drained prior to switching from RCRA-regulated treatment to non RCRA-regulated decontamination activities. All rinsates shall be managed as hazardous/mixed waste. The Permittee shall document the performance of this cleaning regime in accordance with Permit Conditions I.Z. of this Permit.

III.B.5.h. The maximum permitted capacity for container treatment in the NWCF is 7,600 gallons per day of treated media, with the maximum daily volume of treated media for each container set as follows:

CONTAINER	**CONTAINER VOLUME**	**MAXIMUM (T04) VOLUME OF HWMA/RCRA TREATED MEDIA**
VES-NCD-138	538 gallons	4,300 gallons per day
TK-NCD-139	127 gallons	1,100 gallons per day
TK-NCD-137	270 gallons	2,200 gallons per day

III.B.6. SIZING AND REPACKAGING TREATMENT IN CPP-659 and in CPP-666 FDP Cell

The Permittee may conduct sizing and repackaging activities in CPP-659 and CPP-666 FDP Cell for those wastes identified for such treatment in Book 1, Attachment 1 of this Permit, and as follows:

III.B.6.a. The Permittee may conduct sizing and repackaging activities on hazardous/mixed debris, in support of off-Site shipment or subsequent on-Site management, as specified in this permit.

III.B.6.b. The Permittee shall conduct all sizing and repackaging activities in CPP-659, Rooms 216, 306, 308, 309, 323, 418, 421, 422, and 428 and in CPP-666 FDP Cell.

TREATMENT METHOD	MAXIMUM (T04) TREATMENT VOLUME
Sizing Sizing may include cutting, crushing, bending, folding, and other similar activities. Examples of equipment used to size debris waste includes: conventional rotating or reciprocating saw, die – punch, etc.	520 gallons/day per Room/FDP Cell

TREATMENT METHOD	MAXIMUM (T04) TREATMENT VOLUME
Repackaging Repackaging includes opening waste containers, removing the waste, and subsequently placing the waste into new containers, as necessary	520 gallons/day per Room/FDP Cell

III.B.7. COMPACTION TREATMENT IN CPP-659 and in CPP-666 FDP Cell

The Permittee may conduct compaction treatment in CPP-659 and CPP-666 FDP Cell for those wastes identified for such treatment in Book 1, Attachment 1 of this Permit, and as follows:

III.B.7.a. The Permittee may conduct waste compaction in support of off-Site shipment or subsequent on-Site management of hazardous/mixed debris as specified in this permit.

III.B.7.b. The Permittee shall conduct waste compaction in CPP-659, Rooms 216, 306, 308, 309, 323, 418, 421, 422, 428, and in CPP-666 FDP Cell

TREATMENT METHOD	MAXIMUM (T04) TREATMENT VOLUME
Compaction Compaction may include compressing, crushing, etc. the waste, as necessary so that it may be placed/stored in appropriate waste storage/shipping containers	520 gallons/day per Room/FDP Cell

III.B.8. ABSORBENT ADDITION TREATMENT IN CPP-659 AND IN CPP-666 FDP CELL

The Permittee may conduct absorbent addition treatment in CPP-659 and CPP-666 FDP Cell for those wastes identified for such treatment in Book 1, Attachment 1 of this Permit, and as follows:

III.B.8.a. The Permittee may conduct absorbent addition activities in support of off-Site shipment or subsequent on-Site management of hazardous and mixed waste as specified in this permit.

III.B.8.b. Absorbent addition activities will be performed in CPP-659, Rooms 308, 309, and 418, and in the CPP-666 FDP Cell.

TREATMENT METHOD	MAXIMUM TREATMENT VOLUME – T04
Absorbent Addition Absorbent addition consists of adding appropriate absorbent material to hazardous/mixed waste, so that no free liquids are present in the treated waste form.	520 gallons/day per Room/FDP Cell

III.B.9. MACROENCAPSULATION AT RMWSF (CPP-1617) and CPP-659 Room 428 (Crane Maintenance Area)

III.B.9.a. The Permittee may conduct macroencapsulation activities with subsequent on-Site management of that hazardous and/or mixed waste in support of off-Site shipment of that waste as specified in this permit.

III.B.9.b. Macroencapsulation activities will be performed in RMWSF and in CPP-659 Room 428.

TREATMENT METHOD	MAXIMUM TREATMENT VOLUME – T04
CPP-1617 Commercial Macroencapsulation Process Macroencapsulation will be performed using commercially available macroencapsulation units that have been pre-approved by the proposed disposal facility.	9,600 gallons/day total volume treated by macroencapsulation at the CPP-1617 facility
CPP-659 Room 428 Commercial Macrocencapsulation Process Macroencapsulation will be performed using commercially available macroencapsulation units that have been preapproved by the proposed disposal facility	9,600 gallons/day total volume

III.B.10. TREATMENT OF WASTE IN CONTAINER STORAGE AREAS

III.B.10.a The Permittee shall actively manage waste undergoing treatment outside of its container (i.e., sorting, sizing, compacting, and repackaging mixed waste debris, neutralization, and sodium deactivation) in the FDP Cell, anytime waste is not containerized, by ensuring that all the waste is containerized by the end of a shift, or end of operating day in the case where there are multiple shifts in a 24-hour period.

III.B.10.a.(1) If the Permittee cannot comply with Permit Condition III.B.10.a., then the Permittee shall open a RCRA remedial, and perform inspections on the waste every 2 hours.

III.B.10.b. The Permittee shall actively manage waste undergoing treatment outside of it container (i.e., sorting, sizing, compacting, and repackaging mixed waste debris, neutralization, and sodium deactivation) in CPP-659 Room 308, anytime waste is not containerized, by ensuring that all the waste is containerized by the end of a shift, or end of operating day in the case where there are multiple shifts in a 24-hour period.

III.B.10.b.(1) If the Permittee cannot comply with Permit Condition III.B.10.b., then the Permittee shall manage the waste as a waste pile in accordance with Module IV.

III.C. CONDITION OF CONTAINERS

If a container holding waste is not in good condition (*e.g.*, severe rusting, apparent structural defects) or if it begins to leak, the Permittee shall: transfer the waste from said container to a container that is in good condition; transfer the container to an overpack container; or otherwise manage the waste in accordance with IDAPA 58.01.05.008 [40 CFR § 264.171] and Attachments 1 and 1a of this Permit.

III.D. COMPATIBILITY OF WASTE WITH CONTAINERS

The Permittee shall assure that the ability of the container to contain the waste is not impaired, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.172] and Attachments 1 and 6 of this Permit.

III.E. MANAGEMENT OF CONTAINERS

III.E.1. The Permittee shall keep all storage containers closed during storage, except when adding or removing waste,, and shall not open, handle, or store containers in a manner which may rupture the container or cause it to leak, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.173] and Attachments 1, 1a, and 6 of this Permit.

III.E.2. The Permittee may keep the portable treatment containers, in Permit Condition III.B.5, III.B.6, III.B.7, III.B.8, and III.B.9 of this Permit open during treatment provided the containers are visually monitored during treatment. The Permittee shall not otherwise manage treatment containers in a manner which may rupture the container or cause it to leak, in accordance with IDAPA 58.01.05.008 [40 CFR §§ 264.17 and 264.173] and Book 1, Attachments 1 and 6 of this Permit.

III.F. IGNITABLE OR REACTIVE WASTES

The Permittee shall take precautions to prevent accidental ignition or reaction of ignitable or reactive wastes in the permitted container storage and treatment areas by following the procedures specified, in accordance with IDAPA 58.01.05.008 [40 CFR §§ 267.17 and 264.176] and Attachments 1, 1a, and 6 of this Permit.

III.G. INCOMPATIBLE WASTE

III.G.1. The Permittee shall not place incompatible wastes or wastes and material that are incompatible in the same storage or treatment container, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.177(a)] and Attachments 1, 1a, and 6 of this Permit.

III.G.2. The Permittee shall not place waste or materials in an unwashed storage or treatment container that previously held an incompatible waste or material, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.177(b)] and Attachments 1, 1a, and 6 of this Permit.

III.G.3. The Permittee shall not store or treat waste that is incompatible with any waste or material stored or treated nearby, without separating or protecting the incompatible waste or material from commingling by means of a dike, berm, or wall in accordance with IDAPA 58.01.05.008 [40 CFR § 264.177] and Attachments 1, 1a, and 6 of this Permit.

III.G.4. The Permittee shall inspect the permitted container storage and treatment areas and remove any waste, debris, or constituent residues from a storage or treatment area prior to storing potentially incompatible wastes in the area, in accordance with Attachments 1, 1a, and 6 of this Permit.

III.H. SECONDARY CONTAINMENT

III.H.1. The Permittee shall ensure that the secondary containment systems for the container treatment areas in Permit Condition III.B.5, III.B.6, III.B.7, III.B.8., and III.B.9 of this Permit are free of cracks or gaps to prevent any migration of waste or accumulated liquid out of the system to the soil, groundwater, or surface water at any time, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.175] and Book 1, Attachment 1 of this Permit.

III.H.2. The Permittee shall follow Permit Conditions VI.G.1.b., VI.G.1.c., and VI.G.1.d. of this Permit for de minimis spills into the secondary containment system from normal debris treatment processes (i.e., transfers into and out of tanks, condensate drippage, etc.).

III.H.3. Secondary containment systems for the RMWSF shall be constructed and maintained to contain 10% of the total volume of waste containers or 100% of the volume of the largest waste container, whichever is greater, stored within the waste management units, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.175(b)(3)] and Book 1, Attachment 1a of this Permit.

III.H.4. If containers with free liquid are stored within RWMC buildings WMF-1617, WMF-1619 and WMF-698, then secondary containment will be provided through the use of secondary containment pans. Secondary containment pans will have enough containment capacity to contain either 10% of the volume of containers or 100% of the largest container, which ever is greater, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.175(b)(3)] and Book 3A, Attachment 1 of this Permit.

III.I. INSPECTION SCHEDULES AND PROCEDURES

The Permittee shall inspect the permitted container storage and treatment areas, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.174] and the Inspection Schedules contained in Attachment 4 of this Permit, to detect leaking containers and deterioration of containers and the containment system caused by corrosion and other factors.

III.J. RECORD KEEPING

The Permittee shall document the results of all certification, inspections, and waste analysis performed in the Operating Record, in accordance with Permit Conditions I.Z. and II.J. of this Permit.

III.K. CLOSURE

The Permittee shall close the permitted container storage and treatment areas in accordance with IDAPA 58.01.05.008 [40 CFR Subpart G and 40 CFR § 264.178], the procedures set forth in Attachments 8, and 8a, and Permit Condition II.K. of this Permit.

MODULE IV – INTEC WASTE PILES

IV.A. PERMITTED WASTE PILE STORAGE AREAS

Subject to the terms of this Permit, the Permittee may store hazardous and mixed debris, as specified in Permit Condition IV.C. of this Permit, in the waste pile storage areas of the NWCF, Building CPP-659/-1659.

IV.B. DESIGN AND OPERATING REQUIREMENTS

The Permittee is exempt from the IDAPA 58.01.05.008 [40 CFR § 264.251(a)] design requirements, as provided by the Director, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.251(b)] and shown in Book 1, Attachment 9 of this Permit.

IV.C. PERMITTED & PROHIBITED WASTES IN THE WASTE PILE STORAGE AREAS

IV.C.1. <u>Waste Pile Units in the NWCF:</u>

The Permittee may provide waste pile storage in the NWCF for those wastes identified for waste piles storage in Book 1, Attachment 1 of this Permit, and as follows:

IV.C.1.a. Storage of hazardous and mixed debris is authorized.

IV.C.1.b. Storage of hazardous and mixed debris containing free liquids is prohibited.

IV.C.1.c. Waste must meet the unit-specific waste acceptance criteria in Attachment 2 of this Permit.

IV.C.1.d. The maximum permitted capacity for waste pile storage in the NWCF is 209 cubic meters, with the maximum waste volume for each room set as follows:

ROOM	MAXIMUM (S03) STORAGE VOLUME
Room 206 – Adsorber Cell	43 cubic meters
Room 207 – Off-Gas Cleanup Cell	3 cubic meters
Room 214 – Calciner Cell	8 cubic meters
Room 215 – Blend and Hold Cell	3 cubic meters
Room 216 - Filter Cell/Valve Cubicle	39 cubic meters
Room 308 - Remote Decon Cell	22 cubic meters
Room 309 - Filter Handling Cell	18 cubic meters
Room 322 – Off-Gas Blower Cell	5 cubic meters
Room 323 - Crane Maintenance & Transfer Area	13 cubic meters
Room 326 - Transfer Area	5 cubic meters
Room 416 - Shielded Storage Room	20 cubic meters
Room 418 – Steam Spray Booth	30 cubic meters

IV.D. IGNITABLE OR REACTIVE WASTES

IV.D.1. The Permittee shall not place ignitable or reactive waste in a waste pile unless the waste and waste pile satisfy all applicable requirements of IDAPA 58.01.05.011 [40 CFR § Part 268], and

IV.D.1.a. The waste is treated, rendered, or mixed before or immediately after placement in the pile so that:

IV.D.1.a.(1) The resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under IDAPA 58.01.05.005 [40 CFR § Part 261.21 or 261.23], and

IV.D.1.a.(2) The Permittee complies with IDAPA 58.01.05.008 [40 CFR § Part 264.17(b)], or

IV.D.1.a.(3) The waste is managed in such a way that it is protected from any material or conditions which may cause it to ignite or react.

IV.E. INCOMPATIBLE WASTE

IV.E.1. The Permittee shall not place incompatible waste or wastes and material that are incompatible in the same waste pile unless the Permittee complies with IDAPA 58.01.05.008 [40 CFR § 264.17] and Book 1, Attachments 1 and 6 of this Permit.

IV.E.2. The Permittee shall separate waste piles from other nearby incompatible material stored in containers, other piles, or open tanks, or protect them by means of a dike, berm, wall, or other device in accordance with IDAPA 58.01.05.008 [40 CFR § 264.257] and Book 1, Attachments 1 and 6 of this Permit.

IV.E.3. The Permittee shall not place waste on the same base where incompatible wastes or materials were previously piled, unless the base has been decontaminated sufficiently to ensure compliance with IDAPA 58.01.05.008 [40 CFR § 264.17] and Book 1, Attachments 1 and 6 of this Permit.

IV.F. INSPECTION SCHEDULES AND PROCEDURES

The Permittee shall inspect waste piles on a weekly basis to detect the presence of free liquids or the deterioration or malfunction of the run-on and run-off protection systems, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.254(b)] and the Inspection Schedules in Book 1, Attachment 4 of this Permit.

IV.G. RECORD KEEPING

The Permittee shall document the results of all certifications, inspections and waste analyses performed in the Operating Record, in accordance with Permit Conditions I.Z. and II.J. of this Permit.

IV.H. CLOSURE

The Permittee shall close the permitted waste pile areas in accordance with IDAPA 58.01.05.008 [40 CFR Subpart G and 40 CFR § 264.258], the procedures set forth in Book 1, Attachment 8, and Permit Condition II.K. of this Permit.

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MODULE V – INTEC TANK SYSTEM STORAGE AND/OR TANK TREATMENT

V.A. PERMITTED STORAGE AND TREATMENT TANKS

Subject to the terms of this Permit, the Permittee may store and treat hazardous and mixed waste, as specified in Permit Condition V.B. of this Permit, in the following storage and treatment tanks in the NWCF, Building 659/-1659 and CPP-666:

V.A.1. Low-level Decon Room Sinks

A small sink, SH-NCD-934, is located in the low-level, Decon Room (415) of Building CPP-659. The sink is constructed of stainless steel and permitted for treatment of small debris items. Make-up solutions can be fed to the sink through permanent fittings via the chemical make-up tanks, or made up directly in the sink. Debris items can be scrubbed, left to soak, or sparged with air/steam. The small sink and treatment processes are further described in Book 1, Attachment 1 of this Permit.

A large sink, SH-NCD-933, is located in the low-level Decon Room (415) of Building CPP-659. The large sink is similar to the small sink, except for size and location of utilities. Make-up solutions can be fed to the sink through permanent fittings via the chemical make-up tanks, or made up directly in the sink. Debris items can be scrubbed, left to soak, or sparged with air/steam. The large sink and treatment processes are further described in Book 1, Attachment 1 of this Permit.

V.A.2. Low-level Decon Room Ultra-Sonic Cleaner

The ultra-sonic cleaner, UC-NCD-921, is located in the low-level, Decon Room (415) of Building CPP-659. The ultra-sonic cleaner is constructed of stainless steel, has an acoustic lid, and a removable polypropylene tank insert that is used for caustic solutions. The ultra-sonic cleaner uses a high frequency mechanical vibration to produce a strong cleaning action at the solid-liquid interfaces (cavitation). Cleaning is usually performed in a basket to allow cavitation on all sides. The ultra-sonic cleaner and treatment processes are further described in Book 1, Attachment 1 of this Permit.

V.A.3. Holdup and Collection Tanks

The holdup tank, VES-NCD-123, is located in Room 219 and the collection tank, VES-NCD-129, is located in Room 203 of Building CPP-659. The tanks are used for collection and storage of liquid, mixed waste from RCRA debris treatment activities. Occasionally, the tanks are used for pH adjustment of the collected liquid pending future processing. VES-NCD-123 is a horizontal, cylindrical tank on two (2) saddle supports. VES-NCD-129 is a vertical, cylindrical tank mounted on four (4) support legs. Both tanks are constructed of stainless steel. The holdup and collection tanks and treatment processes are further described in Book 1, Attachment 1 of this Permit.

V.A.4. The HEPA Filter Leaching System (HFLS)

The HEPA Filter Leaching System consists of a stainless steel leaching tank (VES-NCD-141) and a stainless steel drying tank (VES-NCD-142) that are located in Room 309 of Building CPP-659. The HFLS is designed to treat spent HEPA filters by leaching the hazardous contaminants from the filters using Nitric Acid. A minimum of three (3) leaching cycles followed by two (2) rinse water cycles are performed on each filter. After the filters are allowed to drip dry, they are transferred to the drying tank where they are further dried by circulating heated air. The HFLS and treatment processes are further described in Book 1, Attachment 1 of this Permit. HEPA filters to be treated can also be stored in Room 309, if necessary, during treatment process shutdowns or during maintenance to the remote handling equipment.

The HFLS may also be used for the radiological decontamination (pre-treatment) of HEPA filters to meet off-site treatment facility Waste Acceptance Criteria. When performing decontamination operations, the number/length of leaching and rinsing cycles may be reduced, and drying may or may not be performed. Steam may also be used to pre-dry the filters by driving off most of the residual liquid.

V.A.5. The FDP Cell Slab Tank

The FDP Cell Slab Tank is located at the base of the FDP Cell in CPP-666. The Slab Tank is a critically safe low volume tank that is available to store liquids within the FDP Cell.

V.A.6. The FDP Area Sodium Distillation System (SDS)

The FDP Area SDS in located in CPP-666, Room SB-8 at the -31’ level. The SDS consists of 2 tanks: Distillation Vessel (VES-FC-101) and Collection Vessel (VES-FC-85A). The SDS treats sodium contaminated debris waste.

V.B. PERMITTED AND PROHIBITED WASTES IN THE STORAGE AND TREATMENT TANKS

V.B.1. Tank Storage Units in the NWCF

The Permittee may provide tank storage in the NWCF for those wastes identified for NWCF tank storage in Book 1, Attachment 1 of this Permit, and as follows:

V.B.1.a. Storage of hazardous and mixed waste is authorized.

V.B.1.b. The Permittee may only store hazardous waste that is exempt from IDAPA 58.01.05.008 (40 CFR § 264 Subpart CC), as provided in IDAPA 58.01.05.008 (40 CFR § 264.1082).

V.B.1.c. Waste must meet the unit-specific waste acceptance criteria in Book 1, Attachment 2 of this Permit.

V.B.1.d. The maximum permitted capacity for tank storage in the NWCF is 4,520 gallons, with the maximum waste volume for each tank set as follows:

TANK	TANK DIMENSIONS	MAXIMUM (S02) STORAGE VOLUME
VES-NCD-123 - Holdup Tank	7'6" and tangent to tangent length 9'	3,800 gallons
VES-NCD-129 - Collection Tank	4' and tangent to tangent length of 5'6"	530 gallons
VES-NCD-141	L 2' 11", W 2' 5", and H 2' 2"	120 gallons
VES-NCD-142	L 2' 11", W 2' 5", and H 1' 4"	70 gallons

V.B.2. Tank Storage at FAST/FDP Area (SDS)

The Permittee may provide tank storage in the FAST Slab Tank (VES-FC-184) and in the FDP Area, Sodium Distillation System (SDS) located in Room SB-8, which includes tanks VES-FC-101 and VES-FC-85A, for those wastes identified for tank storage in Book 1, Attachment 1 of this Permit, and as follows:

V.B.2.a. Storage of mixed waste is authorized.

V.B.2.b. Waste must meet the unit-specific waste acceptance criteria in Book 1, Attachment 2 of this Permit.

V.B.2.c. The FAST Slab Tank dimensions are 8 feet by 5 feet by 0.33 feet and has a maximum volume of sixty five gallons.

V.B.2.d. The SDS tank dimensions are as follows:

V.B.2.d.1. VES-FC-101 (distillation vessel) – 71.25 inches long with an outer diameter of 12.75 inches and inner diameter of 12 inches and has a maximum capacity of 35 gallons

V.B.2.d.2. VES-FC-85A (collection vessel) – 15 inches long with an outer diameter of 10.75 inches and an inner diameter of 10 inches and has a maximum capacity of 5 gallons

V.B.3. <u>Tank Treatment Units in the NWCF</u>

The Permittee may provide tank treatment in the NWCF only for those wastes identified for tank treatment in Book 1, Attachment 1 of this Permit, and as follows:

V.B.3.a. Treatment of hazardous and mixed waste is authorized.

V.B.3.b. The Permittee may only treat hazardous waste that is exempt from IDAPA 58.01.05.008 (40 CFR § 264 Subpart CC), as provided in IDAPA 58.01.05.008 (40 CFR § 264.1082).

V.B.3.c. Waste must meet the unit-specific waste acceptance criteria in Book 1, Attachment 2 of this Permit.

V.B.3.d. The maximum permitted capacity for tank treatment in the NWCF is 17,006 gallons per day, with the maximum tank/debris treatment volumes for each tank set as follows:

TANK	TANK DIMENSIONS	MAXIMUM (T01) TREATMENT VOLUME
SH-NCD-934 - Small Sink	18" X 20" X 18"	672 gallons per day*
SH-NCD-933 - Large Sink	119" X 24" X 19"	5,688 gallons per day*
UC-NCD-921 - Ultra-sonic Cleaner	26" X 26" X 27"	1,896 gallons per day*
VES-NCD-123 - Holdup Tank	7'6" and tangent to tangent length of 9'	7,600 gallons per day
VES-NCD-129 - Collection Tank	4' and tangent to tangent length of 5'6"	1,060 gallons per day
VES-NCD-141 - HEPA Filter Leaching Vessel	2'11" X 2'5"X 2'2"	90 gallons per day*
VES-NCD-142 - HEPA Filter Drying Vessel	2'11" X 2'5" 1'4"	90 gallons per day*

* Indicates volume of hazardous and mixed debris treated per day.

V.B.3.e. The treatment tanks shall be rinsed with an appropriate solvent, flushed, and completely drained prior to switching from RCRA-regulated treatment to non RCRA-regulated decontamination activities. The Permittee shall document the performance of this cleaning regime in accordance with Permit Conditions I.Z. and II.J. of this Permit.

V.B.4. Tank treatment in the FAST Slab Tank is not authorized.

V.C. SECONDARY CONTAINMENT

V.C.1. The Permittee shall design, install, and operate secondary containment systems that are capable of detecting and collecting releases, and which prevent any migration of waste or accumulated liquid out of the system to the soil, groundwater, or surface water during use of the tank systems, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.193] and Book 1, Attachment 1 of this Permit.

V.C.2. The boundaries of the secondary containment system for the storage and treatment tanks are dependent on the position of the cell drain valves during storage and treatment. The primary and secondary containment boundaries and materials of construction are defined in Book 2, Appendix 2, of this Permit.

V.D. NEW TANK SYSTEMS

V.D.1. The Permittee shall obtain and keep on file (at the Facility) written statements from an independent, qualified installation inspector or a qualified registered professional engineer certifying to the design and attesting that proper installation procedures for any new tank systems were used, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.192(b) and (g)], Permit Conditions I.Z. and II.J., and Book 1, Attachment 1 of this Permit.

V.E. TANK SYSTEM OPERATING CONDITIONS

V.E.1. The Permittee shall not place waste or treatment reagents in a tank system if they could cause the tank, ancillary equipment, or containment system to rupture, leak, corrode, or otherwise fail, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.194(a)] and Book 1, Attachments 1 and 6 of this Permit.

V.E.2. The Permittee shall use appropriate controls and practices to prevent spills and overflows from the tank or containment systems, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.194(b)(1) and (2)] and Book 1, Attachment 1 of this Permit.

V.F. RESPONSE TO LEAKS OR SPILLS

V.F.1. The Permittee shall immediately remove a tank system from service if there is a leak or spill from the tank system or its secondary containment, or if the system or secondary containment are unfit for use, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.196] and Book 1, Attachment 1 of this Permit. The Permittee shall then:

V.F.1.a. Immediately stop the flow of hazardous or mixed waste into the tank system or secondary containment system and inspect the system to determine the cause of release, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.196(a)] and Book 1, Attachment 1 of this Permit.

V.F.1.b. Within 24 hours, or as soon as practical, remove as much of the waste as is necessary to prevent further releases of hazardous waste to the environment and to allow inspection and repair of the tank system, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.196(a) and (b)] and Book 1, Attachment 1 of this Permit.

V.F.1.c. Immediately conduct a visual inspection of the release and, based upon that inspection, prevent migration of and remove visible contamination from soil or surface water, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.196(c)] and Book 1, Attachment 1 of this Permit.

V.F.1.d. If the collected material is a HWMA/RCRA-regulated material, manage it in accordance with all applicable requirements of IDAPA 58.01.05.006 through 58.01.05.008 [40 CFR Parts 261 through 264]. The Permittee shall note that if the collected material is discharged through a point source to U.S. waters or to a POTW, it is subject to requirements of the Clean Water Act. If the collected material is released to the environment, it may be subject to reporting under 40 CFR Part 302.

V.F.1.e. Follow the verbal and written reporting requirements for any release to the environment, in accordance with Permit Conditions V.H.3. and V.H.4. of this Permit.

V.F.1.f. The Permittee shall follow Permit Conditions V.F.1.b., V.F.1.c., and V.F.1.d. of this Permit for de minimis spills into the secondary containment system from normal debris treatment processes (i.e., transfers into and out of tanks, condensate drippage, etc.).

V.F.2. The Permittee shall close the system in accordance with IDAPA 58.01.05.008 [40 CFR § 264.197] and Book 1, Attachment 8 of this Permit, unless he satisfies the following requirements:

V.F.2.a. For a release caused by a spill that has not damaged the integrity of the system, the Permittee shall remove the released waste and make any necessary repairs before returning the tank system to service, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.196(e)(2)] and Book 1, Attachment 1 of this Permit.

V.F.2.b. For a release caused by a leak from a primary tank system to a secondary containment system, the Permittee shall repair the tank system prior to returning it to service, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.196(e)(3)] and Book 1, Attachment 1 of this Permit.

V.F.2.c. For a release to the environment, caused by a leak from an aboveground portion of the ancillary equipment that does not have secondary containment, the Permittee shall repair the tank system prior to returning it to service, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.196(e)(4)] and Book 1, Attachment 1 of this Permit.

V.F.2.d. If the Permittee replaces a component of the tank system to eliminate the leak, that component must satisfy the requirements for new tank systems or components in IDAPA 58.01.05.008 [40 CFR § § 264.192 and 264.193].

V.F.3. If the Permittee has repaired a tank system in accordance with Permit Condition V.F.2. of this Permit and the repair has been extensive (e.g., installation of an internal liner, repair of a ruptured primary containment or secondary containment vessel), the tank system must not be returned to service until the Permittee obtains a certification by a qualified, registered, professional engineer that the repaired system is capable of handling hazardous waste without release for the intended life of the system. The certification shall be submitted to the Director within seven (7) days after returning the tank system to use, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.196(f)], Permit Condition I.Y., and retained in accordance with Permit Conditions I.Z. and II.J., and Book 1, Attachment 1 of this Permit.

V.F.4. In addition to the requirements of Permit Condition V.F. above, the following requirements apply to the FDP Cell Slab Tank only:

V.F.4.a. Detection of liquids in the FDP Cell sump shall be reported in accordance with Permit Condition I.T.

V.F.4.b. The operator shall determine if the source of sump liquids is a leak in Slab Tank.

V.F.4.b.i. If the source of liquids is determined to be non-waste (e.g., steam leak, pump priming water, etc) then operations of the slab tank may continue provided the level of liquids remains less than the sixty-five gallon capacity of the tank.

V.F.4.b.ii. If the source of liquids either is a leak in slab tank or can not be determined, the Permittee shall respond in accordance with IDAPA 58.01.05.008 [40 CFR § 264.196]. Liquids shall be containerized or removed from the FDP Cell.

V.G. INSPECTION SCHEDULES AND PROCEDURES

V.G.1. The Permittee shall develop and maintain a schedule and procedures for inspecting the overfill controls, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.195(a)] and Book 1, Attachment 4 of this Permit.

V.G.2. The Permittee shall inspect at least once each operating day:

V.G.2.a. Data gathered from monitoring and leak detection equipment and overfill controls to ensure that the tank system is being operated according to design; and

V.G.2.b. The construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment system and ancillary equipment, to detect erosion or signs of release of hazardous waste.

V.G.2.c. The Permittee may rely on the inspection requirements of Permit Condition V.G.2.a. of the Permit to also meet the inspection requirements of V.G.2.b. of the Permit for VES-NCD-123 and VES-NCD-129.

V.H. RECORD KEEPING AND REPORTING

V.H.1. The Permittee shall document the results of all certifications, inspections, and waste analyses in the Operating Record, in accordance with Permit Conditions I.Z. and II.J. of this Permit.

V.H.2. Releases from tanks that are totally contained within a secondary containment system need not be reported. However, said releases shall be recorded in the Operating Record, in accordance with Permit Conditions I.Z. and II.J. of this Permit, and shall include:

V.H.2.a. Date and time of the release;

V.H.2.b. Tank identification;

V.H.2.c. Name and title of the employee documenting the release;

V.H.2.d. Size and amount of the release; and

V.H.2.e. All actions taken.

V.H.3. The Permittee shall verbally report to the Director any release to the environment within 24 hours of its detection, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.196(d)(1) and (2)], Permit Condition I.T., and Book 1, Attachment 1 of this Permit.

V.H.4. In addition to complying with the requirements of Permit Condition I.T. of this Permit, within 30 calendar days of detecting a release to the environment from a tank system, the Permittee shall report the following to the Director in accordance with Permit Condition I.Y. of this Permit:

V.H.4.a. Likely route of migration of the release;

V.H.4.b. Characteristics of the surrounding soil, including soil composition, geology, and hydrogeology, taking into account possible climatic effect on the soil characteristics;

V.H.4.c. Results of any monitoring, sampling, or air dispersion modeling conducted in connection with the release;

V.H.4.d. Proximity of downgradient drinking water, surface water, and populated areas; and

V.H.4.e. Description of response action taken or planned.

V.I. CLOSURE

The Permittee shall close the permitted storage and treatment tanks in accordance with IDAPA 58.01.05.008 [40 CFR Subpart G and 40 CFR § 264.197], the procedures set forth in Book 1, Attachment 8, and Permit Condition II.K. of this Permit.

MODULE VI - MISCELLANEOUS UNIT TREATMENT

VI.A. PERMITTED MISCELLANEOUS/OTHER TREATMENT UNITS

Subject to the terms of this Permit, the Permittee may treat hazardous and mixed debris, as specified in Permit Condition VI.B. of this Permit, in the following miscellaneous treatment units in the NWCF, Building CPP-659/-1659, in the CPP-666 FDP Cell, CPP-666 Room SB-8, and at the RMWSF. Additionally, the Permittee may treat hazardous and mixed debris, as specified in Permit Condition VI.B. of this Permit in the WMF-1617 Retrieval Area, Drum Packaging Stations, and Drum Compactor at the RWMC and the WMF-1619 Retrieval Area, Drum Packaging Stations, Decon Tent, and Service Bay:

VI.B. PERMITTED/PROHIBITED WASTE IN THE MISCELLANEOUS TREATMENT UNITS

VI.B.1. Miscellaneous Treatment Unit for Scarification and Spalling in the NWCF:

The Permittee may provide scarification and spalling in the miscellaneous treatment unit only for those wastes identified for scarification and spalling in Book 1, Attachment 1 of the Permit, and as follows:

VI.B.1.a.

UNIT	MAXIMUM (X02) VOLUME OF HWMA/RCRA TREATMENT MEDIA
Steam Spray Booth and Glovebox - Room 418	30 short tons per day

VI.B.2. Miscellaneous Treatment Units for Chemical/Physical Extraction in the NWCF:

The Permittee may provide chemical/physical extraction in the miscellaneous treatment units only for those wastes identified for chemical/physical extraction in Book 1, Attachment 1 of the Permit, and as follows:

VI.B.2.a. Treatment of hazardous and mixed debris is authorized.

VI.B.2.b. The Permittee may only treat hazardous waste that is exempt from IDAPA 58.01.05.008 (40 CFR § 264 Subpart CC), as provided in IDAPA 58.01.05.008 (40 CFR § 264.1082).

VI.B.2.c. Waste must meet the unit-specific waste acceptance criteria in Book 1, Attachment 2 of this Permit.

VI.B.2.d. Chemical/physical extraction shall consist of steam and/or pressurized hot water washing, solvent extraction, liquid abrasive spray blasting, and carbon dioxide blasting.

VI.B.2.e. The Permittee may perform chemical/physical extraction in the following units at the following maximum capacities:

UNITS	MAXIMUM (X99) VOLUME OF HWMA/RCRA TREATMENT MEDIA
Steam Spray Booth and Glove Box - Room 418	8,660 gallons per day
Decon Cubicle - Room 421	8,660 gallons per day
Decon Cubicle - Room 422	8,660 gallons per day
Decon Cell - Room 308	8,660 gallons per day

VI.B.2.f. The Permittee must drain all decontamination solutions from the decontamination cell, CPP-659 Room 308, immediately upon completion of debris treatment.

VI.B.3. <u>Miscellaneous/Other Treatment Unit (T04) for Deactivation of Sodium at CPP-659 Room 308 and CPP-666 FDP Cell within the Argon Repackaging Station (ARS)</u>

VI.B.3.a. Treatment of hazardous and mixed debris is authorized.

VI.B.3.b. The Permittee may only treat hazardous waste that is exempt from IDAPA58.01.05.008 (40 CFR § 264 Subpart CC), as provided in IDAPA 58.01.05.008 (40 CFR § 264.1082).

VI.B.3.c. Waste must meet the unit-specific waste acceptance criteria in Book 1, Attachment 2 of this Permit.

VI.B.3.d. Deactivation of sodium shall consist of reaction with water in an immersion bath or by misting/wetting of the waste surface within the ARS, or exposure to air in CPP-659 Room 308 and the FDP Cell.

VI.B.3.e. The Permittee may perform deactivation of sodium in the following units at the following maximum capacities:

UNITS	MAXIMUM (T04) VOLUME OF HWMA/RCRA TREATMENT MEDIA
FDP Cell CPP-659 Room 308	6.2 gallons (50 pounds) per day total 6.2 gallons (50 pounds) per day total

VI.B.3.f. The Permittee shall actively manage waste undergoing sodium deactivation in the FDP Cell or in the FDP ARS, anytime waste is not containerized; by ensuring that all the waste is containerized by the end of a shift, or end of operating day in the case where there are multiple shifts in a 24-hour period.

VI.B.3.f.(1) If the Permittee cannot comply with Permit Condition VI.B.3.f., then the Permittee shall open a RCRA remedial and perform inspections on the waste every 2 hours.

VI.B.3.g. The Permittee shall actively manage waste undergoing sodium deactivation in the CPP-659 Room 308 or the CPP-659 Room 308 ARS, anytime the waste is not containerized, by ensuring that all the waste is containerized by the end of a shift, or end of operating day in the case where there are nultiple shifts in a 24-hour period.

VI.B.3.g.(1) If the Permittee cannot comply with Permit Condition VI.B.3.g., then the Permittee shall manage the waste as a waste pile in accordance with Module IV.

VI.B.4. Miscellaneous/Other Treatment Unit (T04) for Distillation of Sodium at CPP-666 FDP Area, Room SB-8

VI.B.4.a. Treatment of hazardous and mixed debris is authorized.

VI.B.4.b. The Permittee may only treat hazardous waste that is exempt from IDAPA58.01.05.008 (40 CFR § 264 Subpart CC), as provided in IDAPA 58.01.05.008 (40 CFR § 264.1082).

VI.B.4.c. Waste must meet the unit-specific waste acceptance criteria in Book 1, Attachment 2 of this Permit.

VI.B.4.d. Distillation of sodium shall be conducted in the Sodium Distillation System (SDS) which consists of the: Distillation Vessel (VES-FC-101) and Collection Vessel (VES-FC-85A).

VI.B.4.e. The Permittee may perform distillation of sodium in the SDS unit in the following vessels at the following maximum capacities:

UNIT	**MAXIMUM (T04) VOLUME OF HWMA/RCRA TREATMENT MEDIA**
SDS: VES-FC-101 VES-FC-85A	6.2 gallons (50 pounds) per day total

VI.B.4.f. The Distillation Vessel will be evacuated until a vaccum of 10Torr is achieved before the distillation furnace is turned on.

VI.B.4.g. The operating vacuum pressure for distillation treatment is 1 mTorr to 10 Torr.

VI.B.4.h. The operating temperature for distillation treatment is 500 °F to 1200 °F.

VI.B.4.i. The SDS will be maintained/operated under an inert atmosphere when waste is present.

VI.B.5. MACROENCAPSULATION at the RMWSF (CPP-1617) (T04)

Subject to the terms of this Permit, the Permittee may treat mixed waste in containers through macroencapsulation (either commercial or custom process) at the RMWSF, CPP-1617 building and fenced area.

TREATMENT METHODS	MAXIMUM T04 TREATMENT VOLUME
Building CPP-1617 and Fenced Area Macroencapsulation (custom)	9,600 gallons/day total volume treated by macroencapsulation at the CPP-1617 facility

VI.B.5.a. The treatment process, macroencapsulation, consists of equipment placed within the RMWSF to provide for container handling and contamination control to allow for the macroencapsulation of waste.

VI.B.5.b. The treatment of mixed waste through macroencapsulation (Process Code T04), is authorized with a throughput rate not to exceed 9,600 gallons per day, or 312 tons/year in the RMWSF, CPP-1617.

VI.B.5.c. The Permittee shall document in the Operating Record the amount of treatment via macroencapsulation performed each day when such treatment occurs and the total amount of treatment via macroencapsulation performed during the twelve (12) month period previous to that day.

VI.B.5.d. Wastes acceptable for the treatment process are defined as wastes that have been characterized as having the EPA HWNs defined in the current Part A Permit Application in Attachment 1 of this Permit.

VI.B.5.e. During the treatment process, the Permittee shall not place incompatible wastes, or wastes and materials that are incompatible, in the same container, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.177].

VI.B.5.f. The Permittee shall inspect the macroencapsulation activity in accordance with Permit Condition II.E and Attachment 4 of this Permit.

VI.B.5.g. The Permittee shall document inspection and operation of the macroencapsulation process in the Operating Record, in accordance with Permit Conditions I.Y and II.E.

VI.B.6. MISCELLANEOUS TREATMENT at RWMC WMF-1617 (X02 and X99) and WMF-1619 (X99)

VI.B.6.a. MISCELLANEOUS TREATMENT. The Permittee may conduct treatment activities on mixed waste/debris, in support of off-Site shipment or subsequent on-Site management, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.601],and as specified in Book 3A, Attachment 1, Section D of this Permit.

VI.B.6.a.1. The Permittee shall conduct all miscellaneous treatment activities in WMF-1617 Retrieval Area and Room 105 (Drum Packaging Stations) and Drum Compactor Area (Room 103) and in WMF-1619 as follows:

VI.B.6.a.1.a. X99 - Miscellaneous Treatment units at WMF-1617 consist of the following: Retrieval Area, 4 Drum Packaging Stations, and Drum Compactor. Additionally, X99 – Miscellaneous Treatment units at WMF-1619 consists of the following:
Retrieval Area (Decon Tent, and Box Transfer Pan area), 4 Drum Packaging Stations, and the Service Bay Area (Room 103)

Miscellaneous treatment in WMF-1617 includes any/all of the following, opening waste containers, venting containers, staging waste in the retrieval area associated with waste processing activities, removing waste from the container, staging empty drums and ancillaries, wiping sludge from drums, segregating/sorting waste, opening/crushing inner containers with liquid content, absorbent addition for liquids, segregation/treatment of WIPP prohibited items, sizing waste to fit into containers, and subsequently placing the waste into new containers.

The WMF-1619 Retrieval Area processing includes the following activities: staging waste in the retrieval area associated with waste processing activities, opening waste containers, removing the container from around the debris waste, segregating/sorting the loose debris into separate waste boxes, opening/crushing inner containers with liquid content, absorbent addition for liquids with the absorbed material being placed into the boxes of repackaged loose debris, segregation/treatment of WIPP prohibited items, staging empty containers, compacting/crushing empty containers with the excavator, and sizing waste to fit into containers. In addition, the large debris items may be transferred into the Decon Tent within the Retrieval Area for manual radiological decontamination. The decontamination process will include simple manual decontamination by operations personnel in PPE using hand spraying equipment, wiping by hand, brushes, carbon dioxide decon, etc. Absorbent addition to any liquid decontamination wastes will also be performed.

TREATMENT METHODS	MAXIMUM X99 TREATMENT VOLUME
WMF 1617 Retrieval Area includes: Sorting Table Treatment @ 50 drums treated/day (in secondary containment)	2,750 gallons/day
WMF-1617 Room 105 – 4 Drum Packaging Station (DPS) @ 100 drums/day	5,500 gallons/day
WMF-1617 Room 103 – Drum Compactor (absorbent addition)	10 gallons/day
WMF-1619 Retrieval Area includes: Box Transfer Pan Area treatment @ 2 large boxes treated per day Decon Tent treatment includes 2 large boxes treated per day	2,800 gallons/day 2,800 gallons/day
WMF-1619 – Room 105 – 4 Drum Packaging Stations @ 8 drums/day total treated	440 gallons/day
WMF-1619 Absorbent Addition in the following areas: Service Bay (Room 103) @ 50 gallons/day Retrieval Area - Box Transfer Pan @ 50 gallons/day Retrieval Area – Decon Tent @ 50 gallons/day	50 gallons/day 50 gallons/day 50 gallons/day

VI.B.6.a.1.b. X02 – Miscellaneous Mechanical Treatment units at WMF-1617 consists of the Drum Compactor

Miscellaneous mechanical treatment in WMF-1617 includes compaction/crushing of drum carcasses and/or liner.

TREATMENT METHODS	MAXIMUM X02 TREATMENT VOLUME
WMF-1617, Room 103 Drum Compactor @ 100 drums/day	5,500 gallons/day

VI.C. IGNITABLE OR REACTIVE WASTES

The Permittee shall take precautions to prevent accidental ignition or reaction of ignitable or reactive wastes in the miscellaneous treatment units, in accordance with IDAPA 58.01.05.008 [40 CFR §§ 264.17 and 264.601] and Attachments 1 and 6 of this Permit.

VI.C.1. The Permittee shall not perform treatment of waste containing pyrophoric radionuclides at the RWMC.

VI.D. INCOMPATIBLE WASTE

VI.D.1. The Permittee shall not place incompatible wastes or materials that are incompatible in the same treatment container, in accordance with IDAPA 58.01.05.008 [40 CFR §§ 264.177(a) and 264.601] and Attachments 1 and 6 of this Permit.

VI.D.2. The Permittee shall not place waste or materials in an unwashed treatment container that previously held an incompatible waste or material, in accordance with IDAPA 58.01.05.008 [40 CFR §§ 264.177(b) and 264.601] and Attachments 1 and 6 of this Permit.

VI.D.3. The Permittee shall not treat wastes that are incompatible with any waste or any materials stored or treated nearby, without separating or protecting the incompatible waste or material from commingling by means of a dike, berm, or wall, in accordance with IDAPA 58.01.05.008 [40 CFR §§ 264.17 and 264.601] and Attachments 1 and 6 of this Permit.

VI.D.4. The Permittee shall not place waste on the same base where incompatible wastes or materials were previously placed, unless the base has been decontaminated sufficiently to ensure compliance with IDAPA 58.01.05.008 [40 CFR §§ 264.17 and 264.601] and Attachments 1 and 6 of this Permit.

VI.E. SECONDARY CONTAINMENT SYSTEMS

VI.E.1. The Permittee shall ensure that the secondary containment systems for the miscellaneous treatment unit areas are free of cracks or gaps to prevent any migration of waste or accumulated liquid out of the system to the soil, groundwater, or surface water at any time, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.601] and Attachment 1 of this Permit.

VI.E.2. The boundaries of the secondary containment systems for the INTEC miscellaneous treatment units are dependent on the position of the cell drain valves during treatment. The primary and secondary containment boundaries and materials of construction are defined in Book 2, Appendix 1, of this Permit.

VI.E.3. The secondary containment for the Miscellaneous Treatments Units at the RWMC consists of secondary containment pans compatible with the waste that is being treated. Detailed information on the secondary containment systems are provided in Book 3A, Attachment 1, Section D, of this Permit.

VI.F. INSPECTION SCHEDULES AND PROCEDURES

The Permittee shall inspect the permitted miscellaneous treatment units in accordance with IDAPA 58.01.05.008 [40 CFR § 264.602], and the Inspection Schedules contained in Attachment 4 of this Permit, to assure compliance with the environmental performance standards of IDAPA 58.01.05.008 [40 CFR § 264.601].

VI.G. RESPONSE TO LEAKS OR SPILLS

VI.G.1. The Permittee shall immediately remove a miscellaneous treatment unit from service if there is a leak or spill from the treatment unit or its secondary containment, or if the system or secondary containment are unfit for use, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.601] and Attachment 1 of this Permit. The Permittee shall then:

VI.G.1.a. Immediately stop the flow of hazardous waste into the treatment system or secondary containment system and inspect the system to determine the cause of release, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.601] and Attachment 1 of this Permit.

VI.G.1.b. Within 24 hours, or as soon as practical, remove as much of the waste as is necessary to prevent further releases of hazardous waste to the environment and to allow inspection and repair of the treatment system, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.601] and Attachment 1 of this Permit.

VI.G.1.c. Immediately conduct a visual inspection of the release and based upon that inspection, prevent migration of and remove visible contamination from soil or surface water, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.601] and Attachment 1 of this Permit.

VI.G.1.d. If the collected material is a HWMA/RCRA-regulated material, manage it in accordance with all applicable requirements of IDAPA 58.01.05.005 through 58.01.05.008 [40 CFR Parts 261 through 264]. The Permittee shall note that if the collected material is discharged through a point source to U.S. waters or to a POTW, it is subject to requirements of the Clean Water Act. If the collected material is released to the environment, it may be subject to reporting under 40 CFR Part 302.

VI.G.1.e. The Permittee shall verbally report to the Director any release to the environment within 24 hours of its detection, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.196(d)(1) and (2)], Permit Condition I.T., and Attachment 1 of this Permit.

In addition to complying with the requirements of Permit Condition I.T. of this Permit, within thirty (30) calendar days of detecting a release to the environment from a miscellaneous treatment unit, the Permittee shall report the following to the Director in accordance with Permit Condition I.Y. of this Permit:

VI.G.1.f. The Permittee shall follow Permit Conditions VI.G.1.b., VI.G.1.c., and VI.G.1.d. of this Permit for de minimis spills into the secondary containment system from normal debris treatment processes (i.e., transfers into and out of tanks, condensate drippage, etc.) at INTEC and miscellaneous treatment within WMF-1617 and WMF-1619.

VI.G.2. The Permittee shall close the miscellaneous treatment unit, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.601] and Attachment 8 of this Permit, unless he satisfies the following requirements:

VI.G.2.a. For a release caused by a spill that has not damaged the integrity of the system, the Permittee shall remove the released waste and make any necessary repairs before returning the treatment system to service, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.601] and Attachment 1 of this Permit.

VI.G.2.b. For a release caused by a leak from a miscellaneous treatment unit to a secondary containment system, the Permittee shall repair the miscellaneous treatment unit prior to returning it to service, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.601] and Attachment 1 of this Permit.

VI.G.2.c. If the Permittee replaces a component of the miscellaneous treatment unit to eliminate the leak, that component must satisfy the requirements for new components, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.601].

VI.G.3. If the Permittee has repaired a miscellaneous treatment unit in accordance with Permit Condition VI.G.2. of this Permit, and the repair has been extensive (e.g., installation of an internal liner, repair of a ruptured primary containment or secondary containment vessel), the miscellaneous treatment unit must not be returned to service until the Permittee obtains a certification by a qualified, registered, professional engineer that the repaired system is capable of handling hazardous waste, without release, for the intended life of the system. The certification shall be submitted to the Director within seven (7) days after returning the miscellaneous treatment unit to use, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.196(f)], Permit Condition I.Y., and retained in accordance with Permit Conditions I.Z.1.c., I.Z.2., and II.J., and Attachment 1 of this Permit.

VI.H. RECORD KEEPING AND REPORTING

VI.H.1. The Permittee shall document the results of all certifications, inspections, and waste analyses in the Operating Record in accordance with Permit Conditions I.Z. and II.J. of this Permit.

VI.H.2. Releases from miscellaneous treatment units that are totally contained within a secondary containment system need not be reported. However, said releases shall be recorded in the Operating Record, in accordance with Permit Conditions I.Z. and II.J. of this Permit, and shall include :

VI.H.2.a. Date and time of the release;

VI.H.2.b. Miscellaneous treatment unit identification;

VI.H.2.c. Name and title of the employee documenting the release;

VI.H.2.d. Size and amount of the release; and

VI.H.2.e. All actions taken.

VI.H.3. The Permittee shall verbally report to the Director any release to the environment within 24 hours of its detection, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.196(d)(1) and (2)], Permit Condition I.T., and Attachment 1 of this Permit.

VI.H.4. In addition to complying with the requirements of Permit Condition I.T. of this Permit, within thirty (30) calendar days of detecting a release to the environment from a miscellaneous treatment unit, the Permittee shall report the following to the Director in accordance with Permit Condition I.Y. of this Permit:

VI.H.4.a. Likely route of migration of the release;

VI.H.4.b. Characteristics of the surrounding soil, including soil composition, geology, and hydrogeology, taking into account possible climatic effect on the soil characteristics;

VI.H.4.c. Results of any monitoring, sampling, or air dispersion modeling conducted in connection with the release;

VI.H.4.d. Proximity of downgradient drinking water, surface water, and populated areas; and

VI.H.4.e. Description of response action taken or planned.

VI.I. CLOSURE

The Permittee shall close the permitted miscellaneous treatment units, in accordance with IDAPA 58.01.05.008 [40 CFR Subpart G and 40 CFR § 264.603], the procedures set forth in Attachment 8, and Permit Condition II.K. of this Permit.

MODULE VII - MISCELLANEOUS UNIT STORAGE

VII.A. PERMITTED MISCELLANEOUS STORAGE UNITS

Subject to the terms of this Permit, the Permittee may stage and store mixed waste and debris, as specified in Permit Condition VII.B. of this Permit, in the miscellaneous drum/tray storage units in the WMF-1617 and WMF-1619 Retrieval Areas as described in Book 3A, Attachment 1 of this Permit.

VII.B. PERMITTED/PROHIBITED WASTE IN THE MISCELLANEOUS STORAGE UNITS

VII.B.1. The Permittee may provide miscellaneous staging and storage in the miscellaneous storage units only for those wastes identified for staging and storage in Book 3A, Attachment 1 of the Permit, and as follows:

VII.B.1.a. Storage and staging of mixed waste and/or debris is authorized.

VII.B.1.b. The Permittee may only store mixed waste/debris that is exempt from IDAPA 58.01.05.008 (40 CFR § 264 Subpart CC), as provided in IDAPA 58.01.05.008 (40 CFR § 264.1082).

VII.B.1.c. Waste must meet the unit-specific waste acceptance criteria in Book 3A, Attachment 2 of this Permit.

VII.B.2.d. The maximum permitted storage/staging capacity for mixed waste/debris is as follows:

UNIT	MAXIMUM (X99) STORAGE VOLUME
WMF-1617 Container/Tray Staging/Storage Units	17,730 gallons
WMF-1619 Retrieval Area Container/Tray Staging/Storage Areas	17,730 gallons

VII.C. IGNITABLE OR REACTIVE WASTES

The Permittee shall take precautions to prevent accidental ignition or reaction of ignitable or reactive wastes in the miscellaneous treatment units, in accordance with IDAPA 58.01.05.008 [40 CFR §§ 264.17 and 264.601] and Book 3A, Attachments 1 and 6 of this Permit.

VII.D. INCOMPATIBLE WASTE

VII.D.1. The Permittee shall not place incompatible wastes or materials that are incompatible in the same storage container, in accordance with IDAPA 58.01.05.008 [40 CFR §§ 264.177(a) and 264.601] and Book 3A, Attachments 1 and 6 of this Permit.

VII.D.2. The Permittee shall not place waste or materials in an unwashed container that previously held an incompatible waste or material, in accordance with IDAPA 58.01.05.008 [40 CFR §§ 264.177(b) and 264.601] and Book 3A, Attachments 1 and 6 of this Permit.

VII.D.3. The Permittee shall not store wastes that are incompatible with any waste or any materials stored or treated nearby, without separating or protecting the incompatible waste or material from commingling by means of a dike, berm, or wall, in accordance with IDAPA 58.01.05.008 [40 CFR §§ 264.177(c) and 264.601] and Book 3, Attachments 1 and 6 of this Permit.

VII.D.4. The Permittee shall not place waste on the same base where incompatible wastes or materials were previously placed, unless the base has been decontaminated sufficiently to ensure compliance with IDAPA 58.01.05.008 [40 CFR §§ 264.17 and 264.601] and Book 3, Attachments 1 and 6 of this Permit.

VII.E. SECONDARY CONTAINMENT SYSTEMS

VII.E.1. The Permittee shall ensure that the secondary containment systems for the WMF-1617 and WMF-1619 drum/tray miscellaneous storage units are designed in accordance with IDAPA 58.01.05.008 [40 CFR §§ 264.175(b) and 264.601] and Book 3A, Attachment 1 of this Permit.

VII.E.1.a. The base underlying the containers/trays must be free of cracks or gaps and be sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed.

VII.E.1.b. The base must be sloped or the containment system must be otherwise designed and operated to drain and remove liquids resulting from leaks, spills, or precipitation, unless the containers are elevated or are otherwise protected from contact with accumulated liquids.

VII.E.1.c. The containment system must have sufficient capacity to contain 10% of the volume of containers or the volume of the largest container, whichever is greater. Containers that do not contain free liquids need not be considered in this determination.

As detailed in Attachment 1, for waste boxes to be stored in Room 104 or the retrieval areas within WMF-1617 and WMF-1619 that have been verified through real time radiography to contain free liquids in the box that are less than 10% of the box volume, storage is allowed on 9' by 6' by 0'6" box transfer pans, 9' by 9' by 0'6" containment pans, or in the processing area secondary containment.

VII.E.1.d. Run-on into the containment system must be prevented unless the collection system has sufficient excess capacity in addition to that required in Permit Condition VII.E.1.c. to contain any run-on which might enter the system.

VII.E.1.e. Spilled or leaked waste and accumulated precipitation must be removed from the sump or collection area in as timely a manner as is necessary to prevent overflow of the collection system.

VII.E.2. The secondary containment for the Miscellaneous Storage Units at the RWMC consists of secondary containment pans compatible with the waste that is being treated. Detailed information on the secondary containment systems are provided in Book 3A, Attachment 1, Section D, of this Permit.

VII.F. INSPECTION SCHEDULES AND PROCEDURES

The Permittee shall inspect the permitted miscellaneous storage units weekly in accordance with IDAPA 58.01.05.008 [40 CFR § 264.174]. In addition, consistent with IDAPA 58.01.05.008 [40 CFR § 264.15(b)(4)], the units will be inspected every operational day day when waste is being moved into or out of the storage units as defined by the Inspection Schedules contained in Book 3A Attachment 4 of this Permit, to assure compliance with the environmental performance standards of IDAPA 58.01.05.008 [40 CFR § 264.601].

VII.G. RESPONSE TO LEAKS OR SPILLS

VII.G.1. The Permittee shall immediately remove a miscellaneous storage unit from service if there is a leak or spill from the unit or its secondary containment, or if the system or secondary containment are unfit for use, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.601 and 264.196] and Book 3A Attachment 1 of this Permit. The Permittee shall then:

VII.G.1.a. Immediately stop the flow of hazardous waste into the storage system or secondary containment system and inspect the system to determine the cause of release, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.601 and 264.196] and Book 3A Attachment 1 of this Permit.

VII.G.1.b. Within 24 hours, or as soon as practical, remove as much of the waste as is necessary to prevent further releases of hazardous waste to the environment and to allow inspection and repair of the storage system, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.601 and 264.196] and Book 3A Attachment 1 of this Permit.

VII.G.1.c. Immediately conduct a visual inspection of the release and based upon that inspection, prevent migration of and remove visible contamination from soil or surface water, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.601 and 264.196] and Book 3A Attachment 1 of this Permit.

VII.G.1.d. If the collected material is a HWMA/RCRA-regulated material, manage it in accordance with all applicable requirements of IDAPA 58.01.05.005 through 58.01.05.008 [40 CFR Parts 261 through 264]. The Permittee shall note that if the collected material is discharged through a point source to U.S. waters or to a POTW, it is subject to requirements of the Clean Water Act. If the collected material is released to the environment, it may be subject to reporting under 40 CFR Part 302.

VII.G.1.e. The Permittee shall verbally report to the Director any release to the environment within 24 hours of its detection, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.196(d)(1) and (2)], Permit Condition I.T., and Book 3A Attachment 1 of this Permit.

In addition to complying with the requirements of Permit Condition I.T. of this Permit, within thirty (30) calendar days of detecting a release to the environment from a miscellaneous storage unit, the Permittee shall report the following to the Director in accordance with Permit Condition I.Y. of this Permit:

VII.G.1.f. The Permittee shall follow Permit Conditions VII.G.1.b., VII.G.1.c., and VII.G.1.d. of this Permit for de minimis spills into the secondary containment system and miscellaneous storage units within WMF-1617 and WMF-1619.

VII.G.2. The Permittee shall close the miscellaneous storage units, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.601] and Book 3A Attachment 8 of this Permit, unless he satisfies the following requirements:

VII.G.2.a. For a release caused by a spill that has not damaged the integrity of the system, the Permittee shall remove the released waste and make any necessary repairs before returning the storage system to service, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.601] and Book 3A Attachment 1 of this Permit.

VII.G.2.b. For a release caused by a leak from a miscellaneous storage unit to a secondary containment system, the Permittee shall repair the miscellaneous storage unit prior to returning it to service, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.601] and Book 3A Attachment 1 of this Permit.

VII.G.2.c. If the Permittee replaces a component of the miscellaneous storage unit to eliminate the leak, that component must satisfy the requirements for new components, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.601].

VII.G.3. If the Permittee has repaired a miscellaneous storage unit in accordance with Permit Condition VII.G.2. of this Permit, and the repair has been extensive (e.g., installation of an internal liner, repair of a ruptured primary containment or secondary containment vessel), the miscellaneous storage unit must not be returned to service until the Permittee obtains a certification by an qualified professional engineer that the repaired system is capable of handling hazardous waste, without release, for the intended life of the system. The certification shall be submitted to the Director within seven (7) days after returning the miscellaneous storage unit to use, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.196(f)], Permit Condition I.Y., and retained in accordance with Permit Conditions I.Z.1.c., I.Z.2., and II.J., and Book 3A Attachment 1 of this Permit.

VII.H. RECORD KEEPING AND REPORTING

VII.H.1. The Permittee shall document the results of all certifications, inspections, and waste analyses in the Operating Record in accordance with Permit Conditions I.Z. and II.J. of this Permit.

VII.H.2. Releases from miscellaneous storage units that are totally contained within a secondary containment system need not be reported. However, said releases shall be recorded in the Operating Record, in accordance with Permit Conditions I.Z. and II.J. of this Permit, and shall include:

VII.H.2.a. Date and time of the release;

VII.H.2.b. Miscellaneous storage unit identification;

VII.H.2.c. Name and title of the employee documenting the release;

VII.H.2.d. Size and amount of the release; and

VII.H.2.e. All actions taken.

VII.H.3. The Permittee shall verbally report to the Director any release to the environment within 24 hours of its detection, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.196(d)(1) and (2)], Permit Condition I.T., and Book 3A Attachment 1 of this Permit.

VII.H.4. In addition to complying with the requirements of Permit Condition I.T. of this Permit, within thirty (30) calendar days of detecting a release to the environment from a miscellaneous storage unit, the Permittee shall report the following to the Director in accordance with Permit Condition I.Y. of this Permit:

VII.H.4.a. Likely route of migration of the release;

VII.H.4.b. Characteristics of the surrounding soil, including soil composition, geology, and hydrogeology, taking into account possible climatic effect on the soil characteristics;

VII.H.4.c. Results of any monitoring, sampling, or air dispersion modeling conducted in connection with the release;

VII.H.4.d. Proximity of downgradient drinking water, surface water, and populated areas; and

VII.H.4.e. Description of response action taken or planned.

VII.I. CLOSURE

The Permittee shall close the permitted miscellaneous storage units, in accordance with IDAPA 58.01.05.008 [40 CFR Subpart G and 40 CFR § 264.603], the procedures set forth in Book 3A Attachment 8, and Permit Condition II.K. of this Permit.

MODULE VIII - CORRECTIVE ACTION

VIII.A. APPLICABILITY

Sections 3004 (u) and 3004 (VII) of RCRA (42 U.S.C. §§ 6924 (u) and (v)); HWMA (Idaho Code § 39-4409 (5)); and IDAPA 58.01.05.008 [40 CFR § 264.101] require corrective action, as necessary, to protect human health and the environment for all releases of hazardous waste or hazardous waste constituents from any Solid Waste Management Unit (SWMU) at the facility, for all permits issued after November 8, 1984. A Federal Facility Agreement (FFA) under Section 120(e)(2) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA, 42 U.S.C. § 9620) is a mechanism to be used to investigate and clean up releases of hazardous wastes and hazardous waste constituents, as necessary, to protect human health and the environment. On December 4, 1991 the U.S. Environmental Protection Agency, the State of Idaho, and the United States Department of Energy (Parties) executed a Federal Facilities Agreement and Consent Order (FFACO) to integrate and satisfy the requirements of CERCLA and the corrective action requirements of RCRA. The FFACO is fully incorporated into this Permit and enforceable through this Permit as corrective action requirements. All investigations and cleanups included in the FFACO will meet or exceed all applicable or relevant and appropriate state and federal requirements including RCRA, HWSA, and HWMA to the extent required by CERCLA Section 121, 42 U.S.C. § 9621.

The corrective action requirements for the facility will be satisfied by the FFACO, except for those units not covered by the FFACO as set out in Permit Conditions VIII.A.1 to VIII.A.3.

VIII.A.1. Module VIII applies to those releases or threats of releases not included in the Statement of Work by the Parties to the FFACO.

VIII.A.2. In the event the FFACO is vacated, Module VIII applies to those units for which a Record of Decision has not been signed.

VIII.A.3. Module VIII applies to those releases or threats of releases which are discovered after the termination of the FFACO.

VIII.B. STANDARD CONDITIONS

VIII.B.1. The Permittee shall take corrective action as necessary to protect human health and the environment for those units listed in Tables 1 and 2 of this Permit.

VIII.B.2. Failure to submit the information required by the Permit Conditions identified within Module VIII of this Permit or falsification of any submitted information is grounds for termination of this Permit in accordance with IDAPA 58.01.05.012 [40 CFR § 270.43] and/or grounds for an enforcement action pursuant to Permit Condition I.B. of this Permit.

VIII.B.3. All plans, reports, notifications, and other submissions to the Director, as required by the Permit Conditions identified within Module VIII of this Permit, shall be signed and certified in accordance with Permit Condition I.W. of this Permit.

VIII.B.4. The Permittee shall submit, by certified mail, express mail, or hand delivery, a minimum of three (3) copies of each plan, report, notification, or other submissions, required by the Permit Conditions identified within Module VIII of this Permit, to the following addressees:

Please submit two (2) copies to:

Director, Idaho Department of Environmental Quality
c/o Administrator, State Waste Management & Remediation Program
1410 North Hilton
Boise, Idaho 83706-1255
Telephone No. (208) 373-0502

An additional copy to:

Chief, RCRA Permits Section WCM-127
U.S. Environmental Protection Agency
1200 Sixth Avenue
Seattle, Washington 98101

VIII.B.5. All plans and schedules, as required by the Permit Conditions in Module VIII of this Permit, upon written approval from the Director, shall be incorporated into Module VIII of this Permit in accordance with Permit Condition VIII.I. of this Permit. Any noncompliance with such approved plans and schedules shall be deemed noncompliance with this Permit.

VIII.B.6. The Permittee shall only receive extension(s) of the specified compliance schedule due date(s) for the submittal(s) required by the permit conditions within Module VIII of this Permit, upon written approval from the Director, in accordance with Permit Condition VIII.I. of this Permit.

VIII.B.7. If the Director determines that further actions beyond those provided by the permit conditions within Module VIII of this Permit, or changes to permit conditions stated herein, are warranted, the Director shall modify the permit condition(s) in Module VIII in accordance with Permit Condition VIII.I. of this Permit.

VIII.B.8. All raw data, such as laboratory reports, drilling logs, geological and hydrogeological investigations, bench-scale or pilot-scale data, and other supporting information gathered or generated during activities undertaken pursuant to the permit conditions in Module VIII of this Permit shall be maintained at the facility during the effective term of this Permit, including any reissued permits, and be readily available for inspection.

VIII.B.9. Should the FFACO be vacated, investigations completed under the FFACO/CERCLA remedial process may be utilized in complying with Module VIII of this Permit in so much as the terms “Preliminary Assessment,” “Site Investigation,” “Remedial Investigation,” “Feasibility Study,” “Remedial Design,” and “Remedial Action” may be utilized in lieu of the terms “RCRA Facility Investigation,” “Corrective Measures Study,” and “Remedy Selection,” where appropriate.

VIII.B.10. To the extent that work required by Module VIII of this Permit must be done under permit(s) or approval(s) pursuant to other federal, state, or local regulatory authorities, the Permittee shall use its best efforts to obtain such permits. For the purposes of this Permit condition the term “best efforts” shall, at a minimum, mean submittal of a complete application for the permit(s) and/or approval(s) no later than sixty (60) calendar days after the information necessary to prepare the application is available to the Permittee.

VIII.B.11. To the extent that work required by Module VIII of this Permit must be done on property not owned or controlled by the Permittee, the Permittee shall use its best efforts to obtain site access agreements from the present owner(s) of such property no later than two (2) weeks prior to the scheduled commencement of work. Best efforts shall mean, at a minimum, a certified letter from the Permittee to the current property owner(s) requesting access to such property and if a reply is received from the property owner, follow-up letters from the Permittee, as appropriate, to clarify the work contemplated and address the owner’s reasonable concerns. In the event that the Permittee cannot obtain the necessary access agreements, the Permittee shall notify the Director in writing. The Director shall, consistent with their legal authority, assist the Permittee in obtaining such agreements.

VIII.C. NOTIFICATION REQUIREMENTS FOR, AND ASSESSMENT OF, NEWLY-IDENTIFIED SOLID WASTE MANAGEMENT UNITS

VIII.C.1. The Permittee shall notify the Director in writing, by certified mail, express mail, or hand delivery, of any newly identified SWMU(s). The Permittee shall submit written notification to the Director within thirty (30) calendar days after discovery of newly identified SWMU(s). The notification shall include the location of the new SWMU(s) and information on the suspected or known wastes at the site.

VIII.C.2. Within ninety (90) calendar days after discovery of the newly identified SWMU(s), the Permittee shall submit a Solid Waste Management Unit Assessment Plan to the Director by certified mail, express mail or hand delivery.

VIII.C.3. The Solid Waste Management Unit Assessment Plan shall include the information or the means by which the following information shall be obtained:

VIII.C.3.a. Information concerning past and present operations at the unit(s); and

VIII.C.3.b. Any groundwater, surface water, soil (surface or subsurface strata), or air sampling and analysis data needed to determine whether a release of hazardous waste and/or hazardous constituent(s) from such unit(s) is likely to occur. The Solid Waste Management Unit Assessment Plan shall demonstrate that the sampling and analysis program, if applicable, is capable of yielding representative samples and must include parameters sufficient to identify migration of hazardous waste and/or hazardous constituent(s) from the newly identified Solid Waste Management Unit(s) to the environment.

VIII.C.4. The Permittee shall receive written approval from the Director for the Solid Waste Management Unit Assessment Plan; or

VIII.C.5. The Permittee shall receive written notice from the Director of the Solid Waste Management Unit Assessment Plan's deficiencies and the written notice shall specify a due date for submittal of a revised assessment plan; or

VIII.C.6. The Permittee shall receive written notice from the Director of the revisions incorporated, by the Director, in the Solid Waste Management Unit Assessment Plan. The revised assessment plan shall become the approved Solid Waste Management Unit Assessment Plan.

VIII.C.7. The Solid Waste Management Unit Assessment Plan, as approved by the Director, as specified in Permit Conditions VIII.C.4., VIII.C.5., or VIII.C.6. of this Permit, shall be incorporated within Module VIII of this Permit in accordance with Permit Condition VIII.I. of this Permit. The Permittee shall be notified in writing of the approval of the permit modification.

VIII.C.8. The Permittee shall implement the approved Solid Waste Management Unit Assessment Plan within thirty (30) calendar days after receipt of written notice of the permit modification approval specified in Permit Condition VIII.C.7. of this Permit.

VIII.C.9. The Solid Waste Management Unit Assessment Plan shall contain a schedule, which includes the submission date for a Solid Waste Management Unit Assessment Report, not to exceed thirty (30) calendar days after the completion of the requirements identified in the approved Solid Waste Management Assessment Plan referenced in Permit Condition VIII.C.8. of this Permit.

VIII.C.10. The Solid Waste Management Unit Assessment Report shall describe all results obtained from the implementation of the approved Solid Waste Management Unit Assessment Plan. At a minimum, the Report shall provide the following information for each newly identified SWMU:

VIII.C.10.a. The location of each newly-identified SWMU(s) in relation to any/all previously identified SWMUs, building numbers, or other descriptive landmarks;

VIII.C.10.b. The type and function of the unit, including general dimensions and a structural description;

VIII.C.10.c. The period during which the unit was operated; and

VIII.C.10.d. All wastes that were or are being managed at the SWMU, including results of any sampling and analysis used to determine whether releases of hazardous wastes and/or hazardous constituent(s) have occurred, are occurring, or are likely to occur from the unit.

VIII.C.11. Based on the results of the Solid Waste Management Unit Assessment Report, the Director shall determine the need for further investigations at specific unit(s) included in the Solid Waste Management Unit Assessment. If the Director determines that such investigations are needed, the Director shall require the Permittee to prepare a plan for such investigations. This plan shall be reviewed for approval in accordance with the requirements of Permit Condition VIII.D. of this Permit.

VIII.C.12. The Permittee shall notify the Director, in writing by certified mail, express mail, or hand delivery, of any release(s) of hazardous waste and hazardous waste constituent(s) discovered during the course of groundwater monitoring, field investigation, environmental auditing, or other activities undertaken during the RCRA Facility Investigation. The written notification shall be received by the Director no later than fifteen (15) calendar days after discovery. Such releases may be from already documented or newly identified units. The Director may require further investigation of the newly identified releases. Further investigation, if required, shall be performed in accordance with the requirements of Permit Condition VIII.D. of this Permit.

VIII.D. RCRA FACILITY INVESTIGATION

The Permittee shall conduct a RCRA Facility Investigation to determine the nature and extent of known and suspected releases of hazardous waste and/or hazardous constituent(s) from each Solid Waste Management Unit at the facility and to gather data to support the Corrective Measures Study. The Permittee shall conduct the RCRA Facility Investigation in accordance with the requirements specified in Appendix A of this Permit.

VIII.D.1. The Permittee shall prepare and submit the RCRA Facility Investigation, Task I Report, as specified in Appendix A of this Permit for each SWMU identified in Table 1 of this Permit in which a release of hazardous waste or hazardous constituent(s) has not been documented.

VIII.D.1.a. The Permittee shall conduct a RCRA Facility Investigation - Phase I, in accordance with Appendix A, Task I.D of this Permit, for each SWMU in which a release of hazardous waste or hazardous constituent(s) has not been documented, as specified in Table 1 of this Permit.

VIII.D.1.b. The Permittee shall evaluate the RCRA Facility Investigation - Phase I and identify SWMU(s) that require additional investigation under the RCRA Facility Investigation Phase II (Task II and Task III).

VIII.D.1.c. Based on the data collected in the RCRA Facility Investigation - Phase I, the Permittee shall prioritize each SWMU, identified for additional investigation pursuant to Permit Condition VIII.D.1.b. of this Permit, according to the SWMU's potential for imminent threat to human health and the environment.

VIII.D.1.d. Based on the classification of the SWMU (s), pursuant to Permit Condition VIII.D.1.c. of this Permit, the Permittee shall identify a need, if applicable, and recommend an alternate RCRA Facility Investigation schedule(s) for the additional investigation of any SWMU's potential for imminent threat to human health and the environment.

VIII.D.1.e. The Director may modify the RCRA Facility Investigation schedules, specified in Tables 4, 5, and 6 of this Permit, pursuant to Permit Conditions VIII.I.1. and VIII.I.4. of this Permit, to allow additional investigations under the RCRA Facility investigation - Phase II (Task II and III) to be conducted according to the prioritization of the Solid Waste Management Units, in accordance with Permit Conditions VIII.D.1.c. and VIII.D.1.d. of this Permit.

VIII.D.1.f. The Permittee shall prepare and submit the results of the RCRA Facility Investigation - Phase I in the Task I Report.

VIII.D.2. The Permittee shall conduct the RCRA Facility Investigation, for all of the SWMUs listed in Table 1 of this Permit, in accordance with the schedule specified in Table 4 of this Permit.

VIII.D.3. The Permittee shall conduct a RCRA Facility Investigation, excluding the RCRA Facility Investigation -Phase I requirements, as specified in Appendix A of this Permit, for each SWMU, specified in Table 2 of this Permit, in which a release of hazardous waste or hazardous waste constituent(s) has been documented. The RCRA Facility Investigation shall be conducted concurrently with the RCRA Facility Investigation - Phase I specified in Permit Condition VIII.D.1.a. of this Permit.

VIII.D.4. The Permittee shall conduct the RCRA Facility Investigation for the SWMUs specified in Table 2 of this Permit in accordance with the schedule specified in Table 5 of this Permit.

VIII.D.5. The RFI compliance schedules specified in Tables 4 and 5 of this Permit may be modified in accordance with Permit Condition VIII.I. of this Permit.

VIII.E. INTERIM MEASURES

VIII.E.1. If during the course of any activity initiated in compliance with the permit conditions of Module VII of this Permit, the Director determines that a release or potential release of hazardous waste and/or constituent(s) from an SWMU poses a threat to human health and/or the environment, the Director may require the Permittee to perform specific interim measures.

VIII.E.2. The Director shall notify the Permittee in writing of the requirement to perform the interim measures specified in the Interim Measures Plan, in accordance with Permit Condition VIII.E.3. of this Permit. The Permittee shall comply with the specified Interim Measures Plan alternative (Permit Condition VIII.E.3.a. or VIII.E.3.b. of this Permit) designated in the written notification.

VIII.E.3. The Permittee shall perform the requirements of the Interim Measures Plan in accordance with the alternative specified in either Permit Condition VIII.E.3.a. or VIII.E.3.b. of this Permit.

VIII.E.3.a. The Director shall determine specific actions to implement the interim measures. The Director shall provide an Interim Measures Plan with the written notification specified in Permit Condition VIII.E.2. of this Permit. or;

VIII.E.3.b. Within thirty (30) calendar days after receipt of written notification requiring the Interim Measures Plan as specified in Permit Condition VIII.E.2. of this Permit, the Permittee shall provide, by certified mail, express mail, or hand delivery, the Interim Measures Plan to the Director for approval.

VIII.E.4. The Interim Measures Plan shall identify specific action(s) to be taken to implement the interim measures and a schedule for implementing the required measures. At a minimum, the Interim Measures Plan shall consider, but not be limited to, the following factors:

VIII.E.4.a. Time required to develop and implement a final remedy;

VIII.E.4.b. Actual and potential exposure of human and environmental receptors;

VIII.E.4.c. Actual and potential contamination of drinking water supplies and sensitive ecosystems;

VIII.E.4.d. The potential for further degradation of the medium absent of interim measures;

VIII.E.4.e. Presence of hazardous waste that may pose a threat of release;

VIII.E.4.f. Presence and concentration of hazardous waste including hazardous waste constituent(s) in solids that have the potential to migrate to groundwater or surface water;

VIII.E.4.g Weather conditions that may affect the current levels of contamination;

VIII.E.4.h. Risks of fire, explosion, or accident; and

VIII.E.4.i. Other situations that may pose threats to human health and/or the environment.

VIII.E.5. The Interim Measures Plan shall be incorporated into this Permit in accordance with Permit Condition VIII.H. of this Permit.

VIII.F. DETERMINATION OF NO FURTHER ACTION

VIII.F.1. Based on the results of the RFI and other relevant information, the Permittee may petition the Director to terminate all or parts of the Corrective Action for Solid Waste Management Units Schedule of Compliance.

VIII.F.1.a. This petition shall contain information demonstrating that there are no releases of hazardous waste including hazardous waste constituents from SWMU(s) at the facility that pose a threat to human health and the environment.

VIII.F.1.b. If, based upon a review of the Permittee's petition the results of the RFI, and other information the Director determines that releases or suspected releases which were investigated either are non-existent or do not pose a threat to human health and the environment, the Director shall grant the request to terminate all or part of the Corrective Action for Solid Waste Management Units Schedule of Compliance.

VIII.F.2. A determination of no further action shall not preclude the Director from requiring continued or periodic monitoring of air, soil, ground water, or surface water, when site specific circumstances indicate that a release of hazardous waste including hazardous waste constituents are likely to occur, if necessary to protect human health and the environment.

VIII.F.3. A determination of no further action shall not preclude the Director from requiring further investigations, studies, or remediation at a later date, if new information or subsequent analysis indicates that a release or the likelihood of a release from a SWMU at the facility is likely to pose a threat to human health or the environment. In such a case, the Director shall initiate a modification to the Corrective Action for Solid Waste Management Units Schedule of Compliance according to the procedures in Permit Condition VIII.I. to rescind the determination made in accordance with Permit Condition VIII.F.1.

VIII.G. CORRECTIVE MEASURES STUDY AND IMPLEMENTATION

VIII.G.1. Based on the results of the RCRA Facility Investigation, the Permittee shall identify, screen, and develop the alternative or alternatives for removal, containment, treatment and/or other redemption of the contamination. The Permittee shall conduct the Corrective Measures Study in accordance with the requirements specified in Appendix B (Task I, II, III, and V) of this Permit.

VIII.G.2. Upon the Director's approval of the Corrective Measures Study, pursuant to Permit Condition VIII.G.1. of this Permit, the Permittee shall prepare and submit, to the Director, by certified mail, express mail, or hand delivery, for approval, the Corrective Measures Implementation Program Plan, in accordance with the requirements specified in Appendix B, Task V.A. of this Permit.

VIII.G.3. Upon the Director's approval of the Corrective Measures Implementation Program Plan, pursuant to Permit Condition VIII.G.2. of this Permit, the Permittee shall conduct the Corrective Measures Implementation Program Plan in accordance with the requirements specified in Appendix B, Task V of this Permit [the corrective measures design (Task V.B.) and construction of the corrective measures (Task V.C.)].

VIII.G.4. The Permittee shall conduct the Corrective Measures Study and prepare the Corrective Measures Implementation Program Plan, as specified in Permit Conditions VIII.G.1. and VIII.G.2. of this Permit, in accordance with the schedule specified in Table 6 of this Permit.

VIII.G.5. The Permittee shall prepare and submit, to the Director for approval a compliance schedule for conducting the Corrective Measures Implementation Program Plan, as required by Permit Condition VIII.G.3. of this Permit.

VIII.G.5.a. The Permittee shall provide a justification for each compliance date in the compliance schedule based on the complexity of the Corrective Measures Implementation Program Plan and reasonable contract and administrative time requirements.

VIII.G.5.b. On or before the compliance date for submittal of the draft Corrective Measures Implementation Program Plan specified in Table 6 of this Permit, the Permittee shall submit the compliance schedule and subsequent justification, pursuant to Permit Condition of this Permit, by certified mail, express mail, or hand delivery, to the Director for approval.

VIII.G.5.c. Upon the Director's approval of the Corrective Measures Implementation Program

Plan compliance schedule, the compliance schedule shall be incorporated into this Permit concurrently with the final Corrective Measures Implementation Program Plan, in accordance with IDAPA 58.01.05.012 [40 CFR §§ 270.41 and 270.42].

VIII.G.6. The Permittee shall conduct the Corrective Measures Implementation, as specified in Permit Condition VIII.G.3. of this Permit, in accordance with Permit Condition VIII.G.5. of this Permit.

VIII.G.7. The Corrective Measures Study and Corrective Measures Implementation compliance schedules, specified in Table 6 of this Permit, shall be modified in accordance with Permit Condition VIII.I. of this Permit.

VIII.H. REPORTING REQUIREMENTS

VIII.H.1. The Permittee shall submit to the Director signed semiannual progress reports of all activities (*i.e.*, Solid Waste Management Unit Assessments, Interim Measures, RCRA Facility Investigations, and/or Corrective Measures Studies) conducted pursuant to the permit conditions of Module VIII of this Permit. The Permittee shall initially submit the semiannual progress reports no later than ninety (90) calendar days after being notified in writing that the approved Solid Waste Management Unit Assessment Plan has been incorporated within Module VIII of this Permit, through a permit modification in accordance with Permit Condition VIII.I. of this Permit.

VIII.H.2. At a minimum, the semiannual progress reports shall contain the following:

VIII.H.2.a. A description of the work completed;

VIII.H.2.b. Summaries of all findings and summaries of all raw data;

VIII.H.2.c. Summaries of all problems or potential problems encountered during the reporting period and actions taken or to be taken to rectify problems; and

VIII.H.2.d. Projected work for the next reporting period.

VIII.H.3. The Permittee shall maintain copies of other reports, drilling logs, etc. at the facility during the effective period of this Permit. The Permittee shall provide copies of the said reports, logs, etc. to the Director upon request.

VIII.H.4. As specified under Permit Condition VIII.F.3. of this Permit, the Director may require the Permittee to conduct new or more extensive assessments, investigations, or studies, as needed, based on information provided in these progress reports or other supporting information.

VIII.I. MODIFICATION OF THE CORRECTIVE ACTION SCHEDULE OF COMPLIANCE

Requests for modifications of the final compliance dates pursuant to the permit conditions in Module VIII of this Permit shall be submitted to the Director for approval, in accordance with IDAPA 58.01.05.012 [40 CFR §§ 270.41 and 270.42]. The Corrective Action Schedule of Compliance (Module VIII of this Permit) final compliance dates subject to modification include:

VIII.I.1. The compliance date(s), as specified in Table 5 of this Permit, for submittal of the RCRA Facility Investigation Final Report (Appendix A, Task V);

VIII.I.2. The compliance date(s), as specified in Table 6 of this Permit for submittal of the Corrective Measures Study Report (Appendix A, Task I, II, & III);

VIII.I.3. The compliance date(s), as specified in Table 6 of this Permit, for submittal of the final Corrective Measures Implementation Program Plan (Appendix A, Task V.A.), in accordance with Permit Condition VIII.F.2. of this Permit;

VIII.I.4. Once established in accordance with Permit Condition VIII.G.5. of this Permit, the compliance date(s) for submittal of the corrective measures final (100% completion) design and construction plans, in accordance with Permit Condition VIII.G.3. of this Permit;

VIII.I.5. Compliance dates, as specified in Tables 5 and 6 of this Permit, for implementing the approved plans and/or reports; and

VIII.I.6. Compliance dates for quarterly submittal of progress reports.

VIII.I.7. Pursuant to IDAPA 58.01.05.012 [40 CFR § 270.42(a)], the compliance schedules specified in Tables 5 and 6 of this Permit, shall be modified if the Director determines that good cause exists for which the Permittee had no control and for which there is no reasonable available remedy.

VIII.I.8. Failure to obtain adequate funds or appropriations to conduct the Corrective Measures Implementation Program Plan, pursuant to Permit Condition VIII.G.3. of this Permit, shall be considered good cause for modification of the compliance schedule(s), Table 6 of this Permit, as specified in Permit Condition VIII.I.7. of this Permit, only in accordance with the following permit conditions:

VIII.I.8.a. The Permittee shall use its best effort to secure all funds that may be required for implementation of the requirements specified in Permit Condition VIII.G.3. of this Permit pursuant to the compliance schedule in Table 6 of this Permit;

VIII.I.8.b. If necessary, the Permittee shall seek, by the most expeditious means possible, appropriations from the U.S. Congress for funding to achieve the compliance schedule in Table 6 of this Permit, in accordance with Sections 1-4 and 1-5 of executive Order 12088 as implemented by the Office of Management and Budget Circular A-106, as amended. Section 1-5 of executive Order 12088 states "The head of each executive agency shall ensure that sufficient funds for compliance with applicable pollution control standards are requested in the Agency budget."

VIII.I.8.c. Within five (5) calendar days after failing to obtain adequate funding, the Permittee shall submit to the Director, by certified mail, express mail, or hand delivery, a written request and justification, for modification of the compliance schedule specified in Table 6 of this Permit. The written justification shall demonstrate that good cause exists, pursuant to the permit conditions under VIII.I.8. of this Permit. The Permittee shall also provide an alternate schedule of compliance for conducting the Corrective Measures Implementation for the subsequent fiscal year.

VIII.I.8.d. Upon evaluation, if the Director determines that good cause exists in accordance with the permit conditions under VIII.I.8. of this Permit, the Director shall modify the compliance schedule.

VIII.I.8.e. For any approved modification, the compliance schedule specified in Table 6 of this Permit shall be modified to provide relief from the original compliance schedule time-frames only for the subsequent fiscal year. All successive compliance dates after the end of such fiscal year shall be modified to reflect the original time-frames specified prior to the modification request under Permit Condition VIII.I.8. of this Permit.

VIII.I.9. Failure to obtain adequate funds or appropriations from Congress shall not, in any way, release the Permittee from it’s obligation to comply with the Corrective Measures Implementation (as required by Permit Condition VIII.G.3 of this Permit) or any other requirement of this Permit or RCRA.

VIII.I.10. If adequate funds for Corrective Measures Implementation are not available, the Director reserves the right to pursue any action or actions deemed necessary to protect human health and the environment, not excluding judicial recourse or termination of this Permit.

VIII.I.11. The Permittee shall submit a request for modifications of the interim compliance dates that do not affect the final compliance dates, to the Director for approval. If the Director approves the interim compliance date modifications, Tables 4, 5 and/or 6 of this Permit shall incorporate the modified compliance dates as approved and such change shall not be considered a permit modification under IDAPA 58.01.05.012 [40 CFR § 270.41].

APPENDIX A - RCRA FACILITY INVESTIGATION

TASK I: DESCRIPTION OF CURRENT CONDITIONS

The Permittee shall submit for the Director's approval a report providing the background information pertinent to the Facility (Idaho National Laboratory), contamination and interim measures as set forth below. The data gathered during any previous investigations or inspections and other relevant data shall be included.

I.A. BACKGROUND INFORMATION

I.A.1. Map(s), consistent with the requirements set forth in IDAPA 58.01.05.012 [40 CFR § 270.14(b)(19)] and be of sufficient detail and accuracy to locate and report all current and future work performed at the site, depicting the following:

I.A.1.a. All solid or hazardous waste treatment, storage or disposal areas including all solid waste management units, active after November 19, 1980;

I.A.1.b. All known past solid or hazardous waste treatment, storage or disposal areas including solid waste management units regardless of whether they were active on November 19, 1980;

I.A.1.c. All known past or present product and waste underground tanks or piping;

I.A.1.d. The location of all production and groundwater monitoring wells. These wells shall be clearly labeled and ground and top of casing elevations and construction details included.

I.A.2. A history and description of ownership and operation, solid and hazardous waste generation, treatment, storage, and disposal activities at the Facility;

I.A.3. Approximate dates or periods of past product (to aid in the evaluation of determining the source for any contamination) and waste spills, type of materials spilled, and a description of the response actions conducted, including any inspection reports or technical reports generated as a result of the response; and

I.A.4. A list of documents and studies prepared for the Facility.

I.B. NATURE, EXTENT, AND RATE OF MIGRATION OF CONTAMINATION

The Permittee shall prepare and submit for the Director's approval a preliminary report describing the existing information on the nature and extent of contamination.

I.B.1. The report shall summarize all possible source areas of contamination. This, at minimum, should include all regulated units, solid waste management units, waste and product spill areas, and other suspected source areas of contamination. For each area, the Permittee shall identify the following:

I.B.1.a. Location of area (on a Facility map);

I.B.1.b. Quantities of solid and hazardous wastes;

I.B.1.c. Hazardous waste or hazardous waste constituents, to the extent known; and

I.B.1.d. Identification of areas where additional information is necessary.

I.B.2. The report shall include an assessment and description of the existing degree and extent of contamination. This should include:

I.B.2.a. Available monitoring data and qualitative information on locations and levels of contamination at the Facility;

I.B.2.b. All potential migration pathways including information on geology, pedology, hydrogeology, physiography, hydrology, hydrogeochemistry, water quality, meteorology, and air quality; and

I.B.2.c. The potential impact(s) on human health and the environment, including demography, groundwater and surface water use, and land use.

I.C. PAST/CURRENT ACTIVITIES

The Permittee shall document investigatory and/or remedial activities which were or are being undertaken at the Facility. This shall include:

I.C.1. Objectives of these activities; how the activities are mitigating potential threats to human health and the environment and/or are consistent with and integrated into RCRA Facility Investigation work at the Facility;

I.C.2. Design, construction, operation, and maintenance requirements; and

I.C.3. Schedules for all activities, including progress reports.

I.D. RCRA FACILITY INVESTIGATION-PHASE I

I.D.1. For each SWMU in which a release of hazardous waste or hazardous waste constituents has not been documented, as specified on Table 1 of this Permit, the Permittee shall conduct a RCRA Facility Investigation-Phase I to document a release or absence of a release of hazardous waste or hazardous waste constituents.

I.D.2. The Permittee shall prepare and submit a RCRA Facility Investigation-Phase I Workplan to the Director for approval. The RCRA Facility Investigation-Phase I Workplan shall include the development of several plans, which shall be prepared concurrently. During the RCRA Facility Investigation, it may be necessary to revise the RCRA Facility Investigation-Phase I Workplan to increase or decrease the amount of information collected to accommodate the Facility specific situation. The Facility Investigation-Phase I Workplan shall include, but not be limited to the following:

I.D.2.a. RCRA Facility Investigation-Phase I Project Management Plan. The Permittee shall prepare a Project Management Plan which shall include a discussion of the technical approach, schedules, and personnel. The Project Management Plan shall evaluate each Solid Waste Management Unit based on its actual or potential threat to human health and the environment and prioritize the investigatory and/or remedial activities accordingly. The Project Management Plan shall also include a description of qualifyications of personnel performing or directing the RCRA Facility Investigation, including contractor personnel. This plan shall also document the overall management approach to the RCRA Facility Investigation.

I.D.2.b. RCRA Facility Investigation-Phase I Data Collection Quality Assurance Plan. The Permittee shall prepare a plan documenting all monitoring procedures, including; sampling, field measurements and sample analyses performed during the investigation to characterize the environmental setting, source, and contamination, so as to ensure that all information, data and resulting decisions are technically sound, statistically valid, and properly documented. The Data Quality Assurance Plan shall include, but not be limited to, the following:

(1) A Data Collection Strategy section which shall include, but not be limited to; the level of precision and accuracy for all data (factors which should be considered include the environmental conditions at the time of sampling, number of sampling points, and the representatives of selected media and selected analytical parameters), a description of methods and procedures to assess the precision, accuracy and completeness of the measurement data, a description of the measures to be taken to assure that data generated by the Permittee and outside laboratories or consultants during the RCRA Facility Investigation-Phase I can be compared to each other (these data shall be comparable during the entire RCRA Facility Investigation), and details relating to the schedules and information to be provided in quality assurance reports which shall include, but not be limited to:

- Periodic assessment of measurement data accuracy, precision, and completeness;
- Results of performance audits;
- Results of system audits; and
- Potential quality assurance problems and recommended solutions.

(2) A Sample Collection section which shall include, but not be limited to a discussion of, selecting appropriate sampling locations (depths, etc.), providing a statistically significant number of sampling sites, determining conditions under which sampling should be conducted, determining which media are to be sampled (*e.g.*, groundwater, air, soil, sediment, etc.), determining which parameters are to be measured and where, selecting the frequency of sampling and length of sampling period, selecting the type of samples (*e.g.*, composites Versus grabs) and number of samples to be collected, measures to be taken to prevent contamination of the sampling equipment and cross contamination between sampling points, selecting appropriate sample containers, sample preservation, chain-of-custody (*e.g.*, standardized field tracking reporting forms to establish sample custody in the field prior to and during shipment as well as prepared sample labels containing all information necessary for effective sample tracking), and documenting field sampling operations and procedures, including:

- Documentation of procedures for preparation of reagents or supplies which become an integral part of the sample (*e.g.*, filters, and absorbing reagents);
- Procedures and forms for recording the exact location and specific considerations associated with sample acquisition;
- Documentation of specific sample preservation method;

- Calibration of field devices;
- Collection of replicate samples;
- Submission of field-biased blanks, where appropriate;
- Potential interferences present at the Facility;
- Construction materials and techniques, associated with monitoring wells and piezometer;
- Field equipment listing and types of sample containers;
- Sampling order; and
- Decontamination procedures.

(3) A Field Measurements section which shall include, but not be limited to, a discussion of selecting appropriate field measurements (locations, depth, etc.), providing a statistically significant number of field measurements, measuring all necessary ancillary data, determining conditions under which field measurements should be conducted, determining which media are to be addressed by appropriate field measurements (*e.g.*, groundwater, air, soil, sediment, etc.), determining which parameters are to be measured and where, selecting the frequency of field measurements and length of field measurements period, and documenting field measurements and procedures, including:

- Procedures and forms for recording raw data and the exact location, time and Facility-specific considerations associated with the data acquisition;
- Calibration of field devices;
- Collection of replicate measurements;
- Submission of field-biased blanks;
- Potential interferences present at the Facility;
- Construction associated with monitoring wells and piezometers used to collect field data;
- Field equipment listing;
- Order in which field measurements were made; and
- Decontamination procedures.

(4) A Sample Analysis section which shall specify: chain-of-custody procedures [*i.e.*, identification of a responsible party to act as sample custodian at the laboratory who is “Facility authorized” to sign for incoming field samples - obtain documents of shipment - and verify the data entered onto the sample custody records, provision for a laboratory sample custody log consisting of serially numbered standard lab-tracking report sheets; and specification of laboratory sample custody procedures (*e.g.*, for sample handling, storage, and disbursement for analysis)]; sample storage procedures and storage times; sample preparation methods; analytical procedures (*i.e.*, scope and application of the procedure, sample matrix, potential interferences, precision and accuracy of the methodology, and method detection limits); calibration procedures and frequency; data reduction, validation and reporting; preventative maintenance procedures and schedules; corrective action (for laboratory problems); turnaround time; and internal quality control checks, laboratory performance and systems audits and frequency, including:

- Method blank(s);
- Laboratory control sample(s);
- Calibration check sample(s);
- Replicate sample(s);

- Matrix-spiked sample(s);
- “Blind” quality control sample(s);
- Control charts;
- Surrogate samples;
- Zero and span gases; and
- Reagent quality control checks.

I.D.2.c. RCRA Facility Investigation-Phase I Data Management Plan. The Permittee shall develop and initiate a RCRA Facility Investigation-Phase I Data Management Plan to document and track investigation data and results. This plan shall identify and set up data documentation materials and procedures, project file requirements, and project related progress reporting procedures and documents. The plan shall also provide the format to be used to present the raw data and conclusions of the investigation.

- A Data Record section which shall include; unique sample or field measurement code, sampling or field measurement location and sample or measurement type, sampling or field measurement raw data, laboratory analysis ID number, and result of analysis.
- A Tabular Display section which shall present; raw data, results for each medium or each constituent monitored, data reduction for statistical analysis, sorting of data by potential stratification factors (*e.g.*, location, soil layer, topography), and summary data.
- A Graphical Format section (*e.g.*, bar graphs, line graphs, area or plan maps, isopleth plots, cross-sectional plots or transects, three dimensional graphs, etc.) which shall present: sampling location and sampling grid; boundaries of sampling area, and areas where additional data is required; levels and extent of contamination at each sampling location; contamination levels, averages, and maxima; changes in concentration in relation to distance from the source, time, depth, or other parameters; and features affecting intramedia transport and potential receptors.

I.D.2.d. RCRA Facility Investigation-Phase I Health and Safety Plan. The Permittee shall prepare a Health and Safety Plan, which shall include:

- Facility description including delineation of work area and availability of resources such as roads, water supply, electricity, and telephone service;
- Known hazards and risks associated with each activity conducted;
- Key personnel and alternatives responsible for site safety, response operations, and for protection of public health;
- Levels of protection to be worn by personnel in work areas (and justification);
- Procedures to control site access; and
- The Facility Health and Safety Plan shall be consistent with all applicable federal, state, and local regulations such as: NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site activities (1985), EPA Order 1440.1 - Respiratory Protection, EPA Order 1440.3 - Health and Safety Requirements for Employees engaged in Field activities, Facility Contingency Plan, EPA Standard Operating Guide (1984), OSHA regulations (*i.e.*, 29 CFR Parts 1910 and 1926 including Interim Final Rule (29 CFR Part 1910) published in the December 19, 1986 Federal Register), state and local regulations, and other applicable EPA guidance.

I.D.3. Determination of Further Action

I.D.3.a. The Permittee shall provide recommendations for further investigation under a RCRA Facility Investigation-Phase I at the identified Solid Waste Management Unit(s) based on documentation of a known or prior release from the specified SWMU(s) in the final Task I report.

I.D.3.b. The list of recommended SWMU(s) for further investigation under a RCRA Facility Investigation-Phase I shall be prioritized based on the actual or potential threat to human health or the environment.

TASK II: RCRA FACILITY INVESTIGATION-PHASE II WORKPLAN

The Permittee shall prepare a RCRA Facility Investigation-Phase II Workplan. This RCRA Facility Investigation-Phase II Workplan shall include the development of several plans, which shall be prepared concurrently. During the RCRA Facility Investigation, it may be necessary to revise the RCRA Facility Investigation-Phase II Workplan to increase or decrease the amount of information collected to accommodate the facility-specific situation. The RCRA Facility Investigation-Phase II Workplan shall include, but not be limited to, the following:

II.A. PROJECT MANAGEMENT PLAN

The Permittee shall prepare a Project Management Plan which shall include a discussion of the technical approach, schedules, budget, and personnel. The Project Management Plan shall evaluate each SWMU based on it's actual or potential threat to human health and the environment and prioritize the investigator and/or remedial activities accordingly. The Project Management Plan shall also include a description of qualifications of personnel performing or directing the RCRA Facility Investigation, including contractor personnel. This plan shall also document the overall management approach to the RCRA Facility Investigation.

II.B. DATA COLLECTION QUALITY ASSURANCE PLAN

The Permittee shall prepare a plan documenting all monitoring procedures, including: sampling, field measurements and sample analyses performed during the investigation to characterize the environmental setting, source, and contamination, so as to ensure that all information and data is properly documented.

II.B.1. The Data Collection Strategy section of the Data Collection Quality Assurance Plan shall include, but not be limited to, those requirements set forth under section I.D.2.b.(1) of this appendix.

II.B.2. The Sample Collection section of the Data Collection Quality Assurance Plan shall include, but not be limited to, those requirements set forth under Section I.D.2.b.(2) of this appendix.

II.B.3. The Field Measurements section of the Data Collection Quality Assurance Plan shall include, but not be limited to, those requirements set forth under Section I.D.2.b.(3) of this appendix.

II.B.4. The Sample Analysis section of the Data Collection Quality Assurance Plan shall include, but not be limited to, those requirements set forth under Section I.D.2.b.(4) of this appendix.

II.C. DATA MANAGEMENT PLAN

The Permittee shall develop and initiate a Data Management Plan to document and track investigation data and results. This plan shall identify and set up data documentation materials and procedures, project file requirements, and project related progress reporting procedures and documents. The plan shall also provide the format to be used to present the raw data and conclusions of the investigation. This plan shall include, but not be limited to, those requirements set forth under Section I.D.2.c. of this appendix.

II.D. HEALTH AND SAFETY PLAN

The Permittee shall prepare a Health and Safety Plan which shall include, but not be limited to, those requirements set forth under Section I.D.2.d. of this appendix.

II.E. COMMUNITY RELATIONS PLAN

The Permittee shall prepare a plan for the dissemination of information to the public regarding investigation activities and results.

TASK III: FACILITY INVESTIGATION

The Permittee shall conduct a facility investigation to characterize the Facility (environmental setting), define the source(s) and degree and extent of contamination, and identify actual or potential receptors. This investigation shall be conducted in accordance with Task II and shall produce data of adequate technical quality to support the development and evaluation of the corrective measure alternative or alternatives during the Corrective Measures Study.

III.A. ENVIRONMENTAL SETTING

III.A.1. Hydrogeology

III.A.1.a. A description of the regional and site specific geologic and hydrogeologic characteristics affecting groundwater flow beneath the Facility, including:

- Regional and site specific stratigraphy; description of strata including strike and dip, identification of stratigraphic contacts;
- Structural geology: description of local and regional structural features (*e.g.*, folding, faulting, tilting, jointing, etc.);
- Depositional history;
- Locations and amounts of recharge and discharge; and
- Regional and site specific groundwater flow, including seasonal and temporal variations in the groundwater flow regime.

III.A.1.b. An analysis of any topographic features that might influence the groundwater flow system. (Note: Stereographic analysis of aerial photographs may aid in this analysis).

III.A.1.c. Based on field data, test, and cores, a representative and accurate classification and description of the hydrogeologic units which may be part of the migration pathways at the Facility (*i.e.*, the aquifers and any intervening saturated and unsaturated units), including:

- Hydraulic conductivity and porosity (total and effective);
- Lithology, grain size, sorting, degree of cementation;
- An interpretation of hydraulic interconnections between saturated zones; and
- The attenuation capacity and mechanisms of the natural earth materials (*e.g.*, ion exchange capacity, organic carbon content, mineral content, etc.).

III.A.1.d. Based on field studies and cores, structural and hydrogeologic cross sections showing the extent (depth, thickness, lateral extent) of hydrogeologic units which may be part of the migration pathways identifying:

- Sand and gravel deposits in unconsolidated deposits;
- Zones of fracturing or channeling in consolidated or unconsolidated deposits;
- Zones of high and low permeability that might direct and restrict the flow contaminants;
- The uppermost aquifer: geologic formation, group of formations, or part of a formation capable of yielding a significant amount of groundwater to wells or springs; and
- Water-bearing zones above the first confining layer that may serve as pathways for contaminant migration including perched zones of saturation.

II.A.1.e. Based on data obtained from groundwater monitoring wells and piezometer(s) installed upgradient and downgradient of the potential contaminant source(s), a representative description of water level or fluid pressure monitoring including:

- Potentiometric maps;
- Hydrologic cross sections showing vertical gradients;
- The flow system, including the vertical and horizontal components of flow; and
- Any temporal changes in hydraulic gradients, for example, due to seasonal influences.

III.A.1.f. A description of manmade influences that may affect the hydrogeology of the site, identifying:

- Active and inactive local water-supply and production wells with an approximate schedule of pumping; and
- Manmade hydraulic structures (pipelines, French drains, ditches, unlined ponds, septic tanks, National Pollution Discharge Elimination System outfalls, retention areas, etc.).

III.A.2. Soils

The Permittee shall characterize the soil and rock units above the water table in the vicinity of the contaminant release(s). Such characterization shall include, but not be limited to, the following information:

III.A.2.a. SCS soil classification;

III.A.2.b. Surface soil distribution;

III.A.2.c. Soil profile, including ASTM classification of soils;

III.A.2.d. Transects of soil stratigraphy;

III.A.2.e. Hydraulic conductivity (saturated and unsaturated);

III.A.2.f. Relative permeability;

III.A.2.g. Bulk density;

III.A.2.h. Porosity;

III.A.2.i. Soil sorptive capacity;

III.A.2.j. Cation exchange capacity;

III.A.2.k. Soil organic content;

III.A.2.l. Soil pH;

III.A.2.m. Particle size distribution;

III.A.2.n. Depth of water table;

III.A.2.o. Moisture content;

III.A.2.p. Effect of stratification on unsaturated flow;

III.A.2.q. Infiltration;

III.A.2.r. Evapotranspiration;

III.A.2.s. Storage capacity;

III.A.2.t. Vertical flow rate;

III.A.2.u. Mineral content; and

III.A.2.v. Redox potential.

III.A.3. Surface Water and Sediment

The Permittee shall characterize the temporal and permanent surface water bodies in the vicinity of the Facility. Such characterization shall include, but not be limited to, the following information:

III.A.3.a. Location, elevation, surface area, inflow, outflow, depth, temperature stratification, and volume for lakes and estuaries;

III.A.3.b. Location, elevation, surface area, depth, volume, freeboard, and purpose of impoundment for surface impoundments;

III.A.3.c. Location, elevation, flow, velocity, depth, width, seasonal fluctuations, and flooding tendencies (*i.e.*, 100 year event) for streams, ditches, drains, swamps and channels;

III.A.3.d. Drainage patterns;

III.A.3.e. Evaporation;

III.A.3.f. Description of the chemistry of the natural surface water and sediments. This includes determining the pH, total dissolved solids, total suspended solids, biological oxygen demand, alkalinity, conductivity, dissolved oxygen profiles, nutrients (NH_3, NO_3-NO2-, PO_{4-3}), chemical oxygen demand, total organic carbon, specific contaminant concentrations, etc., and

III.A.3.g. Description of sediment characteristics including, deposition area, thickness profile, and physical and chemical parameters (*e.g.*, grain size, density, organic carbon content, ion exchange, pH, etc.)

III.A.4. Air

The Permittee shall provide information characterizing the climate in the vicinity of the Facility. Such information shall include, but not be limited to:

III.A.4.a. A description of the following parameters:

- Annual and monthly rainfall averages;
- Monthly temperature averages and extremes;
- Wind speed and direction;
- Relative humidity/dew point;
- Atmospheric pressure;
- Evaporation data;
- Development of inversions; and
- Climate extremes that have been known to occur in the vicinity of the Facility, including frequency of occurrence.

III.A.4.b. A description of topographic and manmade features which affect air flow and emission patterns, including;

- Ridges, hills or mountain areas;
- Canyons or valleys;
- Surface water bodies (*e.g.*, rivers, lakes, bays, etc.);
- Wind breaks and forests, and
- Buildings.

III.B. SOURCE CHARACTERIZATION

The Permittee shall collect analytical data to characterize the wastes and the areas where wastes have been placed, collected or removed including: type, quantity, physical form, disposition, and Facility characteristics affecting release (*e.g.*, Facility security, and engineered barriers). This shall include the quantification of the following specific characteristics (as well as the documentation of the procedures used in making the determinations), at each source area:

III.B.1. Unit/Disposal Area Characteristics;

III.B.1.a. Location of unit/disposal area;

III.B.1.b. Type of unit/disposal area;

III.B.1.c. Design features;

III.B.1.d. Operating practices (past and present);

III.B.1.e. Period of operation;

III.B.1.f. General physical conditions; and

III.B.1.g. Method used to close the unit/disposal area.

III.B.2. Waste Characteristics:

III.B.2.a. Type of waste placed in the unit;

- Hazardous Classification (*e.g.*, ignitable, reactive, corrosive, toxic);
- Quantity; and
- Chemical composition.

III.B.2.b. Physical, chemical, and biological characteristics;

- Physical form (solid, liquid, gas);
- Physical description (*e.g.*, powder, oily sludge);
- Temperature;
- pH;
- General chemical class (*e.g.*, acid, base, solvent);
- Molecular weight;
- Density;
- Boiling point;
- Viscosity;
- Solubility in water;
- Cohesiveness of the waste;
- Vapor pressure;
- Flash point;
- Sorption;
- Biodegradability/bioconcentration/biotransformation;
- Photodegradation rates;
- Hydrolysis rates; and

- Chemical transformations.

III.C. CONTAMINATION CHARACTERIZATION

The Permittee shall collect analytical data on groundwater, soils, surface water, sediment, and subsurface gas contamination in the vicinity of the Facility. These data shall be sufficient to define the extent, origin, direction, and rate on movement of contaminant plumes. Data shall include time and location of sampling, media sampled, concentrations found, and conditions during sampling, and the identity of the individuals performing the sampling and analysis. The data shall also include an assessment of the risk of explosion from each SWMU. The Permittee shall address and document all the procedures used in addressing the following types of contamination at the Facility:

III.C.1. Groundwater contamination

The Permittee shall conduct a ground-water investigation to characterize any plumes of contamination at the Facility. This investigation shall at a minimum provide the following information:

III.C.1.a. A description of the horizontal and vertical extent of any immiscible or dissolved contaminant plume(s) originating from the Facility;

III.C.1.b. The horizontal and vertical direction of contamination movement;

III.C.1.c. The velocity of contaminant movement;

III.C.1.d. The horizontal and vertical concentration profiles of reasonable suspected hazardous wastes and/or hazardous constituents in the plume(s);

III.C.1.e. An evaluation of factors influencing the plume movement;

III.C.1.f. An extrapolation of future contaminant movement.

III.C.2. Soil contamination

The Permittee shall conduct an investigation to characterize any contamination of the soil and rock units above the water table in the vicinity of the contaminant release. The investigation shall include the following information:

III.C.2.a. A description of the vertical and horizontal extent of any contamination;

III.C.2.b. A description of contaminant and soil chemical properties within the contaminant source area and plume. This precludes contaminant solubility, speciation, adsorption, leachability, exchange capacity, biodegradability, hydrolysis, photolysis, oxidation and other factors that might affect contaminant migration and transformation;

III.C.2.c. Specific contaminant concentrations;

III.C.2.d. The velocity and direction of contaminant movement; and

III.C.2.e. An extrapolation of future contaminant movement.

III.C.3. Surface Water and Sediment Contamination

The Permittee shall conduct an investigation of surface water contamination at the Facility. The investigation shall include, but not be limited to, the following information:

III.C.3.a. A description of the horizontal and vertical extent of any immiscible or dissolved contaminant plume(s) originating from the Facility, and the extent of contamination in underlying sediments;

III.C.3.b. The horizontal and vertical direction of contaminant movement;

III.C.3.c. The contaminant velocity;

III.C.3.d. An evaluation of the physical, biological and chemical factors influencing contaminant movement;

III.C.3.e. An extrapolation of future contaminant movement; and

III.C.3.f. A description of the chemistry of the contaminated surface waters and sediments. This includes determining the pH, total dissolved solids, specific contaminant concentrations, etc.

III.C.4. Air Contamination

The Permittee shall conduct an investigation to characterize the particulate and gaseous contaminants released into the atmosphere. This investigation shall provide the following information:

III.C.4.a. A description of the horizontal and vertical direction and velocity of contaminant movement;

III.C.4.b. The rate and amount of the release; and

III.C.4.c. The chemical and physical composition of the contaminant(s) released, including horizontal and vertical concentration profiles.

III.C.5. Subsurface Gas Contamination

The Permittee shall conduct an investigation to characterize subsurface gases emitted from buried hazardous waste and hazardous waste constituents in the ground water. This investigation shall include the following information:

III.C.5.a. A description of the horizontal and vertical extent of subsurface gases migration;

III.C.5.b. The chemical composition of the gases being emitted;

III.C.5.c. The rate, amount, and density of the gases being emitted;

III.C.5.d. Horizontal and vertical concentration profiles of the subsurface gases emitted.

III.D. POTENTIAL RECEPTORS

The Permittee shall collect data describing the human populations and environmental systems that may be affected by contaminant exposure from the Facility. Chemical analysis of biological samples may also be needed. Data on observable effects in ecosystems may also be obtained. The following characteristics shall be identified:

III.D.1. Current and possible future uses of ground water and surface water, including type of use and location of ground water users.

III.D.2. Human use of or access to the Facility and adjacent lands, including but not limited to:

III.D.2.a. Recreation;

III.D.2.b. Hunting;

III.D.2.c. Residential;

III.D.2.d. Commercial;

III.D.2.e. Zoning; and

III.D.2.f. Relationship between population locations and prevailing wind direction.

III.D.3. A description of the biota in surface water bodies on, adjacent to, or affected by the Facility.

III.D.4. A description of the ecology overlying and adjacent to the Facility.

III.D.5. A demographic profile of the people who use or have access to the Facility and adjacent land, including, but not limited to; age, sex, and sensitive subgroups.

III.D.6. A description of any endangered or threatened species near the Facility.

TASK IV: INVESTIGATION ANALYSIS

The Permittee shall prepare an analysis and summary of all Facility investigations and their results. The objective of this task shall be to ensure that the investigation data is sufficient in quality and quantity to describe the nature and extent of contamination, potential threat to human health and/or the environment, and to produce the Corrective Measures Study.

IV.A. DATA ANALYSIS

The Permittee shall analyze all Facility investigation data outlined in Task III and prepare a report on the type and extent of contamination at the Facility including sources and migration pathways. The report shall describe the extent of contamination (qualitative/quantitative) in relation to on-site and off-site background levels as appropriate, *i.e.* at the Facility and/or surrounding communities).

IV.B. PROTECTION STANDARDS

IV.B.1. Ground-water Protection Standards

For regulated units, the Permittee shall provide information to support the Department's selection/development of Ground-water Protection Standards for all of the Appendix IX constituents found in the ground water during the Facility Investigation (Task IV). The Ground-water Protection Standards shall consist of:

IV.B.1.a. The background level of a constituent or chemical agent in the groundwater; or

IV.B.1.b. For any of the constituents listed in IDAPA 58.01.05.008 [Table 1 of 40 CFR § 264.94], the respective value given in Table 1 if the background level of the constituent is below the value given in Table 1; or

IV.B.1.c. A Director-approved Alternate Concentration Limit (ACL). For any proposed Alternate Concentration Limits, the Permittee shall include a justification based upon the criteria specified in IDAPA 58.01.05.008 [40 CFR § 264.94(b)].

IV.B.2. Soil Protection Standards

For regulated units, the Permittee shall provide information to support the Director's selection/development of Soil Protection Standards for all of the hazardous wastes and hazardous waste constituents found in the soil during the Facility Investigation (Task IV). The Soil Protection Standards shall consist of:

IV.B.2.a. The background concentration levels for any suspected hazardous inorganic constituent(s) in the soil shall be established by collecting a minimum of sixteen (16) background samples in similar geologic strata (location of background samples shall be approved by the Director) and establishing an initial background arithmetic mean and Variance for each inorganic constituents. The arithmetic mean and variance shall be calculated based on at least four (4) replicate measurements of each constituents and comparing these results with it's initial background arithmetic mean. The comparison shall consider individually each inorganic constituent, and shall use Cochran's Approximation to the Behrens-Fisher Student's T-test at the 0.05 level of confidence, as specified in IDAPA 58.01.05.008 [40 CFR Part 264, Appendix IV].

IV.B.2.b. The background concentration levels for any suspected synthetically produced hazardous organic constituent(s) in the soil shall be zero (0) or below the method detection limit for that constituent.

IV.B.2.c. Or; a Director-approved alternate Significance Limit. For any proposed Significance Limit, the Permittee shall include a justification based upon the criteria specified in IDAPA 58.01.05.008 [40 CFR § 264.94(b)].

IV.B.3. Other Relevant Protection Standards

The Permittee shall identify all relevant and applicable standards for the protection of human health and the environment (*e.g.* National Ambient Air Quality Standards, state or federal approved water quality standards, etc.).

TASK V: SCHEDULE OF ACTIVITIES AND REPORTS

V.A. PROGRESS REPORTS

The Permittee shall at a minimum provide the Director with signed, quarterly progress reports containing:

V.A.1. A description and estimate of the percentage of the RCRA Facility Investigation-Phase II completed;

V.A.2. Summaries of all the findings;

V.A.3. Summaries of all changes made in the RCRA Facility Investigation during the reporting period;

V.A.4. Summaries of all contacts with representatives of the local community, public interest groups or state government during the reporting period;

V.A.5. Summaries of all problems or potential problems encountered during the reporting period;

V.A.6. Actions being taken to rectify problems;

V.A.7. Changes in personnel during the reporting period;

V.A.8. Projected work for the next reporting period; and

V.A.9. Copies of daily reports, inspection reports, laboratory/monitoring data, etc.

V.B. RCRA FACILITY INVESTIGATION-TASK I FINAL REPORT

V.B.1. The Permittee shall submit the RCRA Facility Investigation Task I Final and Summary Reports to the Director. The Final Report shall describe the procedures, methods, and results of all the RCRA Facility Investigations-Phase I findings for the SWMU(s) under investigation in Phase I and their releases, including information on the type and extent of contamination at the Facility, sources and migration pathways, and actual or potential receptors. The report shall present all information gathered under the approved RCRA Facility Investigation-Phase I Workplan and schedule. The Final Report shall contain adequate information to support corrective action decisions at the Facility. The Summary Report shall summarize the findings in the Final Report.

V.B.2. The Director shall either approve or disapprove the Reports in writing. If the Director determines that the Final or Summary Reports are not adequate, the Director shall notify the Permittee in writing of the Report's deficiencies and specify a due date for submittal of the revised Final and Summary Task I Reports.

V.C. RFI TASK III & IV FINAL REPORT

V.C.1. The Permittee shall submit RCRA Facility Investigation-Phase II, Task III & IV Final and Summary Reports. The Final Reports shall describe the procedures, methods, and results of all the Facility investigations of SWMU(s) and their releases, including information on the type and extent of contamination at the Facility, sources and migration pathways, and actual or potential receptors. The Report shall present all information gathered under the approved Task II and III workplan and schedule. The Final Report shall contain adequate information to support further corrective action decisions at the Facility. The Summary Report shall summarize the findings in the Final Report.

V.C.2. After the Permittee submits the Final and Summary Reports, the Director shall either approve or disapprove the Reports in writing. If the Director determines that the Final and Summary Reports are not adequate, the Director shall notify the Permittee in writing of the Reports' deficiencies and specify a due date for submittal of the revised Final and Summary Reports. The permit shall be modified in accordance to IDAPA 58.01.05.012 [40 CFR § 270.42(a)] to include the approved Final and Summary Reports.

V.D. RCRA FACILITY INVESTIGATION SCHEDULE

The Permittee shall perform the RCRA Facility Investigation activities in accordance with the schedules specified in Table 3 of this Permit.

APPENDIX B - CORRECTIVE MEASURES STUDY AND IMPLEMENTATION

TASK I: DEVELOPMENT OF CORRECTIVE ACTION ALTERNATIVE(S)

Based on the results of the RCRA Facility Investigation, the Permittee shall identify, screen and develop the alternative or alternatives for removal, containment, treatment and/or other remediation of the contamination based on the objectives established for the corrective action.

I.A. DESCRIPTION OF CURRENT SITUATION

The Permittee shall submit an update to the information describing the current situation at the Facility and the known nature and extent of the contamination as documented by the RCRA Facility Investigation Task I Report. The Permittee shall provide an update to the information presented in the Task I Report to the Director regarding previous response activities and any interim measures which have or are being implemented at the Facility. The Permittee shall also make a Facility-specific statement of the purpose for the response, based on the results of the RCRA Facility Investigation. The statement of purpose shall identify the actual or potential exposure pathways that should be addressed by corrective measures.

I.B. ESTABLISHMENT OF CORRECTIVE ACTION OBJECTIVES

The Permittee shall establish site-specific objectives for the corrective action. These objectives shall be based on public health and environmental criteria, information gathered during the RCRA Facility Investigation, EPA guidance, and the requirements of any applicable state and federal statutes. At a minimum, all corrective actions concerning groundwater releases from regulated units must be consistent with, and as stringent as, those required under the Groundwater Protection Standards.

I.C. SCREENING OF CORRECTIVE MEASURE TECHNOLOGIES

The Permittee shall review the results of the RCRA Facility Investigation to identify technologies which are appropriate for the Facility. The Permittee shall screen technologies to eliminate those which have severe limitations for a given set of waste and site-specific conditions. The screening may eliminate technologies based on inherent technology limitations. Site, waste, and technology characteristics which are used to screen inapplicable technologies are described in more detail below:

I.C.1. Site Characteristics - Site data shall be reviewed to identify conditions that may limit or promote the use of certain technologies. Technologies whose use is clearly precluded by site characteristics shall be eliminated from further consideration.

I.C.2. Waste Characteristics - Identification of waste characteristics that limit the effectiveness or feasibility of technologies is an important part of the screening process. Technologies clearly limited by these waste characteristics shall be eliminated from consideration. Waste characteristics particularly affect the feasibility of in-situ methods, direct treatment methods, and land disposal (on/off-site).

I.C.3. Technology Limitations - During the screening process, the level of technology development, performance record, and inherent construction, operation, and maintenance problems shall be identified for each technology considered. Technologies that are unreliable, perform poorly, or are not fully demonstrated may be eliminated in the screening process. For example, certain treatment methods have been developed to a point where they can be implemented in the field without extensive technology transfer or development.

I.D. IDENTIFICATION OF CORRECTIVE MEASURE ALTERNATIVES

The Permittee shall develop the corrective measure alternatives based on the corrective action objectives. The Permittee shall rely on engineering practice to determine which technologies appear most suitable for the site. Technologies can be combined to form the overall corrective action alternative or alternatives. The alternative developed should represent a workable number of option(s) that each appear to adequately address all site problems and corrective action objectives. Each alternative may consist of an individual technology or a combination of technologies. The Permittee shall document the reasons for excluding any technologies.

TASK II: EVALUATION OF THE CORRECTIVE MEASURE ALTERNATIVES

The Permittee shall describe each corrective measure alternative that passes the screening in Task I and evaluate each corrective measure alternative and its components. The evaluation shall be based on technical, environmental, human health and institutional concerns. The Permittee shall also develop cost estimates of each corrective measure.

II.A. TECHNICAL/ENVIRONMENTAL/HUMAN HEALTH/INSTITUTIONAL

For each corrective measure alternative, the Permittee shall provide a description which includes but is not limited to the following: preliminary process flow sheets, preliminary sizing and type of construction for buildings and structures, and rough quantities of utilities required. The Permittee shall evaluate each alternative in four areas.

II.A.1. Technical - The Permittee shall evaluate each corrective measure alternative based on performance, reliability, implementability, and safety.

II.A.1.a. The Permittee shall evaluate performance based on effectiveness and useful life of the corrective measure:

- Effectiveness shall be evaluated in terms of the ability to perform intended functions, such as containment, diversion, removal, destruction, or treatment. The effectiveness of each corrective measure shall be determined either through design specifications or by performance evaluation. Any specific waste or site characteristics which could potentially impede effectiveness shall be considered. The evaluation shall also consider the effectiveness of combinations of technologies; and

- Useful life is defined as the length of time the level of effectiveness can be maintained. Most corrective measure technologies, with the exception of destruction, deteriorate with time. Deterioration can often be slowed through proper system operation and maintenance, but the technology may eventually require replacement. Each corrective measure shall be evaluated in terms of the projected service lives of its component technologies. Resource availability in the future life of the technology, as well as appropriateness of the technologies, must be considered in estimating the useful life of the project.

II.A.1.b. The Permittee shall provide information on the reliability of each corrective measure including its operation and maintenance requirements and its demonstrated reliability:

- Operation and maintenance requirements include the frequency and complexity of necessary operation and maintenance. Technologies requiring frequent or complex operation and maintenance activities shall be regarded as less reliable than technologies requiring little or straightforward operation and maintenance. The availability of labor and materials to meet these requirements shall also be considered; and
- Demonstrated and expected reliability measures are ways of measuring the risk and effect of failure. The Permittee shall evaluate whether the technologies have been used effectively under analogous conditions; whether the combination of technologies have been used together effectively; whether failure of any one technology has an immediate impact on receptors; and whether the corrective measure has the flexibility to deal with uncontrollable changes at the site.

II.A.1.c. The Permittee shall describe the implementation of each corrective measure including the relative ease of installation (constructability) and the time required to achieve a given level of response:

- Constructability is determined by conditions both internal and external to the Facility conditions and includes such items as location of underground utilities, depth to water table, heterogeneity of subsurface materials, and location of the Facility (*i.e.*, remote location versus a congested urban area). The Permittee shall evaluate what measures can be taken to facilitate construction under these conditions. External factors which affect implementation include the need for special permits or agreements, equipment availability, and the location of suitable off-site treatment or disposal facilities; and
- The Permittee shall address the time it takes to implement a corrective measure and the time it takes to actually see beneficial results. Beneficial results are defined as the reduction of contaminants to some acceptable, pre-established level.

II.A.1.d. The Permittee shall evaluate each corrective measure alternative with regard to safety. This evaluation shall include threats to the safety of nearby communities and environments as well as those to workers during implementation. Factors to consider are fire, explosion, and exposure to hazardous substances.

II.A.2. Environmental - The Permittee shall perform an Environmental Assessment for each alternative. The Environmental Assessment shall focus on the Facility conditions and pathways of contamination addressed by each alternative. The Environmental Assessment for each alternative shall include, at a minimum, an evaluation of: the short- and long-term beneficial and adverse effects of the response alternative; and adverse effects on environmentally sensitive areas; and an analysis of measures to mitigate adverse effects.

II.A.3. Human Health - The Permittee shall assess each alternative in terms of the extent to which it mitigates short- and long-term potential exposure to any residual contamination and protects human health both during and after implementing the corrective measures. The assessment shall describe the types and levels of contaminants on-site, potential exposure routes, and potentially affected populations. Each alternative shall be evaluated to determine the level of exposure to contaminants and the reduction over time.

For management of mitigation measures, the relative reduction of impact shall be determined by comparing residual levels of each alternative with existing criteria, standards, or guidelines acceptable to the Director.

II.A.4. Institutional - The Permittee shall assess the effects of federal, state and local environmental and public health standards, regulations, guidance, advisories, ordinances, or community relations on the design, operation, and timing of each alternative.

II.B. COST ESTIMATE

The Permittee shall develop an estimate of the cost of each corrective measure alternative (and for each phase or segment of the alternative). The cost estimate shall include both capital and operation and maintenance costs.

II.B.1. Capital costs consist of direct (construction) and indirect (non-construction and overhead) costs.

II.B.1.a. Direct capital costs include:

- Construction costs: Costs of materials, labor (including fringe benefits and worker's compensation), and equipment required to install the corrective measure.
- Equipment costs: Costs of treatment, containment, disposal and/or service equipment necessary to implement the action; these materials remain until the corrective action is complete;
- Land and site-development costs: Expenses associated with purchase of land and development of existing property; and
- Buildings and services costs: Costs of process and non-process buildings, utility connections, purchased services, and disposal costs.

II.B.1.b. Indirect capital costs include:

- Engineering expenses: Costs of administration, design, construction supervision, drafting, and testing of corrective measure alternatives;
- Legal fees and license or permit costs: administrative and technical costs necessary to obtain licenses and permits for installation and operation;
- Start-up and shakedown costs: Costs incurred during corrective measure start-up; and
- Contingency allowances: Funds to cover costs resulting from unforeseen circumstances, such as adverse weather conditions, strikes, and inadequate Facility characterization.

II.B.2. Operation and maintenance costs are post-construction costs necessary to ensure continued effectiveness of a corrective measure. The Permittee shall consider the following operation and maintenance cost components:

II.B.2.a. Operating labor costs: Wages, salaries, training, overhead, and fringe benefits associated with the labor needed for post-construction operations;

II.B.2.b. Maintenance materials and labor costs: Costs for labor, parts, and other resources required for routine maintenance of facilities and equipment;

II.B.2.c. Auxiliary materials and energy: Costs of such items as chemicals and electricity for treatment plant operations, water and sewer service, and fuel;

II.B.2.d. Purchased services: Sampling costs, laboratory fees, and professional fees for which the need can be predicted;

II.B.2.e. Disposal and treatment costs: Costs of transporting, treating, and disposing of waste materials, such as treatment plant residues, generated during operations;

II.B.2.f. Administrative costs: Costs associated with administration of corrective measure operation and maintenance not included under other categories;

II.B.2.g. Other costs: Items that do not fit any of the above categories.

TASK III: RECOMMENDATION OF A CORRECTIVE MEASURE OR MEASURES

The Permittee shall justify and recommend a corrective measure alternative using technical, human health, and environmental criteria. The Permittee shall submit summary tables of the corrective measure alternative recommendations. Tradeoffs among health risks, environmental effects, and other pertinent factors shall be highlighted. The Director shall approve the corrective measure alternative or alternatives to be implemented based on the results of Tasks II and III. The following criteria shall be used to select the final corrective measure or measures.

III.A. TECHNICAL

III.A.1. Performance - corrective measure or measures which are most effective at performing their intended functions and maintaining performance over extended periods of time;

III.A.2. Reliability - corrective measure or measures which do not require frequent or complex operation and maintenance activities and that have proven effective under waste and facility conditions similar to those anticipated;

III.A.3. Implementability - corrective measure or measures which can be constructed and operating to reduce levels of contamination to attain or exceed applicable standards in the shortest period of time; and

III.A.4. Safety - corrective measure or measures which pose the least threat to the safety of nearby residents and environments as well as workers during implementation.

III.B. HUMAN HEALTH

The corrective measure or measures must comply with existing federal and state criteria, standards, or guidelines for the protection of human health. Corrective measures which provide the minimum level of exposure to contaminants and the maximum reduction in exposure with time are preferred.

III.C. ENVIRONMENTAL

The corrective measure or measures posing the least adverse impact (or greatest improvement) over the shortest period of time on the environment shall be favored. The corrective measure(s) shall be assessed as to the degree to which it employs treatment that reduces toxicity, mobility or volume of hazardous wastes and/or hazardous waste constituent(s).

TASK IV: CORRECTIVE MEASURE(S) IMPLEMENTATION

The purpose of the Corrective Measure Implementation program is to design, construct, operate, maintain, and monitor the performance of the corrective measure or measures selected to protect human health and the environment.

IV.A. CORRECTIVE MEASURE IMPLEMENTATION PROGRAM PLAN

The Permittee shall prepare a Corrective Measure Implementation Program Plan. This program shall include the development and implementation of several plans, which require concurrent preparation. It may be necessary to revise plans as the work is performed to focus efforts on a particular problem. The Permittee shall furnish all personnel, materials and services necessary for the implementation of the corrective measure(s).

IV.A.1. The Permittee shall prepare a Program Management Plan which shall document the overall management strategy for performing the design, construction, operation, maintenance and monitoring of corrective measure(s). The plan shall document the responsibility and authority of all organizations and key personnel involved with the implementation. The Program Management Plan shall also include a description of qualifications of key personnel directing the Corrective Measures Implementation program, including contract personnel.

IV.A.2. The Permittee shall revise the Community Relations Plan, performed as part of the RCRA Facility Investigation Workplan, to incorporate any changes addressing the community during the design and construction activities.

IV.B. CORRECTIVE MEASURE(S) DESIGN

The Permittee shall prepare final construction plans and specifications to implement the corrective measure(s) at the Facility as defined in the Corrective Measure Study. At a minimum, the following shall be included, but not be limited to:

IV.B.1. Design plans and specifications:

IV.B.1.a. Design strategy and basis.

IV.B.1.b. Currently accepted environmental control measures, construction practices and techniques, and the constructability of the design.

IV.B.1.c. Assumptions, detailed drawings (*e.g.*, process flow diagrams, general arrangement, and any applicable piping and instrumentation diagrams), equipment and specifications, and material and energy balances (if applicable).

IV.B.1.d. Discussion of the possible sources of error and potential operation and maintenance problems.

IV.B.2. Operations and maintenance plan:

IV.B.2.a. Normal and alternate operation and maintenance practices (*e.g.*, tasks for operation, tasks for maintenance, prescribed treatment or operation conditions, and schedule identifying frequency).

IV.B.2.b. Routine monitoring and laboratory testing (*e.g.*, description of monitoring tasks, required laboratory tests and their interpretation, required Quality Assurance/Quality Control, and a schedule of monitoring frequency).

IV.B.2.c. Equipment description (including equipment identification, installation of monitoring components, maintenance procedures, and replacement schedule), and records and reporting (*e.g.*, daily operating logs, laboratory records, records for operating costs, reporting emergencies, personnel and maintenance records, and required monthly and annual reports to be submitted to the Director).

IV.B.2.d. Alternate operating and maintenance procedures to prevent undue hazard due to system failure and analysis of vulnerability and additional resource requirements should a failure occur.

IV.B.2.e. Safety plan during routine operation and safety tasks in the event of systems failure.

IV.B.3. Cost estimate

IV.B.4. Project schedule (identifying timing for initiation and completion of all critical path tasks, dates for completion of the project and major milestones).

IV.B.5. Construction quality assurance objectives (including but not limited to the responsibility and authority, personnel qualifications, inspection activities, sampling requirements, and documentation).

IV.B.6. Health and Safety Plan (the Health and Safety Plan developed for the RCRA Facility Investigation shall be modified to address the activities to be performed to implement the corrective measure(s)).

IV.B.7. Design phases:

IV.B.7.a. Preliminary design, approximately 30% design completion. The Permittee shall have field verified the existing condition of the Facility. The technical design requirements of the project shall be at an adequate level of completion to enable a determination if the final design will provide an operable and usable corrective measure. Supporting data and documentation shall be provided with the design documents defining the functional aspects of the program. The Permittee shall include with the preliminary submission design calculations reflecting the same percentage of completion as the designs they support.

IV.B.7.b. Intermediate design, approximately 60% completion. The intermediate design shall include the Design Plans and Specifications, Operation and Maintenance Plan, Project Schedule, Quality Assurance Plan and Specifications for the Health and

Safety Plan.

IV.B.7.c. Equipment start-up and operator training identifying the contractor requirements for providing appropriate service visits by experienced personnel to supervise the installation, adjustment, start-up and operation of the treatment systems, and training covering appropriate operational procedures once the start-up has been successfully accomplished.

IV.B.7.d. Additional studies to supplement the available technical corrective measure implementation data may be required. Upon written notification from the Director, the Permittee shall provide sufficient sampling, testing and analysis to optimize the required treatment and/or disposal operations and systems. A final report of the testing shall include all data taken during the testing and a summary of the results of the studies.

IV.B.7.e. Submittal of the pre-final design, approximately 95% completion. The pre-final design submittal shall include the Design Plans and Specifications, Operations and Maintenance Plan, Project Schedule, Quality Assurance Plan and Specifications for the Health and Safety Plan.

IV.B.7.f. Submittal of final design, approximately 100% completion. The final design submittal shall include the Final Design Plans and Specifications, and Final Operation and Maintenance Plan, Final Quality Assurance Plan, Final Project Schedule and Final Health and Safety Plan specifications.

IV.C. CORRECTIVE MEASURE(S) CONSTRUCTION

Following the Director's approval of the final design, the Permittee shall develop and implement a construction quality assurance program to ensure, with a reasonable degree of certainty, that a completed corrective measure(s) meets or exceeds all design criteria, plans, and specifications. The Construction Quality Assurance Plan is a Facility-specific document which must be submitted to the Department for approval prior to the start of construction. At a minimum, the Construction Quality Assurance Plan shall include the elements, which are summarized below. Upon the Director's approval of the Construction Quality Assurance Plan, the Permittee shall construct and implement the corrective measures in accordance with the approved design, schedule, and the Construction Quality Assurance Plan. The Permittee shall also implement the elements of the approved Operation and Maintenance Plan.

IV.C.1. The responsibility and authority of all organizations and the qualifications of all personnel shall be described in the Construction Quality Assurance Plan.

IV.C.2. The observations and tests that shall be used to monitor the construction and/or installation of the components of the corrective measure(s) shall be summarized in the Construction Quality Assurance Plan. The plan shall include the scope and frequency of each type or inspection. Inspections shall verify compliance with all environmental requirements and include, but not be limited to, air quality and emissions monitoring records, waste disposal records, etc. The inspections shall also ensure compliance with all health and safety procedures.

IV.C.2.a. A preconstruction inspection and meeting shall be held to discuss methods for documenting and reporting inspection data, reviewing the distribution and storage of documents and reports, reviewing work area safety, discussing appropriate modifications to the Construction Quality Assurance Plan, and conducting a site Visit.

IV.C.2.b. Upon preliminary project completion, the Permittee shall notify the Director for the purposes of conducting a pre-final inspection which shall consist of a walk-through inspection of the entire site. The inspection is to determine whether the project is complete and consistent with the contract documents and the corrective measures as approved by the Director. The Permittee shall operationally test the treatment equipment. The Permittee shall certify that the equipment has performed to meet the purpose and intent of the specifications. Retesting shall be completed where deficiencies are revealed. This pre-final inspection report shall outline the outstanding construction items, actions required to resolve items, completion date(s) for these items, and the date of the final inspection.

IV.C.2.c. Upon completion of all outstanding construction items, the Permittee shall notify the Director, by certified mail, express mail, or hand delivery, for the purposes of conducting a final inspection. The final inspection shall focus on confirming that outstanding items have been resolved.

IV.D. SAMPLING REQUIREMENTS

The sampling activities, sample size, sample locations, frequency of testing, acceptance and rejection criteria, and plans for correcting problems shall be presented in the Construction Quality Assurance Plan.

IV.E. DOCUMENTATION

Reporting requirements for construction quality assurance activities shall be described in detail in the Construction Quality Assurance Plan. This shall include such items as daily summary reports, inspection data sheets, problem identification and corrective measure reports, and design acceptance reports.

TASK V: REPORTS

V.A. CORRECTIVE MEASURES STUDY REPORTS

The Permittee shall prepare Corrective Measures Study reports in accordance with the schedule specified in Table 5 of this Permit.

V.B. PROGRESS REPORTS

The progress reports shall contain, at a minimum, the following information:

- A description and estimate of the percentage of the Corrective Measures Study completed;
- Summaries of all findings;
- Summaries of all changes made in the Corrective Measures Study during the reporting period;
- Summaries of all contacts with representative(s) of the local community, public interest groups or state government during the reporting period;
- Summaries of all problems or potential problems encountered during the reporting period;

- Actions being taken to rectify problems;
- Changes in personnel during reporting period;
- Copies of daily reports, inspection reports, laboratory/monitoring data, etc.

V.C. CORRECTIVE MEASURE CONSTRUCTION REPORT

At the completion of construction, the Permittee shall submit a Corrective Measure Construction report to the Director. The report shall establish that the project was built according to the specifications and that the corrective measure is performing adequately. The Corrective Measure Construction report shall include all of the daily inspection summary reports; inspection summary reports, inspection data sheets, problem identification and corrective measure reports, block evaluation reports, photographic reporting data sheets, design engineers' acceptance reports, deviations from design and material specifications and as-built drawings. The report shall include, but not be limited to, the following elements:

- Certification of the design and construction;
- Explanation of any modifications to the plans and why these were necessary;
- Listing of the criteria established for judging the functioning of the corrective measure and also explaining any modification to these criteria;
- Results of Facility monitoring, indicating that the corrective measure shall meet or exceed the performance criteria; and
- Explanation of the operation and maintenance (including monitoring) to be undertaken at the Facility.

TABLES

TABLE 1
SOLID WASTE MANAGEMENT UNITS (SWMUs) AT THE INL UNDER INVESTIGATION FOR RELEASES To be submitted by Permittee in accordance with Permit Condition II.K. of the MFC Partial Permit (Effective Date: October 1, 2015).

TABLE 2
SWMUs AT THE INL WITH KNOWN RELEASES To be submitted by Permittee in accordance with Permit Condition II.K. of the MFC Partial Permit (Effective Date: October 1, 2015).

TABLE 3
SWMUs AT THE INL WITH NO FURTHER ACTION DETERMINATIONS To be submitted by Permittee in accordance with Permit Condition II.K. of the MFC Partial Permit (Effective Date: October 1, 2015).

TABLE 4

RCRA FACILITY INVESTIGATION COMPLIANCE SCHEDULE
FOR SOLID WASTE MANAGEMENT UNITS (SWMUs)
WITH SUSPECTED RELEASES

RFI ACTIVITY	DUE DATE
SUBMIT RFI - PHASE I WORKPLAN (TASK I.D.)	Within 180 calendar days of a final determination of applicability made in accordance with Permit Condition VIII.A.2.
SUBMIT FINAL TASK I REPORT	Within 270 calendar days of the Director's approval of the RFI – Phase I workplan.
SUBMIT DRAFT RFI - PHASE II (TASK II AND III) WORKPLAN AND SCHEDULE	Within 90 calendar days of the Director's approval of the final Task I Report
INITIATE RFI - PHASE II (TASK II AND III) ACTIVITIES	Within 60 calendar days of the Director's approval of the Task II and III workplan and schedule.
SUBMIT TASK IV DRAFT REPORT	As specified in the Director's approved RFI - Phase II (Task II and III) workplan and schedule.
SUBMIT TASK IV FINAL AND SUMMARY REPORTS	As specified in the Director's approved RFI - Phase II (Task II and III) workplan and schedule.
PROGRESS REPORTS ON TASKS I THROUGH IV	Quarterly (every 90 calendar days) beginning 90 calendar days after the effective date of this Permit.

TABLE 5	
RCRA FACILITY INVESTIGATION COMPLIANCE SCHEDULE FOR SOLID WASTE MANAGEMENT UNITS (SWMUs) WITH KNOWN RELEASES	
RFI ACTIVITY	DUE DATE
SUBMIT FINAL TASK I REPORT (excluding RFI - Phase I, Task I.D.)	Within 180 calendar days of the final determination that the Corrective Action portion of this Permit must be implemented.
SUBMIT DRAFT RFI-PHASE II (Task II & III) WORKPLAN and SCHEDULE	Within 90 calendar days of the Director's approval of the final Task I Report.
INITIATE RFI-PHASE II (TASK II & III) ACTIVITIES	Within 45 calendar days of the Director's approval of the Task II and III workplan and schedule
SUBMIT TASK IV DRAFT REPORT	As specified in the Director's approved RFI-Phase II (Task II and III) workplan and schedule.
SUBMIT TASK IV FINAL & SUMMARY REPORTS	As specified in the Director's approved RFI-Phase II (Task II and III) workplan and schedule.
PROGRESS REPORTS ON TASKS I through IV	Quarterly (every 90 calendar days) beginning 90 calendar days of the effective date of this Permit.

TABLE 6

CORRECTIVE MEASURES STUDY AND IMPLEMENTATION
COMPLIANCE SCHEDULE
FOR SOLID WASTE MANAGEMENT UNITS (SWMUs)

CMS SUBMISSION/CMI SUBMISSION	DUE DATES
Submit CMS Workplan (TASK I & II)	Within 60 calendar days of the Director's approval of the RCRA Facility Investigation Final Report.
Submit Draft CMS Report (TASK I, II, & III)	Within 300 calendar days of the Director's approval of the CMS Workplan.
Submit Final CMS Report (TASK I, II, & III)	Within 60 calendar days of receiving the Director's comments on the draft CMS Report.
Submit Draft CMI Program Plan (TASK IV.A)	Within 90 calendar days of the Director's approval of the final CMS report.
Submit Final CMI Program Plan (TASK IV.A)	Within 60 calendar days of receiving the Director's comments on the draft CMI Program Plan.
Submit Corrective Measures Design Preliminary Design Approximately 30% Complete	As specified in the Director's approved CMI Program Plan.
Submit Corrective Measures Design Preliminary Design Approximately 60% Complete	As specified in the Director's approved CMI Program Plan.
Submit Corrective Measures Design Preliminary Design Approximately 95% Complete	As specified in the Director's approved CMI Program Plan.
Submit Final Corrective Measures Design	As specified in the Director's approved CMI Program Plan.
Progress Reports on Tasks I through IV	Quarterly, every 90 calendar days beginning 90 calendar days after the Director's approval of the final RFI report.
Submit Draft CQA Program Plan	As specified in the Director's approved CMI Program plan.
Submit Final CQA Program Plan	Within 60 calendar days of the Director's approval of the draft CQA.
Construction of Corrective Measures	Within 60 calendar days of the Director's approval of the final CQA.
Pre-Final Inspection	Forty-five (45) calendar days following report of pre-final inspection
Corrective Measures Construction Report	Within 90 calendar days following completion of construction.
Corrective Measures Implementation Quarterly Progress Reports	Quarterly, every 90 calendar days.

OMB#: 2050-0024 Expires 01/31/2017

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 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 # VOLUME 18 - Revision Date: June 1, 2016) ❑ 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: ID4890008952**
3. Site Name	**Name: IDAHO NATIONAL LABORATORY**

4. Site Location Information	**Street Address:**		
	City, Town, or Village: SCOVILLE	**County: BUTTE, CLARK, JEFFERSON, BONNEVILLE, BINGHAN**	
	State: ID	**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**	B. **54171**	
	C. **336992**	D. **Not Applicable**	
7. Site Mailing Address	**Street or P. O. Box: 1955 FREMONT AVENUE**		
	City, Town, or Village: IDAHO FALLS		
	State: ID	**Country: USA**	**Zip Code: 83415**
8. Site Contact Person	**First Name: TERESA**	**MI: L**	**Last Name: PERKINS**
	Title: DIRECTOR, ENVIRONMENT & SUSTAINABILITY DIVISION		
	Street or P. O. Box: 1955 FREMONT AVENUE		
	City, Town, or Village: IDAHO FALLS		
	State: ID	**Country: USA**	**Zip Code: 83415**
	Email: PERKINTL@ID.DOE.GOV		
	Phone: (208) 526-1483	**Ext.: N/A**	**Fax: 208-526-1926**
9. Legal Owner and Operator of the Site	**A. Name of Site's Legal Owner: US DEPARTMENT OF ENERGY 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 Sites Operator: FLUOR IDAHO, LLC.		**Date Became Operator: 06/01/2016**
	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 an 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 5,000kg 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 witdrawing 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 affilation 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 Wastes

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 attached Form OMB#2050-0024; Item 9

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.

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

RCRA Permit Transition PMRs

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 (se 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)
Frederick P. Hughes	F. P. Hughes, Program Manager, Fluor Idaho, LLC.	04/15/2016
[signature]	R. B. Provencher, Manager, Department of Energy Idaho Operations Office	4/15/16

United States Environmental Protection Agency

HAZARDOUS 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.: N/A	Email: PERKINTL@ID.DOE.GOV
2. Facility Permit Contact Mailing Address	Street or P.O. Box: 1955 FREMONT AVENUE		
	City, Town, or Village: IDAHO FALLS		
	State: ID		
	Country: USA		Zip Code: 83415
3. Operator Mailing Address and Telephone Number	Street or P.O. Box: 1580 SAWTELLE STREET		
	City, Town, or Village: IDAHO FALLS		
	State: ID		Phone: (208) 227-8107
	Country: USA		Zip Code: 83402
4. Facility Existence Date	Facility Existence Date (mm/dd/yyyy): 06/01/1949		

5. Other Environmental Permits

A. Facility Type (Enter code)	B. Permit Number											C. Description
R	I	D	4	8	9	0	0	0	8	9	5	2	Final HWMA Storage & Treatment Permit for the INTEC on the INL (Volume 14)
R	I	D	4	8	9	0	0	0	8	9	5	2	Final HWMA Storage & Treatment Permit for the INTEC and RWMC on the INL (Volume 18)
R	I	D	4	8	9	0	0	0	8	9	5	2	HWMA/RCRA Part B Permit Application for the INL (Volume 3)
R	I	D	4	8	9	0	0	0	8	9	5	2	HWMA/RCRA Post-Closure Permit for the INTEC on the INL (Volume 21)
R	I	D	4	8	9	0	0	0	8	9	5	2	HWMA/RCRA Storage Permit for the CSSF at the INTEC on the INL (Volume 22)
R	I	D	4	8	9	0	0	0	8	9	5	2	HWMA/RCRA Part A Permit Application for the INL (Volume 1)
R, P, E, U													See Additional Information Supplement to Item 5 - Other Permits List

6. Nature of Business

The Idaho National Laboratory (INL) was established in 1949, as a center where nuclear power reactors and support facilities could be built, tested, and operated. The INL site covers approximately 890 square miles and is 25 miles west of Idaho Falls, ID. For many years the INL was the site of the largest nuclear power research & development effort in the world. During the 1970's the INL's mission broadened to include such areas as biotechnology, energy and materials research, and conservation and renewable energy. At the end of the Cold War, waste treatment and cleanup of previously contaminated sites became a priority. Today the INL is a science-based, applied engineering national laboratory dedicated to completing its waste cleanup mission and meeting the nation's environmental, energy, nuclear science and technology, and national security needs. Additionally, in 2002, it was announced that the INL will serve as the nation's leading nuclear technology center.

Additional Information Supplement to Item 5.
Other Environmental Permits

HWMA/RCRA Permits (Permit Type R)

- Part A Permit Application for Interim Status TSA 1/R
- HWMA/RCRA Storage and Treatment Permit for AMWTP

AIR PERMITS (Permit Type P)
INL Title V Operating Permit - Permit Number T1-2009.0148

PTC (Permit Number PTC-023-00001)
- INTEC New Waste Calcining Facility/Decontamination Area, CPP-659

PTC (Permit Number P.2012.0053)
- INTEC CPP-606 Distillate Oil-Fired Boilers

PTC (Permit Number P.2008.0199)
- INTEC Integrated Waste Treatment Unit

PTC (Permit Number P-2011.0124)
- INTEC Radiological Sources

PTC (Permit Number P-2013.0023)
- INTEC Sodium Distillation System

PTC (Permit Number P-2001.109)
- AMWTP TSA-RE

PTC (Permit Number 023 00001)

- AMWTF

State of Idaho Monitoring Well Permit (IDWR) (Permit Type U)
INL monitoring well permit applications are sent annually to the IDWR for wells (greater than 18 feet deep) to be constructed in the current calendar year. Permits are authorized by agreement between the DOE-ID and the IDWR.

State of Idaho Water Reuse Permit (WRP) (Permit Type E)
- Municipal and Industrial Reuse Permit, LA-000130-05 INTEC New Percolation Ponds

Ground Water Rights (Permit Type E)
INL operations use water guaranteed by both a Federal Reserved Water Right and a water rights agreement with the State of Idaho

7. Process Codes and Design Capacities - Enter information in the Sections on Form Page 3.

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. 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; Hectare-meter; Acres; Cubic Meters; Hectares; Cubic Yards
D81	Land Treatment	Acres or Hectares
D82	Ocean Disposal	Gallons Per Day or Liters Per Day
D83	Surface Impoundment Disposal	Gallons; Liters; Cubic Meters; or Cubic Yards
D99	Other Disposal	Any Unit of Measure Listed Below
	Storage	
S01	Container	Gallons; Liters; Cubic Meters; or Cubic Yards
S02	Tank Storage	Gallons; Liters; Cubic Meters; or Cubic Yards
S03	Waste Pile	Cubic Yards or Cubic Meters
S04	Surface Impoundment	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

Process Code	Process	Appropriate Unit of Measure for Process Design Capacity
	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	Unit of Measure	Unit of Measure Code	Unit of Measure	Unit of Measure Code
Gallons	**G**	**Short Tons Per Hour**	**D**	**Cubic Yards**	**Y**
Gallons Per Hour	**E**	**Short Tons Per Day**	**N**	**Cubic Meters**	**C**
Gallons Per Day	**U**	**Metric Tons Per Hour**	**W**	**Acres**	**B**
Liters	**L**	**Metric Tons Per Day**	**S**	**Acre-feet**	**A**
Liters Per Hour	**H**	**Pounds Per Hour**	**J**	**Hectares**	**Q**
Liters Per Day	**V**	**Kilograms Per Hour**	**X**	**Hectare-meter**	**F**
		Million BTU Per Hour	**X**	**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 (1) Amount (Specify)	(2) Unit of Measure	C. Process Total Number of Units	For Official Use Only
X	1	S	0	2	533.788	G	001	
	1	S	0	1	2,809,508.0	G	030	
	2	S	0	2	4,625.0	G	007	
	3	S	0	3	209	C	012	
	4	T	0	1	17,600	U	006	
	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 lines sequentially, taking into account any lines that will be used for "other" processes (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 (1) Amount (Specify)	(2) Unit of Measure	C. Process Total Number of Units	For Official Use Only
X	2	T	0	4	100.00	U	001	
0	5	T	0	4	7,600	U	003	
0	6	X	0	2	30	N	001	
0	7	X	9	9	34,640	U	004	
0	8	T	0	4	5,200	U	003	
0	9	T	0	4	1,560	U	003	
1	0	T	0	4	9,600	U	002	
1	1	T	0	4	12.4	U	002	
1	2	T	0	4	6.2	U	001	
1	3	T	0	4	9,600	U	001	

ITEM 7. PROCESS CODES AND DESIGN CAPACITIES SUPPLEMENT

LINE NUMBER	PROCESS TYPE UNIT NAME		PROCESS DESIGN CAPACITY
1	**S01- CONTAINER STORAGE includes:**		
	• CPP-659 Room 205 - Hot Sump Tank Removal and Access Cell		54,200 gallons
	• CPP-659 Room 206 - Adsorber Cell		12,400 gallons
	• CPP-659 Room 207 - Off-Gas Cell		11,600 gallons
	• CPP-659 Room 214 - Calciner Cell		9,800 gallons
	• CPP-659 Room 215 - Blend and Hold Cell		8,200 gallons
	• CPP-659 Room 216 - Filter Cell/Valve Cubicle		10,300 gallons
	• CPP-659 Room 218 - Manipulator (PaR) Parking Area		3,200 gallons
	• CPP-659 Room 306 - Equipment Decontamination Storage Room		4,800 gallons
	• CPP-659 Room 308 - Remote Decon Cell		5,800 gallons
	• CPP-659 Room 309 - Filter Handling Cell		4,800 gallons
	• CPP-659 Room 323 - Crane Maintenance and Transfer Area		3,400 gallons
	• CPP-659 Room 326 - Transfer Area		1,300 gallons
	• CPP-659 Room 415 - Low Level Decontamination Room		23,500 gallons
	• CPP-659 Room 416 - Shielded Storage Room		5,300 gallons
	• CPP-659 Room 417 - Vehicle Entry Way		78,200 gallons
	• CPP-659 Room 418 - Equipment Decontamination Room		166,700 gallons
	• CPP-659 Room 419 - Transfer Room		26,400 gallons
	• CPP-659 Room 421 - Decon Cubicle		10,039 gallons
	• CPP-659 Room 422 - Decon Cubicle		10,039 gallons
	• CPP-659 Room 428 - Crane Maintenance Area		4,400 gallons
	• CPP-1659 Contaminated Equipment Maintenance Area		87,200 gallons
	• CPP-666 FDP Cell		37,300 gallons
	• CPP-666 Room 301 (includes the entire +28'0" level)		4,304 gallons
	• CPP-666 Room 114C (0'0" level)		1,000 gallons
	• CPP-666 Room 115 (0'0" level)		1,000 gallons
	• CPP-666 Room 180 (0'0" level)		55 gallons
	• CPP-666 Room B-4 (-13'0" level)		55 gallons
	• CPP-666 Room B-5 (-13'0" level)		55 gallons
	• CPP-666 Room SB-8 (-31'0" level) - Collection Vessel		5.0 gallons
	• CPP-1617 Radioactive Mixed Waste Staging Facility		2,224,156 gallons
		Line 1 Total:	**2,809,508.0 gallons**
2	**S02 - TANK STORAGE in CPP-659 and CPP-666 includes:**		
	• VES-FC-184 (Slab Tank)		65 gallons
	• CPP-666 FDP Cell - Distillation Vessel (VES-FC-101)		35 gallons
	• CPP-666 FDP Cell - Collection Vessel (VES-FC-85A)		5 gallons
	• VES-NCD-123 Holdup Tank (located in Room 219)		3,800 gallons
	• VES-NCD-129 Collection Tank (located in Room 203)		530 gallons
	• VES-NCD-141 (located in Room 309)		120 gallons
	• VES-NCD-142 (located in Room 309)		70 gallons
		Line 2 Total:	**4,625.0 gallons**

ITEM 7. PROCESS CODES AND DESIGN CAPACITIES SUPPLEMENT

LINE NUMBER	PROCESS TYPE UNIT NAME		PROCESS DESIGN CAPACITY
3	**S03 - WASTE PILE STORAGE in CPP-659 includes:**		
	• Room 206 - Adsorber Cell		43 cubic meters
	• Room 207 - Off-Gas Cleanup Cell		3 cubic meters
	• Room 214 - Calciner Cell		8 cubic meters
	• Room 215 - Blend and Hold Cell		3 cubic meters
	• Room 216 - Filter Cell/Valve Cubicle		39 cubic meters
	• Room 308 - Remote Decon Cell		22 cubic meters
	• Room 309 - Filter Handling Cell		18 cubic meters
	• Room 322 - Off-Gas Blower Cell		5 cubic meters
	• Room 323 - Crane Maintenance and Transfer Area		13 cubic meters
	• Room 326 - Transfer Area		5 cubic meters
	• Room 416 - Shielded Storage Area		20 cubic meters
	• Room 418 - Steam Spray Booth		30 cubic meters
		Line 3 Total:	**209 cubic meters**
4	**T01 - TANK TREATMENT in CPP-659 includes:**		
	• HEPA Filter Leaching System (HFLS)		90 gallons/day*
	– VES-NCD-141 (Room 309)		
	– VES-NCD-142 (Room 309)		
	• SH-NCD-933 (Room 415)		5,688 gallons/day
	• SH-NCD-934 (Room 415)		672 gallons/day
	• UC-NCD-921 (Room 415)		1,896 gallons/day
	• VES-NCD-123 (Room 219) @ ~3,800 gallons		7,600 gallons/day
	• VES-NCD-129 (Room 203) @ ~ 530 gallons		1,060 gallons/day
		Line 4 Total:	**17,600 gallons/day**

* A total of 90 gallons of HEPA Filter media may be treated (T01) per day in the HFLS.

ITEM 8. ADDITIONAL TREATMENT PROCESS SUPPLEMENT

LINE NUMBER	PROCESS TYPE UNIT NAME		PROCESS DESIGN CAPACITY
5	**T04 - CONTAINER TREATMENT in CPP-659 includes:** • VES-NCD-138 @ ~538 gallons • TK-NCD-139 @ ~127 gallons • TK-NCD-137 @ ~270 gallons		 4,300 gallons/day 1,100 gallons/day 2,200 gallons/day
		Line 5 Total:	**7,600 gallons/day**
6	**X02 - SCARIFICATION/SPALLING in CPP-659 includes:** • Steam Spray Booth (Room 418)		 30 short tons/day
		Line 6 Total:	**30 short tons/day**
7	**X99 - CHEMICAL/PHYSICAL EXTRACTION includes:** • Decon Cell (Room 308) • Steam Spray Booth (Room 418) • Decon Cubicle (Room 421) • Decon Cubicle (Room 422)		 8,660 gallons/day 8,660 gallons/day 8,660 gallons/day 8,660 gallons/day
		Line 7 Total:	**34,640 gallons/day**
8	**T04 - SIZING/REPACKAGING/COMPACTION in CPP-659 and in CPP-666 INCLUDES:** • Room 216 - Filter Cell/Valve Cubicle • Room 306 - Equipment Decontamination Storage Room • Room 308 - Remote Decon Cell (520 gallons/day/ treatment method) • Room 309 - Filter Handling Cell (520 gallons/day/ treatment method) • Room 323 - Crane Maintenance & Transfer Area • Room 418 - Equipment Decontamination Room • Room 421 - Decon Cubicle • Room 422 - Decon Cubicle • Room 428 - Crane Maintenance Area • CPP-666 FDP Cell		 520 gallons/day 520 gallons/day 520 gallons/day 520 gallons/day 520 gallons/day 520 gallons/day 520 gallons/day 520 gallons/day 520 gallons/day 520 gallons/day
		Line 4 Total:	**5,200 gallons/day**
9	**T04 - ABSORBENT ADDITION in CPP-659 and CPP-666 FDP Cell includes:** • Room 308 - Remote Decon Cell • Room 309 - Filter Handling Cell • CPP-666 FDP Cell		 520 gallons/day 520 gallons/day 520 gallons/day
		Line 8 Total:	**1,560 gallons/day**

ITEM 8. ADDITIONAL TREATMENT PROCESS SUPPLEMENT

LINE NUMBER	PROCESS TYPE UNIT NAME		PROCESS DESIGN CAPACITY
10	**T04 - MACROENCAPSULATION in CPP-1617 includes:** • Commercial Macroencapsulation Unit • Custom Macroencapsulation Unit		9,600 gallons/day total amount for both units combined
		Line 10 Total:	**9,600 gallons/day total amount for both units combined**
11	**T04 - OTHER TREATMENT IN CPP-666 includes:** • Distillation of Na/NaK in CPP-666 Room SB-8 in the SDS (-31'0" level) Distillation Vessel (VES-FC-101) Collection Vessel (VES-FC-85) • Deactivation of Na/NaK using water (immersion and misting/wetting) in CPP-666 FDP Cell within the ARS, or exposure to air in the cell		6.2 gallons of Na &/or NaK/day 6.2 gallons of Na &/or NaK/day
		Line 11 Total:	**12.4 gallons of Na &/or NaKday**
12	**T04 - OTHER TREATMENT IN CPP-659 includes:** • Deactivation of Na using water (immersion and misting/wetting) in CPP-659 Room 308 within the ARS, or exposure to air in the cell		6.2 gallons of Na/day
		Line 12 Total:	**6.2 gallons of Na/day**
13	**T04 - MACROENCAPSULATION in CPP-659 Room 428 includes:** • Commercial Macroencapsulation Unit		9,600 gallons/day
		Line 13 Total:	**9,600 gallons/day**

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 hazardous 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)									D. PROCESSES (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

ITEM 9. DESCRIPTION OF HAZARDOUS WASTE

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ITEM 9. DESCRIPTION OF HAZARDOUS WASTE

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9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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 a code is not entered in 9.D(1))
	1	D	0	0	2	4,000	T	S	0	2	T	0	1				CPP-659 NWCF, ROOM 203 - TANK STORAGE & TANK TREATMENT (VES-NCD-129)
	2	D	0	0	4												
	3	D	0	0	5												
	4	D	0	0	6												
	5	D	0	0	7												
	6	D	0	0	8												
	7	D	0	0	9												
	8	D	0	1	0												
	9	D	0	1	1												
1	0	D	0	1	8												
1	1	D	0	1	9												
1	2	D	0	2	1												
1	3	D	0	2	2												
1	4	D	0	2	6												
1	5	D	0	2	8												
1	6	D	0	3	2												
1	7	D	0	3	4												
1	8	D	0	3	5												
1	9	D	0	3	6												
2	0	D	0	3	8												
2	1	D	0	3	9												
2	2	D	0	4	0												
2	3	F	0	0	1												
2	4	F	0	0	2												
2	5	F	0	0	3												
2	6	F	0	0	5												
2	7	U	1	3	4												
2	8																
2	9																
3	0																
3	1																
3	2																
3	3																
3	4																
3	5																
3	6																

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)									D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
	1	D	0	0	2	15	T	S	0	1							CPP-659 NWCF, ROOM 205 - CONTAINER STORAGE
	2	D	0	0	4												INCLUDED WITH ABOVE
	3	D	0	0	5												INCLUDED WITH ABOVE
	4	D	0	0	6												INCLUDED WITH ABOVE
	5	D	0	0	7												INCLUDED WITH ABOVE
	6	D	0	0	8												INCLUDED WITH ABOVE
	7	D	0	0	9												INCLUDED WITH ABOVE
	8	D	0	1	0												INCLUDED WITH ABOVE
	9	D	0	1	1												INCLUDED WITH ABOVE
1	0	D	0	1	8												INCLUDED WITH ABOVE
1	1	D	0	1	9												INCLUDED WITH ABOVE
1	2	D	0	2	1												INCLUDED WITH ABOVE
1	3	D	0	2	2												INCLUDED WITH ABOVE
1	4	D	0	2	6												INCLUDED WITH ABOVE
1	5	D	0	2	8												INCLUDED WITH ABOVE
1	6	D	0	2	9												INCLUDED WITH ABOVE
1	7	D	0	3	2												INCLUDED WITH ABOVE
1	8	D	0	3	4												INCLUDED WITH ABOVE
1	9	D	0	3	5												INCLUDED WITH ABOVE
2	0	D	0	3	6												INCLUDED WITH ABOVE
2	1	D	0	3	8												INCLUDED WITH ABOVE
2	2	D	0	3	9												INCLUDED WITH ABOVE
2	3	D	0	4	0												INCLUDED WITH ABOVE
2	4	F	0	0	1												INCLUDED WITH ABOVE
2	5	F	0	0	2												INCLUDED WITH ABOVE
2	6	F	0	0	3												INCLUDED WITH ABOVE
2	7	F	0	0	5												INCLUDED WITH ABOVE
2	8	F	0	0	6												INCLUDED WITH ABOVE
2	9	F	0	0	7												INCLUDED WITH ABOVE
3	0	F	0	0	9												INCLUDED WITH ABOVE
3	1	U	1	3	4												INCLUDED WITH ABOVE
3	2																
3	3																
3	4																
3	5																
3	6																

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9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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 a code is not entered in 9.D(1))
	1	D	0	0	2	15	T	S	0	1							CPP-659 NWCF, ROOM 206 - CONTAINER STORAGE & WASTE PILE STORAGE
	2	D	0	0	4	10	T	S	0	3							INCLUDED WITH ABOVE
	3	D	0	0	5												INCLUDED WITH ABOVE
	4	D	0	0	6												INCLUDED WITH ABOVE
	5	D	0	0	7												INCLUDED WITH ABOVE
	6	D	0	0	8												INCLUDED WITH ABOVE
	7	D	0	0	9												INCLUDED WITH ABOVE
	8	D	0	1	0												INCLUDED WITH ABOVE
	9	D	0	1	1												INCLUDED WITH ABOVE
1	0	D	0	1	8												INCLUDED WITH ABOVE
1	1	D	0	1	9												INCLUDED WITH ABOVE
1	2	D	0	2	1												INCLUDED WITH ABOVE
1	3	D	0	2	2												INCLUDED WITH ABOVE
1	4	D	0	2	6												INCLUDED WITH ABOVE
1	5	D	0	2	8												INCLUDED WITH ABOVE
1	6	D	0	2	9												INCLUDED WITH ABOVE
1	7	D	0	3	2												INCLUDED WITH ABOVE
1	8	D	0	3	4												INCLUDED WITH ABOVE
1	9	D	0	3	5												INCLUDED WITH ABOVE
2	0	D	0	3	6												INCLUDED WITH ABOVE
2	1	D	0	3	8												INCLUDED WITH ABOVE
2	2	D	0	3	9												INCLUDED WITH ABOVE
2	3	D	0	4	0												INCLUDED WITH ABOVE
2	4	F	0	0	1												INCLUDED WITH ABOVE
2	5	F	0	0	2												INCLUDED WITH ABOVE
2	6	F	0	0	3												INCLUDED WITH ABOVE
2	7	F	0	0	5												INCLUDED WITH ABOVE
2	8	F	0	0	6												INCLUDED WITH ABOVE
2	9	F	0	0	7												INCLUDED WITH ABOVE
3	0	F	0	0	9												INCLUDED WITH ABOVE
3	1	U	1	3	4												INCLUDED WITH ABOVE
3	2																
3	3																
3	4																
3	5																
3	6																

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
1	D002	15	T	S01	CPP-659 NWCF, ROOM 207 - CONTAINER STORAGE & WASTE PILE STORAGE
2	D004	10	T	S03	INCLUDED WITH ABOVE
3	D005				INCLUDED WITH ABOVE
4	D006				INCLUDED WITH ABOVE
5	D007				INCLUDED WITH ABOVE
6	D008				INCLUDED WITH ABOVE
7	D009				INCLUDED WITH ABOVE
8	D010				INCLUDED WITH ABOVE
9	D011				INCLUDED WITH ABOVE
10	D018				INCLUDED WITH ABOVE
11	D019				INCLUDED WITH ABOVE
12	D021				INCLUDED WITH ABOVE
13	D022				INCLUDED WITH ABOVE
14	D026				INCLUDED WITH ABOVE
15	D028				INCLUDED WITH ABOVE
16	D029				INCLUDED WITH ABOVE
17	D032				INCLUDED WITH ABOVE
18	D034				INCLUDED WITH ABOVE
19	D035				INCLUDED WITH ABOVE
20	D036				INCLUDED WITH ABOVE
21	D038				INCLUDED WITH ABOVE
22	D039				INCLUDED WITH ABOVE
23	D040				INCLUDED WITH ABOVE
24	F001				INCLUDED WITH ABOVE
25	F002				INCLUDED WITH ABOVE
26	F003				INCLUDED WITH ABOVE
27	F005				INCLUDED WITH ABOVE
28	F006				
29	F007				
30	F009				
31	U134				
32					
33					
34					
35					
36					

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
1	D002	15	T	S01	CPP-659 NWCF, ROOM 214 - CONTAINER STORAGE & WASTE PILE STORAGE
2	D004	10	T	S03	INCLUDED WITH ABOVE
3	D005				INCLUDED WITH ABOVE
4	D006				INCLUDED WITH ABOVE
5	D007				INCLUDED WITH ABOVE
6	D008				INCLUDED WITH ABOVE
7	D009				INCLUDED WITH ABOVE
8	D010				INCLUDED WITH ABOVE
9	D011				INCLUDED WITH ABOVE
10	D018				INCLUDED WITH ABOVE
11	D019				INCLUDED WITH ABOVE
12	D021				INCLUDED WITH ABOVE
13	D022				INCLUDED WITH ABOVE
14	D026				INCLUDED WITH ABOVE
15	D028				INCLUDED WITH ABOVE
16	D029				INCLUDED WITH ABOVE
17	D032				INCLUDED WITH ABOVE
18	D034				INCLUDED WITH ABOVE
19	D035				INCLUDED WITH ABOVE
20	D036				INCLUDED WITH ABOVE
21	D038				INCLUDED WITH ABOVE
22	D039				INCLUDED WITH ABOVE
23	D040				INCLUDED WITH ABOVE
24	F001				INCLUDED WITH ABOVE
25	F002				INCLUDED WITH ABOVE
26	F003				INCLUDED WITH ABOVE
27	F005				INCLUDED WITH ABOVE
28	F006				INCLUDED WITH ABOVE
29	F007				INCLUDED WITH ABOVE
30	F009				INCLUDED WITH ABOVE
31	U134				INCLUDED WITH ABOVE
32					
33					
34					
35					
36					

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
1	D002	15	T	S01	CPP-659 NWCF, ROOM 215 - CONTAINER STORAGE & WASTE PILE STORAGE
2	D004	10	T	S03	INCLUDED WITH ABOVE
3	D005				INCLUDED WITH ABOVE
4	D006				INCLUDED WITH ABOVE
5	D007				INCLUDED WITH ABOVE
6	D008				INCLUDED WITH ABOVE
7	D009				INCLUDED WITH ABOVE
8	D010				INCLUDED WITH ABOVE
9	D011				INCLUDED WITH ABOVE
10	D018				INCLUDED WITH ABOVE
11	D019				INCLUDED WITH ABOVE
12	D021				INCLUDED WITH ABOVE
13	D022				INCLUDED WITH ABOVE
14	D026				INCLUDED WITH ABOVE
15	D028				INCLUDED WITH ABOVE
16	D029				INCLUDED WITH ABOVE
17	D032				INCLUDED WITH ABOVE
18	D034				INCLUDED WITH ABOVE
19	D035				INCLUDED WITH ABOVE
20	D036				INCLUDED WITH ABOVE
21	D038				INCLUDED WITH ABOVE
22	D039				INCLUDED WITH ABOVE
23	D040				INCLUDED WITH ABOVE
24	F001				INCLUDED WITH ABOVE
25	F002				INCLUDED WITH ABOVE
26	F003				INCLUDED WITH ABOVE
27	F005				INCLUDED WITH ABOVE
28	F006				INCLUDED WITH ABOVE
29	F007				INCLUDED WITH ABOVE
30	F009				INCLUDED WITH ABOVE
31	U134				INCLUDED WITH ABOVE
32					
33					
34					
35					
36					

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
1	D002	210	T	S01 S03 T04	CPP-659 NWCF, ROOM 216 - CONTAINER STORAGE, WASTE PILE STORAGE, & SIZING/ REPACKAGING/COMPACTING
2	D004				INCLUDED WITH ABOVE
3	D005				INCLUDED WITH ABOVE
4	D006				INCLUDED WITH ABOVE
5	D007				INCLUDED WITH ABOVE
6	D008				INCLUDED WITH ABOVE
7	D009				INCLUDED WITH ABOVE
8	D010				INCLUDED WITH ABOVE
9	D011				INCLUDED WITH ABOVE
10	D018				INCLUDED WITH ABOVE
11	D019				INCLUDED WITH ABOVE
12	D021				INCLUDED WITH ABOVE
13	D022				INCLUDED WITH ABOVE
14	D026				INCLUDED WITH ABOVE
15	D028				INCLUDED WITH ABOVE
16	D029				INCLUDED WITH ABOVE
17	D032				INCLUDED WITH ABOVE
18	D034				INCLUDED WITH ABOVE
19	D035				INCLUDED WITH ABOVE
20	D036				INCLUDED WITH ABOVE
21	D038				INCLUDED WITH ABOVE
22	D039				INCLUDED WITH ABOVE
23	D040				INCLUDED WITH ABOVE
24	F001				INCLUDED WITH ABOVE
25	F002				INCLUDED WITH ABOVE
26	F003				INCLUDED WITH ABOVE
27	F005				INCLUDED WITH ABOVE
28	F006				INCLUDED WITH ABOVE
29	F007				INCLUDED WITH ABOVE
30	F009				INCLUDED WITH ABOVE
31	U134				INCLUDED WITH ABOVE
32					
33					
34					
35					
36					

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
1	D002	15	T	S01	CPP-659 NWCF, ROOM 218 - CONTAINER STORAGE
2	D004				INCLUDED WITH ABOVE
3	D005				INCLUDED WITH ABOVE
4	D006				INCLUDED WITH ABOVE
5	D007				INCLUDED WITH ABOVE
6	D008				INCLUDED WITH ABOVE
7	D009				INCLUDED WITH ABOVE
8	D010				INCLUDED WITH ABOVE
9	D011				INCLUDED WITH ABOVE
10	D018				INCLUDED WITH ABOVE
11	D019				INCLUDED WITH ABOVE
12	D021				INCLUDED WITH ABOVE
13	D022				INCLUDED WITH ABOVE
14	D026				INCLUDED WITH ABOVE
15	D027				INCLUDED WITH ABOVE
16	D028				INCLUDED WITH ABOVE
17	D029				INCLUDED WITH ABOVE
18	D030				INCLUDED WITH ABOVE
19	D032				INCLUDED WITH ABOVE
20	D033				INCLUDED WITH ABOVE
21	D034				INCLUDED WITH ABOVE
22	D035				INCLUDED WITH ABOVE
23	D036				INCLUDED WITH ABOVE
24	D037				INCLUDED WITH ABOVE
25	D038				INCLUDED WITH ABOVE
26	D039				INCLUDED WITH ABOVE
27	D040				INCLUDED WITH ABOVE
28	D042				INCLUDED WITH ABOVE
29	D043				INCLUDED WITH ABOVE
30	F001				INCLUDED WITH ABOVE
31	F002				INCLUDED WITH ABOVE
32	F003				INCLUDED WITH ABOVE
33	F004				INCLUDED WITH ABOVE
34	F005				INCLUDED WITH ABOVE
35	F006				INCLUDED WITH ABOVE
36	F007				INCLUDED WITH ABOVE

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9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
1	F 0 0 9			S 0 1	INCLUDED with CPP-659 NWCF, ROOM 218 - CONTAINER STORAGE, Pg. 5(H-1) of 6, Line 1
2	U 1 3 4				INCLUDED WITH ABOVE
3					
4					
5					
6					
7					
8					
9					
1 0					
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					
3 4					
3 5					
3 6					

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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 a code is not entered in 9.D(1))
	1	D	0	0	2	4,000	T	S	0	2	T	0	1				CPP-659 NWCF, ROOM 219 - TANK STORAGE & TANK TREATMENT (VES-NCD-123)
	2	D	0	0	4												INCLUDED WITH ABOVE
	3	D	0	0	5												INCLUDED WITH ABOVE
	4	D	0	0	6												INCLUDED WITH ABOVE
	5	D	0	0	7												INCLUDED WITH ABOVE
	6	D	0	0	8												INCLUDED WITH ABOVE
	7	D	0	0	9												INCLUDED WITH ABOVE
	8	D	0	1	0												INCLUDED WITH ABOVE
	9	D	0	1	1												INCLUDED WITH ABOVE
1	0	D	0	1	8												INCLUDED WITH ABOVE
1	1	D	0	1	9												INCLUDED WITH ABOVE
1	2	D	0	2	1												INCLUDED WITH ABOVE
1	3	D	0	2	2												INCLUDED WITH ABOVE
1	4	D	0	2	6												INCLUDED WITH ABOVE
1	5	D	0	2	8												INCLUDED WITH ABOVE
1	6	D	0	3	2												INCLUDED WITH ABOVE
1	7	D	0	3	4												INCLUDED WITH ABOVE
1	8	D	0	3	5												INCLUDED WITH ABOVE
1	9	D	0	3	6												INCLUDED WITH ABOVE
2	0	D	0	3	8												INCLUDED WITH ABOVE
2	1	D	0	3	9												INCLUDED WITH ABOVE
2	2	D	0	4	0												INCLUDED WITH ABOVE
2	3	F	0	0	1												INCLUDED WITH ABOVE
2	4	F	0	0	2												INCLUDED WITH ABOVE
2	5	F	0	0	3												INCLUDED WITH ABOVE
2	6	F	0	0	5												INCLUDED WITH ABOVE
2	7	U	1	3	4												INCLUDED WITH ABOVE
2	8																
2	9																
3	0																
3	1																
3	2																
3	3																
3	4																
3	5																
3	6																

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
1	D001	15	T	S01	CPP-659 NWCF, ROOM 306 - CONTAINER STORAGE
2	D002				INCLUDED WITH ABOVE
3	D003				INCLUDED WITH ABOVE
4	D004				INCLUDED WITH ABOVE
5	D005				INCLUDED WITH ABOVE
6	D006				INCLUDED WITH ABOVE
7	D007				INCLUDED WITH ABOVE
8	D008				INCLUDED WITH ABOVE
9	D009				INCLUDED WITH ABOVE
10	D010				INCLUDED WITH ABOVE
11	D011				INCLUDED WITH ABOVE
12	D018				INCLUDED WITH ABOVE
13	D019				INCLUDED WITH ABOVE
14	D021				INCLUDED WITH ABOVE
15	D022				INCLUDED WITH ABOVE
16	D026				INCLUDED WITH ABOVE
17	D027				INCLUDED WITH ABOVE
18	D028				INCLUDED WITH ABOVE
19	D029				INCLUDED WITH ABOVE
20	D030				INCLUDED WITH ABOVE
21	D032				INCLUDED WITH ABOVE
22	D033				INCLUDED WITH ABOVE
23	D034				INCLUDED WITH ABOVE
24	D035				INCLUDED WITH ABOVE
25	D036				INCLUDED WITH ABOVE
26	D037				INCLUDED WITH ABOVE
27	D038				INCLUDED WITH ABOVE
28	D039				INCLUDED WITH ABOVE
29	D040				INCLUDED WITH ABOVE
30	D042				INCLUDED WITH ABOVE
31	D043				INCLUDED WITH ABOVE
32	F001				INCLUDED WITH ABOVE
33	F002				INCLUDED WITH ABOVE
34	F003				INCLUDED WITH ABOVE
35	F004				INCLUDED WITH ABOVE
36	F005				INCLUDED WITH ABOVE

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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 a code is not entered in 9.D(1))
	1	F	0	0	6			S	0	1							INCLUDED with CPP-659 NWCF, ROOM 306 - CONTAINER STORAGE, Pg. 5(J-1) of 6, Line 1
	2	F	0	0	7												INCLUDED WITH ABOVE
	3	F	0	0	9												INCLUDED WITH ABOVE
	4	U	1	3	4												INCLUDED WITH ABOVE
	5																
	6																
	7																
	8																
	9																
1	0																
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																
3	4																
3	5																
3	6																

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9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
1	D002	210	T	T04	CPP-659 NWCF, ROOM 306 - SIZING/REPACKAGING/ COMPACTING
2	D004				INCLUDED WITH ABOVE
3	D005				INCLUDED WITH ABOVE
4	D006				INCLUDED WITH ABOVE
5	D007				INCLUDED WITH ABOVE
6	D008				INCLUDED WITH ABOVE
7	D009				INCLUDED WITH ABOVE
8	D010				INCLUDED WITH ABOVE
9	D011				INCLUDED WITH ABOVE
10	D018				INCLUDED WITH ABOVE
11	D019				INCLUDED WITH ABOVE
12	D021				INCLUDED WITH ABOVE
13	D022				INCLUDED WITH ABOVE
14	D026				INCLUDED WITH ABOVE
15	D027				INCLUDED WITH ABOVE
16	D028				INCLUDED WITH ABOVE
17	D029				INCLUDED WITH ABOVE
18	D030				INCLUDED WITH ABOVE
19	D032				INCLUDED WITH ABOVE
20	D033				INCLUDED WITH ABOVE
21	D034				INCLUDED WITH ABOVE
22	D035				INCLUDED WITH ABOVE
23	D036				INCLUDED WITH ABOVE
24	D037				INCLUDED WITH ABOVE
25	D038				INCLUDED WITH ABOVE
26	D039				INCLUDED WITH ABOVE
27	D040				INCLUDED WITH ABOVE
28	D042				INCLUDED WITH ABOVE
29	D043				INCLUDED WITH ABOVE
30	F001				INCLUDED WITH ABOVE
31	F002				INCLUDED WITH ABOVE
32	F003				INCLUDED WITH ABOVE
33	F004				INCLUDED WITH ABOVE
34	F005				INCLUDED WITH ABOVE
35	F006				INCLUDED WITH ABOVE
36	F007				INCLUDED WITH ABOVE

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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 a code is not entered in 9.D(1))
	1	F	0	0	9			T	0	4							Included with CPP-659 NWCF, ROOM 306 - SIZING/REPACKAGING/ COMPACTING, Pg. 5(K-1) of 6, Line 1
	2	U	1	3	4												INCLUDED WITH ABOVE
	3																
	4																
	5																
	6																
	7																
	8																
	9																
1	0																
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1	8																
1	9																
2	0																
2	1																
2	2																
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2	4																
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2	6																
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2	8																
2	9																
3	0																
3	1																
3	2																
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9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
1	D001	210	T	S01 T04	CPP-659 NWCF, ROOM 308 - CONTAINER STORAGE, SIZING/REPACKAGING/ COMPACTING, & Na/NaK TREATMENT in the ARS
2	D002				INCLUDED WITH ABOVE
3	D003				INCLUDED WITH ABOVE
4	D004				INCLUDED WITH ABOVE
5	D005				INCLUDED WITH ABOVE
6	D006				INCLUDED WITH ABOVE
7	D007				INCLUDED WITH ABOVE
8	D008				INCLUDED WITH ABOVE
9	D009				INCLUDED WITH ABOVE
10	D010				INCLUDED WITH ABOVE
11	D011				INCLUDED WITH ABOVE
12	D018				INCLUDED WITH ABOVE
13	D019				INCLUDED WITH ABOVE
14	D021				INCLUDED WITH ABOVE
15	D022				INCLUDED WITH ABOVE
16	D026				INCLUDED WITH ABOVE
17	D027				INCLUDED WITH ABOVE
18	D028				INCLUDED WITH ABOVE
19	D029				INCLUDED WITH ABOVE
20	D030				INCLUDED WITH ABOVE
21	D032				INCLUDED WITH ABOVE
22	D033				INCLUDED WITH ABOVE
23	D034				INCLUDED WITH ABOVE
24	D035				INCLUDED WITH ABOVE
25	D036				INCLUDED WITH ABOVE
26	D037				INCLUDED WITH ABOVE
27	D038				INCLUDED WITH ABOVE
28	D039				INCLUDED WITH ABOVE
29	D040				INCLUDED WITH ABOVE
30	D042				INCLUDED WITH ABOVE
31	D043				INCLUDED WITH ABOVE
32	F001				INCLUDED WITH ABOVE
33	F002				INCLUDED WITH ABOVE
34	F003				INCLUDED WITH ABOVE
35	F004				INCLUDED WITH ABOVE
36	F005				INCLUDED WITH ABOVE

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)									D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
	1	F	0	0	6			S	0	1	T	0	4				Included with CPP-659 NWCF, ROOM 308, CONTAINER STORAGE, SIZING/REPACKAGING/ COMPACTING, & Na/NaK TREATMENT in the ARS, Pg. 5(L-1) of 6, Line 1
	2	F	0	0	7												INCLUDED WITH ABOVE
	3	F	0	0	9												INCLUDED WITH ABOVE
	4	U	1	3	4												
	5																
	6																
	7																
	8																
	9																
1	0																
1	1																
1	2																
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EPA ID NO: ID4890008952 OMB #: 2050-0024; Expires 01/31/2017

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)									D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
	1	D	0	0	2	70	T	S	0	3	T	0	4				CPP-659 NWCF, ROOM 308 - WASTE PILE STORAGE & ABSORBENT ADDITION
	2	D	0	0	4												INCLUDED WITH ABOVE
	3	D	0	0	5												INCLUDED WITH ABOVE
	4	D	0	0	6												INCLUDED WITH ABOVE
	5	D	0	0	7												INCLUDED WITH ABOVE
	6	D	0	0	8												INCLUDED WITH ABOVE
	7	D	0	0	9												INCLUDED WITH ABOVE
	8	D	0	1	0												INCLUDED WITH ABOVE
	9	D	0	1	1												INCLUDED WITH ABOVE
1	0	D	0	1	8												INCLUDED WITH ABOVE
1	1	D	0	1	9												INCLUDED WITH ABOVE
1	2	D	0	2	1												INCLUDED WITH ABOVE
1	3	D	0	2	2												INCLUDED WITH ABOVE
1	4	D	0	2	6												INCLUDED WITH ABOVE
1	5	D	0	2	8												INCLUDED WITH ABOVE
1	6	D	0	2	9												INCLUDED WITH ABOVE
1	7	D	0	3	2												INCLUDED WITH ABOVE
1	8	D	0	3	4												INCLUDED WITH ABOVE
1	9	D	0	3	5												INCLUDED WITH ABOVE
2	0	D	0	3	6												INCLUDED WITH ABOVE
2	1	D	0	3	8												INCLUDED WITH ABOVE
2	2	D	0	3	9												INCLUDED WITH ABOVE
2	3	D	0	4	0												INCLUDED WITH ABOVE
2	4	F	0	0	1												INCLUDED WITH ABOVE
2	5	F	0	0	2												INCLUDED WITH ABOVE
2	6	F	0	0	3												INCLUDED WITH ABOVE
2	7	F	0	0	5												INCLUDED WITH ABOVE
2	8	F	0	0	6												INCLUDED WITH ABOVE
2	9	F	0	0	7												INCLUDED WITH ABOVE
3	0	F	0	0	9												INCLUDED WITH ABOVE
3	1	U	1	3	4												INCLUDED WITH ABOVE
3	2																
3	3																
3	4																
3	5																
3	6																

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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 a code is not entered in 9.D(1))
	1	D	0	0	2	11,680	T	T	0	4										CPP-659 NWCF, ROOM 308 - CONTAINER TREATMENT (VES-NCD-137, -138, -139) PHYSICAL & CHEMICAL EXTRACTION
	2	D	0	0	4	13,200	T	X	9	9										
	3	D	0	0	5															
	4	D	0	0	6															
	5	D	0	0	7															
	6	D	0	0	8															
	7	D	0	0	9															
	8	D	0	1	0															
	9	D	0	1	1															
1	0	D	0	1	8															
1	1	D	0	1	9															
1	2	D	0	2	1															
1	3	D	0	2	2															
1	4	D	0	2	6															
1	5	D	0	2	8															
1	6	D	0	3	2															
1	7	D	0	3	4															
1	8	D	0	3	5															
1	9	D	0	3	6															
2	0	D	0	3	8															
2	1	D	0	3	9															
2	2	D	0	4	0															
2	3	F	0	0	1															
2	4	F	0	0	2															
2	5	F	0	0	3															
2	6	F	0	0	5															
2	7	U	1	3	4															
2	8																			
2	9																			
3	0																			
3	1																			
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3	3																			
3	4																			
3	5																			
3	6																			

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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 a code is not entered in 9.D(1))
	1	D	0	0	1	15	T	S	0	1							CPP-659 NWCF, ROOM 309 - CONTAINER STORAGE
	2	D	0	0	2												INCLUDED WITH ABOVE
	3	D	0	0	3												INCLUDED WITH ABOVE
	4	D	0	0	4												INCLUDED WITH ABOVE
	5	D	0	0	5												INCLUDED WITH ABOVE
	6	D	0	0	6												INCLUDED WITH ABOVE
	7	D	0	0	7												INCLUDED WITH ABOVE
	8	D	0	0	8												INCLUDED WITH ABOVE
	9	D	0	0	9												INCLUDED WITH ABOVE
1	0	D	0	1	0												INCLUDED WITH ABOVE
1	1	D	0	1	1												INCLUDED WITH ABOVE
1	2	D	0	1	8												INCLUDED WITH ABOVE
1	3	D	0	1	9												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	6												INCLUDED WITH ABOVE
1	7	D	0	2	7												INCLUDED WITH ABOVE
1	8	D	0	2	8												INCLUDED WITH ABOVE
1	9	D	0	2	9												INCLUDED WITH ABOVE
2	0	D	0	3	0												INCLUDED WITH ABOVE
2	1	D	0	3	2												INCLUDED WITH ABOVE
2	2	D	0	3	3												INCLUDED WITH ABOVE
2	3	D	0	3	4												INCLUDED WITH ABOVE
2	4	D	0	3	5												INCLUDED WITH ABOVE
2	5	D	0	3	6												INCLUDED WITH ABOVE
2	6	D	0	3	7												INCLUDED WITH ABOVE
2	7	D	0	3	8												INCLUDED WITH ABOVE
2	8	D	0	3	9												INCLUDED WITH ABOVE
2	9	D	0	4	0												INCLUDED WITH ABOVE
3	0	D	0	4	2												INCLUDED WITH ABOVE
3	1	D	0	4	3												INCLUDED WITH ABOVE
3	2	F	0	0	1												INCLUDED WITH ABOVE
3	3	F	0	0	2												INCLUDED WITH ABOVE
3	4	F	0	0	3												INCLUDED WITH ABOVE
3	5	F	0	0	4												INCLUDED WITH ABOVE
3	6	F	0	0	5												INCLUDED WITH ABOVE

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
1	F 0 0 6			S 0 1	Included with CPP-659 NWCF, ROOM 309 - CONTAINER STORAGE, Pg. 5O-1 of 6, Line 1
2	F 0 0 7				INCLUDED WITH ABOVE
3	F 0 0 9				INCLUDED WITH ABOVE
4	U 1 3 4				INCLUDED WITH ABOVE
5					INCLUDED WITH ABOVE
6					INCLUDED WITH ABOVE
7					INCLUDED WITH ABOVE
8					INCLUDED WITH ABOVE
9					INCLUDED WITH ABOVE
10					INCLUDED WITH ABOVE
11					INCLUDED WITH ABOVE
12					INCLUDED WITH ABOVE
13					INCLUDED WITH ABOVE
14					INCLUDED WITH ABOVE
15					INCLUDED WITH ABOVE
16					INCLUDED WITH ABOVE
17					INCLUDED WITH ABOVE
18					INCLUDED WITH ABOVE
19					INCLUDED WITH ABOVE
20					INCLUDED WITH ABOVE
21					INCLUDED WITH ABOVE
22					INCLUDED WITH ABOVE
23					INCLUDED WITH ABOVE
24					INCLUDED WITH ABOVE
25					INCLUDED WITH ABOVE
26					INCLUDED WITH ABOVE
27					INCLUDED WITH ABOVE
28					INCLUDED WITH ABOVE
29					INCLUDED WITH ABOVE
30					INCLUDED WITH ABOVE
31					INCLUDED WITH ABOVE
32					INCLUDED WITH ABOVE
33					INCLUDED WITH ABOVE
34					INCLUDED WITH ABOVE
35					INCLUDED WITH ABOVE
36					INCLUDED WITH ABOVE

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)									D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
	1	D	0	0	2	22	T	S	0	2	T	0	1				CPP-659 NWCF, ROOM 309 - TANK STORAGE AND TANK TREATMENT HFLS (VES-NCD-141, VES-NCD-142)
	2	D	0	0	4												INCLUDED WITH ABOVE
	3	D	0	0	5												INCLUDED WITH ABOVE
	4	D	0	0	6												INCLUDED WITH ABOVE
	5	D	0	0	7												INCLUDED WITH ABOVE
	6	D	0	0	8												INCLUDED WITH ABOVE
	7	D	0	0	9												INCLUDED WITH ABOVE
	8	D	0	1	0												INCLUDED WITH ABOVE
	9	D	0	1	1												INCLUDED WITH ABOVE
1	0	D	0	1	8												INCLUDED WITH ABOVE
1	1	D	0	1	9												INCLUDED WITH ABOVE
1	2	D	0	2	1												INCLUDED WITH ABOVE
1	3	D	0	2	2												INCLUDED WITH ABOVE
1	4	D	0	2	6												INCLUDED WITH ABOVE
1	5	D	0	2	8												INCLUDED WITH ABOVE
1	6	D	0	3	2												INCLUDED WITH ABOVE
1	7	D	0	3	4												INCLUDED WITH ABOVE
1	8	D	0	3	5												INCLUDED WITH ABOVE
1	9	D	0	3	6												INCLUDED WITH ABOVE
2	0	D	0	3	8												INCLUDED WITH ABOVE
2	1	D	0	3	9												INCLUDED WITH ABOVE
2	2	D	0	4	0												INCLUDED WITH ABOVE
2	3	F	0	0	1												INCLUDED WITH ABOVE
2	4	F	0	0	2												INCLUDED WITH ABOVE
2	5	F	0	0	3												INCLUDED WITH ABOVE
2	6	F	0	0	5												INCLUDED WITH ABOVE
2	7	U	1	3	4												INCLUDED WITH ABOVE
2	8																
2	9																
3	0																
3	1																
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9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
1	D002	70	T	S03 T04	CPP-659 NWCF, ROOM 309 - WASTE PILE STORAGE & ABSORBENT ADDITION
2	D004				INCLUDED WITH ABOVE
3	D005				INCLUDED WITH ABOVE
4	D006				INCLUDED WITH ABOVE
5	D007				INCLUDED WITH ABOVE
6	D008				INCLUDED WITH ABOVE
7	D009				INCLUDED WITH ABOVE
8	D010				INCLUDED WITH ABOVE
9	D011				INCLUDED WITH ABOVE
10	D018				INCLUDED WITH ABOVE
11	D019				INCLUDED WITH ABOVE
12	D021				INCLUDED WITH ABOVE
13	D022				INCLUDED WITH ABOVE
14	D026				INCLUDED WITH ABOVE
15	D028				INCLUDED WITH ABOVE
16	D029				INCLUDED WITH ABOVE
17	D032				INCLUDED WITH ABOVE
18	D034				INCLUDED WITH ABOVE
19	D035				INCLUDED WITH ABOVE
20	D036				INCLUDED WITH ABOVE
21	D038				INCLUDED WITH ABOVE
22	D039				INCLUDED WITH ABOVE
23	D040				INCLUDED WITH ABOVE
24	F001				INCLUDED WITH ABOVE
25	F002				INCLUDED WITH ABOVE
26	F003				INCLUDED WITH ABOVE
27	F005				INCLUDED WITH ABOVE
28	F006				INCLUDED WITH ABOVE
29	F007				INCLUDED WITH ABOVE
30	F009				INCLUDED WITH ABOVE
31	U134				INCLUDED WITH ABOVE
32					
33					
34					
35					
36					

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9. Description of Hazardous Wastes ***(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)***

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)									D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
	1	D	0	0	2	210	T	T	0	4							CPP-659 NWCF, ROOM 309 - SIZING/REPACKAGING/ COMPACTING
	2	D	0	0	4												INCLUDED WITH ABOVE
	3	D	0	0	5												INCLUDED WITH ABOVE
	4	D	0	0	6												INCLUDED WITH ABOVE
	5	D	0	0	7												INCLUDED WITH ABOVE
	6	D	0	0	8												INCLUDED WITH ABOVE
	7	D	0	0	9												INCLUDED WITH ABOVE
	8	D	0	1	0												INCLUDED WITH ABOVE
	9	D	0	1	1												INCLUDED WITH ABOVE
1	0	D	0	1	8												INCLUDED WITH ABOVE
1	1	D	0	1	9												INCLUDED WITH ABOVE
1	2	D	0	2	1												INCLUDED WITH ABOVE
1	3	D	0	2	2												INCLUDED WITH ABOVE
1	4	D	0	2	6												INCLUDED WITH ABOVE
1	5	D	0	2	7												INCLUDED WITH ABOVE
1	6	D	0	2	8												INCLUDED WITH ABOVE
1	7	D	0	2	9												INCLUDED WITH ABOVE
1	8	D	0	3	0												INCLUDED WITH ABOVE
1	9	D	0	3	2												INCLUDED WITH ABOVE
2	0	D	0	3	3												INCLUDED WITH ABOVE
2	1	D	0	3	4												INCLUDED WITH ABOVE
2	2	D	0	3	5												INCLUDED WITH ABOVE
2	3	D	0	3	6												INCLUDED WITH ABOVE
2	4	D	0	3	7												INCLUDED WITH ABOVE
2	5	D	0	3	8												INCLUDED WITH ABOVE
2	6	D	0	3	9												INCLUDED WITH ABOVE
2	7	D	0	4	0												INCLUDED WITH ABOVE
2	8	D	0	4	2												INCLUDED WITH ABOVE
2	9	D	0	4	3												INCLUDED WITH ABOVE
3	0	F	0	0	1												INCLUDED WITH ABOVE
3	1	F	0	0	2												INCLUDED WITH ABOVE
3	2	F	0	0	3												INCLUDED WITH ABOVE
3	3	F	0	0	4												INCLUDED WITH ABOVE
3	4	F	0	0	5												INCLUDED WITH ABOVE
3	5	F	0	0	6												INCLUDED WITH ABOVE
3	6	F	0	0	7												INCLUDED WITH ABOVE

9. Description of Hazardous Wastes ***(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)***

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)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
1	F009			T04	Included with CPP-659 NWCF, ROOM 309 - SIZING/ REPACKAGING/COMPACTING, Pg. 5(R-1) of 6, Line 1
2	U134				INCLUDED WITH ABOVE
3					
4					
5					
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9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
1	D002	10	T	S03	CPP-659 NWCF, ROOM 322 - WASTE PILE STORAGE
2	D004				INCLUDED WITH ABOVE
3	D005				INCLUDED WITH ABOVE
4	D006				INCLUDED WITH ABOVE
5	D007				INCLUDED WITH ABOVE
6	D008				INCLUDED WITH ABOVE
7	D009				INCLUDED WITH ABOVE
8	D010				INCLUDED WITH ABOVE
9	D011				INCLUDED WITH ABOVE
10	D018				INCLUDED WITH ABOVE
11	D019				INCLUDED WITH ABOVE
12	D021				INCLUDED WITH ABOVE
13	D022				INCLUDED WITH ABOVE
14	D026				INCLUDED WITH ABOVE
15	D028				INCLUDED WITH ABOVE
16	D029				INCLUDED WITH ABOVE
17	D032				INCLUDED WITH ABOVE
18	D034				INCLUDED WITH ABOVE
19	D035				INCLUDED WITH ABOVE
20	D036				INCLUDED WITH ABOVE
21	D038				INCLUDED WITH ABOVE
22	D039				INCLUDED WITH ABOVE
23	D040				INCLUDED WITH ABOVE
24	F001				INCLUDED WITH ABOVE
25	F002				INCLUDED WITH ABOVE
26	F003				INCLUDED WITH ABOVE
27	F005				INCLUDED WITH ABOVE
28	F006				INCLUDED WITH ABOVE
29	F007				INCLUDED WITH ABOVE
30	F009				INCLUDED WITH ABOVE
31	U134				INCLUDED WITH ABOVE
32					
33					
34					
35					
36					

EPA ID NO: ID4890008952 OMB #: 2050-0024; Expires 01/31/2017

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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 a code is not entered in 9.D(1))
	1	D	0	0	2	210	T	S	0	1	T	0	4				CPP-659 NWCF, ROOM 323 - CONTAINER STORAGE & SIZING/REPACKAGING/ COMPACTING
	2	D	0	0	4												INCLUDED WITH ABOVE
	3	D	0	0	5												INCLUDED WITH ABOVE
	4	D	0	0	6												INCLUDED WITH ABOVE
	5	D	0	0	7												INCLUDED WITH ABOVE
	6	D	0	0	8												INCLUDED WITH ABOVE
	7	D	0	0	9												INCLUDED WITH ABOVE
	8	D	0	1	0												INCLUDED WITH ABOVE
	9	D	0	1	1												INCLUDED WITH ABOVE
1	0	D	0	1	8												INCLUDED WITH ABOVE
1	1	D	0	1	9												INCLUDED WITH ABOVE
1	2	D	0	2	1												INCLUDED WITH ABOVE
1	3	D	0	2	2												INCLUDED WITH ABOVE
1	4	D	0	2	6												INCLUDED WITH ABOVE
1	5	D	0	2	7												INCLUDED WITH ABOVE
1	6	D	0	2	8												INCLUDED WITH ABOVE
1	7	D	0	2	9												INCLUDED WITH ABOVE
1	8	D	0	3	0												INCLUDED WITH ABOVE
1	9	D	0	3	2												INCLUDED WITH ABOVE
2	0	D	0	3	3												INCLUDED WITH ABOVE
2	1	D	0	3	4												INCLUDED WITH ABOVE
2	2	D	0	3	5												INCLUDED WITH ABOVE
2	3	D	0	3	6												INCLUDED WITH ABOVE
2	4	D	0	3	7												INCLUDED WITH ABOVE
2	5	D	0	3	8												INCLUDED WITH ABOVE
2	6	D	0	3	9												INCLUDED WITH ABOVE
2	7	D	0	4	0												INCLUDED WITH ABOVE
2	8	D	0	4	2												INCLUDED WITH ABOVE
2	9	D	0	4	3												INCLUDED WITH ABOVE
3	0	F	0	0	1												INCLUDED WITH ABOVE
3	1	F	0	0	2												INCLUDED WITH ABOVE
3	2	F	0	0	3												INCLUDED WITH ABOVE
3	3	F	0	0	4												INCLUDED WITH ABOVE
3	4	F	0	0	5												INCLUDED WITH ABOVE
3	5	F	0	0	6												INCLUDED WITH ABOVE
3	6	F	0	0	7												INCLUDED WITH ABOVE

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)									D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
	1	F	0	0	9			T	0	4							Included with CPP-659 NWCF, ROOM 323 - CONTAINER STORAGE & SIZING/REPACKAGING/COMPACTING, Pg. 5(T-1) of 6, Line 1
	2	U	1	3	4												INCLUDED WITH ABOVE
	3																
	4																
	5																
	6																
	7																
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1	9																
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2	8																
2	9																
3	0																
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9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)									D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
	1	D	0	0	2	10	T	S	0	3							CPP-659 NWCF, ROOM 323 - WASTE PILE STORAGE
	2	D	0	0	4												INCLUDED WITH ABOVE
	3	D	0	0	5												INCLUDED WITH ABOVE
	4	D	0	0	6												INCLUDED WITH ABOVE
	5	D	0	0	7												INCLUDED WITH ABOVE
	6	D	0	0	8												INCLUDED WITH ABOVE
	7	D	0	0	9												INCLUDED WITH ABOVE
	8	D	0	1	0												INCLUDED WITH ABOVE
	9	D	0	1	1												INCLUDED WITH ABOVE
1	0	D	0	1	8												INCLUDED WITH ABOVE
1	1	D	0	1	9												INCLUDED WITH ABOVE
1	2	D	0	2	1												INCLUDED WITH ABOVE
1	3	D	0	2	2												INCLUDED WITH ABOVE
1	4	D	0	2	6												INCLUDED WITH ABOVE
1	5	D	0	2	8												INCLUDED WITH ABOVE
1	6	D	0	2	9												INCLUDED WITH ABOVE
1	7	D	0	3	2												INCLUDED WITH ABOVE
1	8	D	0	3	4												INCLUDED WITH ABOVE
1	9	D	0	3	5												INCLUDED WITH ABOVE
2	0	D	0	3	6												INCLUDED WITH ABOVE
2	1	D	0	3	8												INCLUDED WITH ABOVE
2	2	D	0	3	9												INCLUDED WITH ABOVE
2	3	D	0	4	0												INCLUDED WITH ABOVE
2	4	F	0	0	1												INCLUDED WITH ABOVE
2	5	F	0	0	2												INCLUDED WITH ABOVE
2	6	F	0	0	3												INCLUDED WITH ABOVE
2	7	F	0	0	5												INCLUDED WITH ABOVE
2	8	F	0	0	6												INCLUDED WITH ABOVE
2	9	F	0	0	7												INCLUDED WITH ABOVE
3	0	F	0	0	9												INCLUDED WITH ABOVE
3	1	U	1	3	4												INCLUDED WITH ABOVE
3	2																
3	3																
3	4																
3	5																
3	6																

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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 a code is not entered in 9.D(1))
1	D002	15	T	S01				CPP-659 NWCF, ROOM 326 - CONTAINER STORAGE & WASTE PILE STORAGE
2	D004	10	T	S03				INCLUDED WITH ABOVE
3	D005							INCLUDED WITH ABOVE
4	D006							INCLUDED WITH ABOVE
5	D007							INCLUDED WITH ABOVE
6	D008							INCLUDED WITH ABOVE
7	D009							INCLUDED WITH ABOVE
8	D010							INCLUDED WITH ABOVE
9	D011							INCLUDED WITH ABOVE
10	D018							INCLUDED WITH ABOVE
11	D019							INCLUDED WITH ABOVE
12	D021							INCLUDED WITH ABOVE
13	D022							INCLUDED WITH ABOVE
14	D026							INCLUDED WITH ABOVE
15	D028							INCLUDED WITH ABOVE
16	D029							INCLUDED WITH ABOVE
17	D032							INCLUDED WITH ABOVE
18	D034							INCLUDED WITH ABOVE
19	D035							INCLUDED WITH ABOVE
20	D036							INCLUDED WITH ABOVE
21	D038							INCLUDED WITH ABOVE
22	D039							INCLUDED WITH ABOVE
23	D040							INCLUDED WITH ABOVE
24	F001							INCLUDED WITH ABOVE
25	F002							INCLUDED WITH ABOVE
26	F003							INCLUDED WITH ABOVE
27	F005							INCLUDED WITH ABOVE
28	F006							INCLUDED WITH ABOVE
29	F007							INCLUDED WITH ABOVE
30	F009							INCLUDED WITH ABOVE
31	U134							INCLUDED WITH ABOVE
32								
33								
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35								
36								

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9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)									D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
	1	D	0	0	2	15	T	S	0	1							CPP-659 NWCF, ROOM 415 - CONTAINER STORAGE
	2	D	0	0	4												INCLUDED WITH ABOVE
	3	D	0	0	5												INCLUDED WITH ABOVE
	4	D	0	0	6												INCLUDED WITH ABOVE
	5	D	0	0	7												INCLUDED WITH ABOVE
	6	D	0	0	8												INCLUDED WITH ABOVE
	7	D	0	0	9												INCLUDED WITH ABOVE
	8	D	0	1	0												INCLUDED WITH ABOVE
	9	D	0	1	1												INCLUDED WITH ABOVE
1	0	D	0	1	8												INCLUDED WITH ABOVE
1	1	D	0	1	9												INCLUDED WITH ABOVE
1	2	D	0	2	1												INCLUDED WITH ABOVE
1	3	D	0	2	2												INCLUDED WITH ABOVE
1	4	D	0	2	6												INCLUDED WITH ABOVE
1	5	D	0	2	8												INCLUDED WITH ABOVE
1	6	D	0	2	9												INCLUDED WITH ABOVE
1	7	D	0	3	2												INCLUDED WITH ABOVE
1	8	D	0	3	4												INCLUDED WITH ABOVE
1	9	D	0	3	5												INCLUDED WITH ABOVE
2	0	D	0	3	6												INCLUDED WITH ABOVE
2	1	D	0	3	8												INCLUDED WITH ABOVE
2	2	D	0	3	9												INCLUDED WITH ABOVE
2	3	D	0	4	0												INCLUDED WITH ABOVE
2	4	F	0	0	1												INCLUDED WITH ABOVE
2	5	F	0	0	2												INCLUDED WITH ABOVE
2	6	F	0	0	3												INCLUDED WITH ABOVE
2	7	F	0	0	5												INCLUDED WITH ABOVE
2	8	F	0	0	6												INCLUDED WITH ABOVE
2	9	F	0	0	7												INCLUDED WITH ABOVE
3	0	F	0	0	9												INCLUDED WITH ABOVE
3	1	U	1	3	4												INCLUDED WITH ABOVE
3	2																
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3	4																
3	5																
3	6																

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
1	D002	4,000	T	T01	CPP-659 NWCF, ROOM 415 - TANK TREATMENT (SH-NCD-933, SH-NCD-934, SH-NCD-921)
2	D004				INCLUDED WITH ABOVE
3	D005				INCLUDED WITH ABOVE
4	D006				INCLUDED WITH ABOVE
5	D007				INCLUDED WITH ABOVE
6	D008				INCLUDED WITH ABOVE
7	D009				INCLUDED WITH ABOVE
8	D010				INCLUDED WITH ABOVE
9	D011				INCLUDED WITH ABOVE
10	D018				INCLUDED WITH ABOVE
11	D019				INCLUDED WITH ABOVE
12	D021				INCLUDED WITH ABOVE
13	D022				INCLUDED WITH ABOVE
14	D026				INCLUDED WITH ABOVE
15	D028				INCLUDED WITH ABOVE
16	D032				INCLUDED WITH ABOVE
17	D034				INCLUDED WITH ABOVE
18	D035				INCLUDED WITH ABOVE
19	D036				INCLUDED WITH ABOVE
20	D038				INCLUDED WITH ABOVE
21	D039				INCLUDED WITH ABOVE
22	D040				INCLUDED WITH ABOVE
23	F001				INCLUDED WITH ABOVE
24	F002				INCLUDED WITH ABOVE
25	F003				INCLUDED WITH ABOVE
26	F005				INCLUDED WITH ABOVE
27	U134				INCLUDED WITH ABOVE
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9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*																	
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)									D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
	1	D	0	0	2	15	T	S	0	1							CPP-659 NWCF, ROOM 416 - CONTAINER STORAGE & WASTE PILE STORAGE
	2	D	0	0	4	10	T	S	0	3							INCLUDED WITH ABOVE
	3	D	0	0	5												INCLUDED WITH ABOVE
	4	D	0	0	6												INCLUDED WITH ABOVE
	5	D	0	0	7												INCLUDED WITH ABOVE
	6	D	0	0	8												INCLUDED WITH ABOVE
	7	D	0	0	9												INCLUDED WITH ABOVE
	8	D	0	1	0												INCLUDED WITH ABOVE
	9	D	0	1	1												INCLUDED WITH ABOVE
1	0	D	0	1	8												INCLUDED WITH ABOVE
1	1	D	0	1	9												INCLUDED WITH ABOVE
1	2	D	0	2	1												INCLUDED WITH ABOVE
1	3	D	0	2	2												INCLUDED WITH ABOVE
1	4	D	0	2	6												INCLUDED WITH ABOVE
1	5	D	0	2	8												INCLUDED WITH ABOVE
1	6	D	0	2	9												INCLUDED WITH ABOVE
1	7	D	0	3	2												INCLUDED WITH ABOVE
1	8	D	0	3	4												INCLUDED WITH ABOVE
1	9	D	0	3	5												INCLUDED WITH ABOVE
2	0	D	0	3	6												INCLUDED WITH ABOVE
2	1	D	0	3	8												INCLUDED WITH ABOVE
2	2	D	0	3	9												INCLUDED WITH ABOVE
2	3	D	0	4	0												INCLUDED WITH ABOVE
2	4	F	0	0	1												INCLUDED WITH ABOVE
2	5	F	0	0	2												INCLUDED WITH ABOVE
2	6	F	0	0	3												INCLUDED WITH ABOVE
2	7	F	0	0	5												INCLUDED WITH ABOVE
2	8	F	0	0	6												INCLUDED WITH ABOVE
2	9	F	0	0	7												INCLUDED WITH ABOVE
3	0	F	0	0	9												INCLUDED WITH ABOVE
3	1	U	1	3	4												INCLUDED WITH ABOVE
3	2																
3	3																
3	4																
3	5																
3	6																

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
1	D001	15	T	S01	CPP-659 NWCF, ROOM 417 - CONTAINER STORAGE
2	D002				INCLUDED WITH ABOVE
3	D003				INCLUDED WITH ABOVE
4	D004				INCLUDED WITH ABOVE
5	D005				INCLUDED WITH ABOVE
6	D006				INCLUDED WITH ABOVE
7	D007				INCLUDED WITH ABOVE
8	D008				INCLUDED WITH ABOVE
9	D009				INCLUDED WITH ABOVE
10	D010				INCLUDED WITH ABOVE
11	D011				INCLUDED WITH ABOVE
12	D018				INCLUDED WITH ABOVE
13	D019				INCLUDED WITH ABOVE
14	D021				INCLUDED WITH ABOVE
15	D022				INCLUDED WITH ABOVE
16	D026				INCLUDED WITH ABOVE
17	D027				INCLUDED WITH ABOVE
18	D028				INCLUDED WITH ABOVE
19	D029				INCLUDED WITH ABOVE
20	D030				INCLUDED WITH ABOVE
21	D032				INCLUDED WITH ABOVE
22	D033				INCLUDED WITH ABOVE
23	D034				INCLUDED WITH ABOVE
24	D035				INCLUDED WITH ABOVE
25	D036				INCLUDED WITH ABOVE
26	D037				INCLUDED WITH ABOVE
27	D038				INCLUDED WITH ABOVE
28	D039				INCLUDED WITH ABOVE
29	D040				INCLUDED WITH ABOVE
30	D042				INCLUDED WITH ABOVE
31	D043				INCLUDED WITH ABOVE
32	F001				INCLUDED WITH ABOVE
33	F002				INCLUDED WITH ABOVE
34	F003				INCLUDED WITH ABOVE
35	F004				INCLUDED WITH ABOVE
36	F005				INCLUDED WITH ABOVE

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
1	F 0 0 6			S 0 1	Included with CPP-659 NWCF, ROOM 417 - CONTAINER STORAGE, Pg. 5(Z-1) of 6, Line 1
2	F 0 0 7				INCLUDED WITH ABOVE
3	F 0 0 9				INCLUDED WITH ABOVE
4	U 1 3 4				INCLUDED WITH ABOVE
5					
6					
7					
8					
9					
1 0					
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					
3 4					
3 5					
3 6					

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
1	D001	15	T	S01	CPP-659 NWCF, ROOM 418 - CONTAINER STORAGE
2	D002				INCLUDED WITH ABOVE
3	D003				INCLUDED WITH ABOVE
4	D004				INCLUDED WITH ABOVE
5	D005				INCLUDED WITH ABOVE
6	D006				INCLUDED WITH ABOVE
7	D007				INCLUDED WITH ABOVE
8	D008				INCLUDED WITH ABOVE
9	D009				INCLUDED WITH ABOVE
10	D010				INCLUDED WITH ABOVE
11	D011				INCLUDED WITH ABOVE
12	D018				INCLUDED WITH ABOVE
13	D019				INCLUDED WITH ABOVE
14	D021				INCLUDED WITH ABOVE
15	D022				INCLUDED WITH ABOVE
16	D026				INCLUDED WITH ABOVE
17	D027				INCLUDED WITH ABOVE
18	D028				INCLUDED WITH ABOVE
19	D029				INCLUDED WITH ABOVE
20	D030				INCLUDED WITH ABOVE
21	D032				INCLUDED WITH ABOVE
22	D033				INCLUDED WITH ABOVE
23	D034				INCLUDED WITH ABOVE
24	D035				INCLUDED WITH ABOVE
25	D036				INCLUDED WITH ABOVE
26	D037				INCLUDED WITH ABOVE
27	D038				INCLUDED WITH ABOVE
28	D039				INCLUDED WITH ABOVE
29	D040				INCLUDED WITH ABOVE
30	D042				INCLUDED WITH ABOVE
31	D043				INCLUDED WITH ABOVE
32	F001				INCLUDED WITH ABOVE
33	F002				INCLUDED WITH ABOVE
34	F003				INCLUDED WITH ABOVE
35	F004				INCLUDED WITH ABOVE
36	F005				INCLUDED WITH ABOVE

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9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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 a code is not entered in 9.D(1))
	1	F	0	0	6			S	0	1							Included with CPP-659 NWCF, ROOM 418 - CONTAINER STORAGE, Pg. 5(AA-1) of 6, Line 1
	2	F	0	0	7												INCLUDED WITH ABOVE
	3	F	0	0	9												INCLUDED WITH ABOVE
	4	U	1	3	4												INCLUDED WITH ABOVE
	5																
	6																
	7																
	8																
	9																
1	0																
1	1																
1	2																
1	3																
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2	0																
2	1																
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2	7																
2	8																
2	9																
3	0																
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3	3																
3	4																
3	5																
3	6																

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)									D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
	1	D	0	0	2	10	T	S	0	3							CPP-659 NWCF, ROOM 418 - WASTE PILE STORAGE
	2	D	0	0	4												INCLUDED WITH ABOVE
	3	D	0	0	5												INCLUDED WITH ABOVE
	4	D	0	0	6												INCLUDED WITH ABOVE
	5	D	0	0	7												INCLUDED WITH ABOVE
	6	D	0	0	8												INCLUDED WITH ABOVE
	7	D	0	0	9												INCLUDED WITH ABOVE
	8	D	0	1	0												INCLUDED WITH ABOVE
	9	D	0	1	1												INCLUDED WITH ABOVE
1	0	D	0	1	8												INCLUDED WITH ABOVE
1	1	D	0	1	9												INCLUDED WITH ABOVE
1	2	D	0	2	1												INCLUDED WITH ABOVE
1	3	D	0	2	2												INCLUDED WITH ABOVE
1	4	D	0	2	6												INCLUDED WITH ABOVE
1	5	D	0	2	8												INCLUDED WITH ABOVE
1	6	D	0	2	9												INCLUDED WITH ABOVE
1	7	D	0	3	2												INCLUDED WITH ABOVE
1	8	D	0	3	4												INCLUDED WITH ABOVE
1	9	D	0	3	5												INCLUDED WITH ABOVE
2	0	D	0	3	6												INCLUDED WITH ABOVE
2	1	D	0	3	8												INCLUDED WITH ABOVE
2	2	D	0	3	9												INCLUDED WITH ABOVE
2	3	D	0	4	0												INCLUDED WITH ABOVE
2	4	F	0	0	1												INCLUDED WITH ABOVE
2	5	F	0	0	2												INCLUDED WITH ABOVE
2	6	F	0	0	3												INCLUDED WITH ABOVE
2	7	F	0	0	5												INCLUDED WITH ABOVE
2	8	F	0	0	6												INCLUDED WITH ABOVE
2	9	F	0	0	7												INCLUDED WITH ABOVE
3	0	F	0	0	9												INCLUDED WITH ABOVE
3	1	U	1	3	4												INCLUDED WITH ABOVE
3	2																
3	3																
3	4																
3	5																
3	6																

9. Description of Hazardous Wastes ***(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)***

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)									D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
	1	D	0	0	2	11,680	T	T	0	4							CPP-659 NWCF, ROOM 418 - CONTAINER TREATMENT (TK-NCD-137, TK-NCD-138, TK-NCD-139), SCARIFICATION/SPALLING & CHEMICAL/PHYSICAL EXTRACTION
	2	D	0	0	4	5,400	T	X	0	2							INCLUDED WITH ABOVE
	3	D	0	0	5	13,200	T	X	9	9							INCLUDED WITH ABOVE
	4	D	0	0	6												INCLUDED WITH ABOVE
	5	D	0	0	7												INCLUDED WITH ABOVE
	6	D	0	0	8												INCLUDED WITH ABOVE
	7	D	0	0	9												INCLUDED WITH ABOVE
	8	D	0	1	0												INCLUDED WITH ABOVE
	9	D	0	1	1												INCLUDED WITH ABOVE
1	0	D	0	1	8												INCLUDED WITH ABOVE
1	1	D	0	1	9												INCLUDED WITH ABOVE
1	2	D	0	2	1												INCLUDED WITH ABOVE
1	3	D	0	2	2												INCLUDED WITH ABOVE
1	4	D	0	2	6												INCLUDED WITH ABOVE
1	5	D	0	2	8												INCLUDED WITH ABOVE
1	6	D	0	3	2												INCLUDED WITH ABOVE
1	7	D	0	3	4												INCLUDED WITH ABOVE
1	8	D	0	3	5												INCLUDED WITH ABOVE
1	9	D	0	3	6												INCLUDED WITH ABOVE
2	0	D	0	3	8												INCLUDED WITH ABOVE
2	1	D	0	3	9												INCLUDED WITH ABOVE
2	2	D	0	4	0												INCLUDED WITH ABOVE
2	3	F	0	0	1												INCLUDED WITH ABOVE
2	4	F	0	0	2												INCLUDED WITH ABOVE
2	5	F	0	0	3												INCLUDED WITH ABOVE
2	6	F	0	0	5												INCLUDED WITH ABOVE
2	7	U	1	3	4												INCLUDED WITH ABOVE
2	8																
2	9																
3	0																
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3	2																
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3	4																
3	5																
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9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
1	D002	210	T	T04	CPP-659 NWCF, ROOM 418 - SIZING/REPACKAGING/ COMPACTING
2	D004				INCLUDED WITH ABOVE
3	D005				INCLUDED WITH ABOVE
4	D006				INCLUDED WITH ABOVE
5	D007				INCLUDED WITH ABOVE
6	D008				INCLUDED WITH ABOVE
7	D009				INCLUDED WITH ABOVE
8	D010				INCLUDED WITH ABOVE
9	D011				INCLUDED WITH ABOVE
10	D018				INCLUDED WITH ABOVE
11	D019				INCLUDED WITH ABOVE
12	D021				INCLUDED WITH ABOVE
13	D022				INCLUDED WITH ABOVE
14	D026				INCLUDED WITH ABOVE
15	D027				INCLUDED WITH ABOVE
16	D028				INCLUDED WITH ABOVE
17	D029				INCLUDED WITH ABOVE
18	D030				INCLUDED WITH ABOVE
19	D032				INCLUDED WITH ABOVE
20	D033				INCLUDED WITH ABOVE
21	D034				INCLUDED WITH ABOVE
22	D035				INCLUDED WITH ABOVE
23	D036				INCLUDED WITH ABOVE
24	D037				INCLUDED WITH ABOVE
25	D038				INCLUDED WITH ABOVE
26	D039				INCLUDED WITH ABOVE
27	D040				INCLUDED WITH ABOVE
28	D042				INCLUDED WITH ABOVE
29	D043				INCLUDED WITH ABOVE
30	F001				INCLUDED WITH ABOVE
31	F002				INCLUDED WITH ABOVE
32	F003				INCLUDED WITH ABOVE
33	F004				INCLUDED WITH ABOVE
34	F005				INCLUDED WITH ABOVE
35	F006				INCLUDED WITH ABOVE
36	F007				INCLUDED WITH ABOVE

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9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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 a code is not entered in 9.D(1))
	1	F	0	0	9			T	0	4							Included with CPP-659 NWCF, ROOM 418 - SIZING/ REPACKAGING/COMPACTING, Pg. 5(DD-1) of 6, Line 1
	2	U	1	3	4												INCLUDED WITH ABOVE
	3																
	4																
	5																
	6																
	7																
	8																
	9																
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9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)									D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
	1	D	0	0	2	70	T	T	0	4							CPP-659 NWCF, ROOM 418 - ABSORBENT ADDITION
	2	D	0	0	4												INCLUDED WITH ABOVE
	3	D	0	0	5												INCLUDED WITH ABOVE
	4	D	0	0	6												INCLUDED WITH ABOVE
	5	D	0	0	7												INCLUDED WITH ABOVE
	6	D	0	0	8												INCLUDED WITH ABOVE
	7	D	0	0	9												INCLUDED WITH ABOVE
	8	D	0	1	0												INCLUDED WITH ABOVE
	9	D	0	1	1												INCLUDED WITH ABOVE
1	0	D	0	1	8												INCLUDED WITH ABOVE
1	1	D	0	1	9												INCLUDED WITH ABOVE
1	2	D	0	2	1												INCLUDED WITH ABOVE
1	3	D	0	2	2												INCLUDED WITH ABOVE
1	4	D	0	2	6												INCLUDED WITH ABOVE
1	5	D	0	2	8												INCLUDED WITH ABOVE
1	6	D	0	2	9												INCLUDED WITH ABOVE
1	7	D	0	3	2												INCLUDED WITH ABOVE
1	8	D	0	3	4												INCLUDED WITH ABOVE
1	9	D	0	3	5												INCLUDED WITH ABOVE
2	0	D	0	3	6												INCLUDED WITH ABOVE
2	1	D	0	3	8												INCLUDED WITH ABOVE
2	2	D	0	3	9												INCLUDED WITH ABOVE
2	3	D	0	4	0												INCLUDED WITH ABOVE
2	4	F	0	0	1												INCLUDED WITH ABOVE
2	5	F	0	0	2												INCLUDED WITH ABOVE
2	6	F	0	0	3												INCLUDED WITH ABOVE
2	7	F	0	0	5												INCLUDED WITH ABOVE
2	8	F	0	0	6												INCLUDED WITH ABOVE
2	9	F	0	0	7												INCLUDED WITH ABOVE
3	0	F	0	0	9												INCLUDED WITH ABOVE
3	1	U	1	3	4												INCLUDED WITH ABOVE
3	2																
3	3																
3	4																
3	5																
3	6																

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)									D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
	1	D	0	0	2	15	T	S	0	1							CPP-659 NWCF, ROOM 419 - CONTAINER STORAGE
	2	D	0	0	4												INCLUDED WITH ABOVE
	3	D	0	0	5												INCLUDED WITH ABOVE
	4	D	0	0	6												INCLUDED WITH ABOVE
	5	D	0	0	7												INCLUDED WITH ABOVE
	6	D	0	0	8												INCLUDED WITH ABOVE
	7	D	0	0	9												INCLUDED WITH ABOVE
	8	D	0	1	0												INCLUDED WITH ABOVE
	9	D	0	1	1												INCLUDED WITH ABOVE
1	0	D	0	1	8												INCLUDED WITH ABOVE
1	1	D	0	1	9												INCLUDED WITH ABOVE
1	2	D	0	2	1												INCLUDED WITH ABOVE
1	3	D	0	2	2												INCLUDED WITH ABOVE
1	4	D	0	2	6												INCLUDED WITH ABOVE
1	5	D	0	2	8												INCLUDED WITH ABOVE
1	6	D	0	2	9												INCLUDED WITH ABOVE
1	7	D	0	3	2												INCLUDED WITH ABOVE
1	8	D	0	3	4												INCLUDED WITH ABOVE
1	9	D	0	3	5												INCLUDED WITH ABOVE
2	0	D	0	3	6												INCLUDED WITH ABOVE
2	1	D	0	3	8												INCLUDED WITH ABOVE
2	2	D	0	3	9												INCLUDED WITH ABOVE
2	3	D	0	4	0												INCLUDED WITH ABOVE
2	4	F	0	0	1												INCLUDED WITH ABOVE
2	5	F	0	0	2												INCLUDED WITH ABOVE
2	6	F	0	0	3												INCLUDED WITH ABOVE
2	7	F	0	0	5												INCLUDED WITH ABOVE
2	8	F	0	0	6												INCLUDED WITH ABOVE
2	9	F	0	0	7												INCLUDED WITH ABOVE
3	0	F	0	0	9												INCLUDED WITH ABOVE
3	1	U	1	3	4												INCLUDED WITH ABOVE
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3	4																
3	5																
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9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)									D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
	1	D	0	0	2	210	T	S	0	1	T	0	4				CPP-659 NWCF, ROOM 421 - CONTAINER STORAGE & SIZING/ REPACKAGING/COMPACTING
	2	D	0	0	4												INCLUDED WITH ABOVE
	3	D	0	0	5												INCLUDED WITH ABOVE
	4	D	0	0	6												INCLUDED WITH ABOVE
	5	D	0	0	7												INCLUDED WITH ABOVE
	6	D	0	0	8												INCLUDED WITH ABOVE
	7	D	0	0	9												INCLUDED WITH ABOVE
	8	D	0	1	0												INCLUDED WITH ABOVE
	9	D	0	1	1												INCLUDED WITH ABOVE
1	0	D	0	1	8												INCLUDED WITH ABOVE
1	1	D	0	1	9												INCLUDED WITH ABOVE
1	2	D	0	2	1												INCLUDED WITH ABOVE
1	3	D	0	2	2												INCLUDED WITH ABOVE
1	4	D	0	2	6												INCLUDED WITH ABOVE
1	5	D	0	2	8												INCLUDED WITH ABOVE
1	6	D	0	2	9												INCLUDED WITH ABOVE
1	7	D	0	3	2												INCLUDED WITH ABOVE
1	8	D	0	3	4												INCLUDED WITH ABOVE
1	9	D	0	3	5												INCLUDED WITH ABOVE
2	0	D	0	3	6												INCLUDED WITH ABOVE
2	1	D	0	3	8												INCLUDED WITH ABOVE
2	2	D	0	3	9												INCLUDED WITH ABOVE
2	3	D	0	4	0												INCLUDED WITH ABOVE
2	4	F	0	0	1												INCLUDED WITH ABOVE
2	5	F	0	0	2												INCLUDED WITH ABOVE
2	6	F	0	0	3												INCLUDED WITH ABOVE
2	7	F	0	0	5												INCLUDED WITH ABOVE
2	8	F	0	0	6												INCLUDED WITH ABOVE
2	9	F	0	0	7												INCLUDED WITH ABOVE
3	0	F	0	0	9												INCLUDED WITH ABOVE
3	1	U	1	3	4												INCLUDED WITH ABOVE
3	2																
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3	4																
3	5																
3	6																

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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 a code is not entered in 9.D(1))
	1	D	0	0	2	11,680	T	T	0	4							CPP-659 NWCF, ROOM 421 - CONTAINER TREATMENT (TK-NCD-137, VES-NCD-138, TK-NCD-139) & CHEMICAL/PHYSICAL EXTRACTION
	2	D	0	0	4	13,200	T	X	9	9							INCLUDED WITH ABOVE
	3	D	0	0	5												INCLUDED WITH ABOVE
	4	D	0	0	6												INCLUDED WITH ABOVE
	5	D	0	0	7												INCLUDED WITH ABOVE
	6	D	0	0	8												INCLUDED WITH ABOVE
	7	D	0	0	9												INCLUDED WITH ABOVE
	8	D	0	1	0												INCLUDED WITH ABOVE
	9	D	0	1	1												INCLUDED WITH ABOVE
1	0	D	0	1	8												INCLUDED WITH ABOVE
1	1	D	0	1	9												INCLUDED WITH ABOVE
1	2	D	0	2	1												INCLUDED WITH ABOVE
1	3	D	0	2	2												INCLUDED WITH ABOVE
1	4	D	0	2	6												INCLUDED WITH ABOVE
1	5	D	0	2	8												INCLUDED WITH ABOVE
1	6	D	0	3	2												INCLUDED WITH ABOVE
1	7	D	0	3	4												INCLUDED WITH ABOVE
1	8	D	0	3	5												INCLUDED WITH ABOVE
1	9	D	0	3	6												INCLUDED WITH ABOVE
2	0	D	0	3	8												INCLUDED WITH ABOVE
2	1	D	0	3	9												INCLUDED WITH ABOVE
2	2	D	0	4	0												INCLUDED WITH ABOVE
2	3	F	0	0	1												INCLUDED WITH ABOVE
2	4	F	0	0	2												INCLUDED WITH ABOVE
2	5	F	0	0	3												INCLUDED WITH ABOVE
2	6	F	0	0	5												INCLUDED WITH ABOVE
2	7	U	1	3	4												INCLUDED WITH ABOVE
2	8																
2	9																
3	0																
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9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
1	D002	210	T	S01 T04	CPP-659 NWCF, ROOM 422 - CONTAINER STORAGE & SIZING/ REPACKAGING/COMPACTING
2	D004				INCLUDED WITH ABOVE
3	D005				INCLUDED WITH ABOVE
4	D006				INCLUDED WITH ABOVE
5	D007				INCLUDED WITH ABOVE
6	D008				INCLUDED WITH ABOVE
7	D009				INCLUDED WITH ABOVE
8	D010				INCLUDED WITH ABOVE
9	D011				INCLUDED WITH ABOVE
10	D018				INCLUDED WITH ABOVE
11	D019				INCLUDED WITH ABOVE
12	D021				INCLUDED WITH ABOVE
13	D022				INCLUDED WITH ABOVE
14	D026				INCLUDED WITH ABOVE
15	D028				INCLUDED WITH ABOVE
16	D029				INCLUDED WITH ABOVE
17	D032				INCLUDED WITH ABOVE
18	D034				INCLUDED WITH ABOVE
19	D035				INCLUDED WITH ABOVE
20	D036				INCLUDED WITH ABOVE
21	D038				INCLUDED WITH ABOVE
22	D039				INCLUDED WITH ABOVE
23	D040				INCLUDED WITH ABOVE
24	F001				INCLUDED WITH ABOVE
25	F002				INCLUDED WITH ABOVE
26	F003				INCLUDED WITH ABOVE
27	F005				INCLUDED WITH ABOVE
28	F006				INCLUDED WITH ABOVE
29	F007				INCLUDED WITH ABOVE
30	F009				INCLUDED WITH ABOVE
31	U134				INCLUDED WITH ABOVE
32					
33					
34					
35					
36					

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
1	D002	11,680	T	T04	CPP-659 NWCF, ROOM 422 - CONTAINER TREATMENT (TK-NCD-137, VES-NCD-138, TK-NCD-139) & CHEMICAL/PHYSICAL EXTRACTION
2	D004	13,200	T	X99	INCLUDED WITH ABOVE
3	D005				INCLUDED WITH ABOVE
4	D006				INCLUDED WITH ABOVE
5	D007				INCLUDED WITH ABOVE
6	D008				INCLUDED WITH ABOVE
7	D009				INCLUDED WITH ABOVE
8	D010				INCLUDED WITH ABOVE
9	D011				INCLUDED WITH ABOVE
10	D018				INCLUDED WITH ABOVE
11	D019				INCLUDED WITH ABOVE
12	D021				INCLUDED WITH ABOVE
13	D022				INCLUDED WITH ABOVE
14	D026				INCLUDED WITH ABOVE
15	D028				INCLUDED WITH ABOVE
16	D032				INCLUDED WITH ABOVE
17	D034				INCLUDED WITH ABOVE
18	D035				INCLUDED WITH ABOVE
19	D036				INCLUDED WITH ABOVE
20	D038				INCLUDED WITH ABOVE
21	D039				INCLUDED WITH ABOVE
22	D040				INCLUDED WITH ABOVE
23	F001				INCLUDED WITH ABOVE
24	F002				INCLUDED WITH ABOVE
25	F003				INCLUDED WITH ABOVE
26	F005				INCLUDED WITH ABOVE
27	U134				INCLUDED WITH ABOVE
28					
29					
30					
31					
32					
33					
34					
35					
36					

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9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
1	D001	30	T	S01	CPP-659 NWCF, ROOM 428 - CONTAINER STORAGE
2	D002				INCLUDED WITH ABOVE
3	D003				INCLUDED WITH ABOVE
4	D004				INCLUDED WITH ABOVE
5	D005				INCLUDED WITH ABOVE
6	D006				INCLUDED WITH ABOVE
7	D007				INCLUDED WITH ABOVE
8	D008				INCLUDED WITH ABOVE
9	D009				INCLUDED WITH ABOVE
10	D010				INCLUDED WITH ABOVE
11	D011				INCLUDED WITH ABOVE
12	D012				INCLUDED WITH ABOVE
13	D018				INCLUDED WITH ABOVE
14	D019				INCLUDED WITH ABOVE
15	D021				INCLUDED WITH ABOVE
16	D022				INCLUDED WITH ABOVE
17	D026				INCLUDED WITH ABOVE
18	D027				INCLUDED WITH ABOVE
19	D028				INCLUDED WITH ABOVE
20	D029				INCLUDED WITH ABOVE
21	D030				INCLUDED WITH ABOVE
22	D032				INCLUDED WITH ABOVE
23	D033				INCLUDED WITH ABOVE
24	D034				INCLUDED WITH ABOVE
25	D035				INCLUDED WITH ABOVE
26	D036				INCLUDED WITH ABOVE
27	D037				INCLUDED WITH ABOVE
28	D038				INCLUDED WITH ABOVE
29	D039				INCLUDED WITH ABOVE
30	D040				INCLUDED WITH ABOVE
31	D042				INCLUDED WITH ABOVE
32	D043				INCLUDED WITH ABOVE
33	F001				INCLUDED WITH ABOVE
34	F002				INCLUDED WITH ABOVE
35	F003				INCLUDED WITH ABOVE
36	F004				INCLUDED WITH ABOVE

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
1	F005			S01	Included with CPP-659 NWCF, ROOM 428 - CONTAINER STORAGE, Pg. 5(KK-1) of 6, Line 1
2	F006				INCLUDED WITH ABOVE
3	F007				INCLUDED WITH ABOVE
4	F009				INCLUDED WITH ABOVE
5	P030				INCLUDED WITH ABOVE
6	P098				INCLUDED WITH ABOVE
7	P099				INCLUDED WITH ABOVE
8	P106				INCLUDED WITH ABOVE
9	U003				INCLUDED WITH ABOVE
10	U103				INCLUDED WITH ABOVE
11	U108				INCLUDED WITH ABOVE
12	U134				INCLUDED WITH ABOVE
13	U151				INCLUDED WITH ABOVE
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
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9. Description of Hazardous Wastes ***(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)***

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 a code is not entered in 9.D(1))
	1	D	0	0	2	210	T	T	0	4							CPP-659 NWCF, ROOM 428 - SIZING/REPACKAGING/ COMPACTING
	2	D	0	0	4												INCLUDED WITH ABOVE
	3	D	0	0	5												INCLUDED WITH ABOVE
	4	D	0	0	6												INCLUDED WITH ABOVE
	5	D	0	0	7												INCLUDED WITH ABOVE
	6	D	0	0	8												INCLUDED WITH ABOVE
	7	D	0	0	9												INCLUDED WITH ABOVE
	8	D	0	1	0												INCLUDED WITH ABOVE
	9	D	0	1	1												INCLUDED WITH ABOVE
1	0	D	0	1	8												INCLUDED WITH ABOVE
1	1	D	0	1	9												INCLUDED WITH ABOVE
1	2	D	0	2	1												INCLUDED WITH ABOVE
1	3	D	0	2	2												INCLUDED WITH ABOVE
1	4	D	0	2	6												INCLUDED WITH ABOVE
1	5	D	0	2	7												INCLUDED WITH ABOVE
1	6	D	0	2	8												INCLUDED WITH ABOVE
1	7	D	0	2	9												INCLUDED WITH ABOVE
1	8	D	0	3	0												INCLUDED WITH ABOVE
1	9	D	0	3	2												INCLUDED WITH ABOVE
2	0	D	0	3	3												INCLUDED WITH ABOVE
2	1	D	0	3	4												INCLUDED WITH ABOVE
2	2	D	0	3	5												INCLUDED WITH ABOVE
2	3	D	0	3	6												INCLUDED WITH ABOVE
2	4	D	0	3	7												INCLUDED WITH ABOVE
2	5	D	0	3	8												INCLUDED WITH ABOVE
2	6	D	0	3	9												INCLUDED WITH ABOVE
2	7	D	0	4	0												INCLUDED WITH ABOVE
2	8	D	0	4	2												INCLUDED WITH ABOVE
2	9	D	0	4	3												INCLUDED WITH ABOVE
3	0	F	0	0	1												INCLUDED WITH ABOVE
3	1	F	0	0	2												INCLUDED WITH ABOVE
3	2	F	0	0	3												INCLUDED WITH ABOVE
3	3	F	0	0	4												INCLUDED WITH ABOVE
3	4	F	0	0	5												INCLUDED WITH ABOVE
3	5	F	0	0	6												INCLUDED WITH ABOVE
3	6	F	0	0	7												INCLUDED WITH ABOVE

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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 a code is not entered in 9.D(1))
	1	F	0	0	9			T	0	4							Included with CPP-659 NWCF, ROOM 428 - SIZING/REPACKAGING/ COMPACTING, Pg. 5(LL-1) of 6, Line 1
	2	U	1	3	4												INCLUDED WITH ABOVE
	3																
	4																
	5																
	6																
	7																
	8																
	9																
1	0																
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																
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3	4																
3	5																
3	6																

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9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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 a code is not entered in 9.D(1))
	1	D	0	0	4	312	T	T	0	4							CPP-659 NWCF, ROOM 428 - MACROENCAPSULATION
	2	D	0	0	5												INCLUDED WITH ABOVE
	3	D	0	0	6												INCLUDED WITH ABOVE
	4	D	0	0	7												INCLUDED WITH ABOVE
	5	D	0	0	8												INCLUDED WITH ABOVE
	6	D	0	0	9												INCLUDED WITH ABOVE
	7	D	0	1	0												INCLUDED WITH ABOVE
	8	D	0	1	1												INCLUDED WITH ABOVE
	9	D	0	1	2												INCLUDED WITH ABOVE
1	0	D	0	1	8												INCLUDED WITH ABOVE
1	1	D	0	1	9												INCLUDED WITH ABOVE
1	2	D	0	2	1												INCLUDED WITH ABOVE
1	3	D	0	2	2												INCLUDED WITH ABOVE
1	4	D	0	2	6												INCLUDED WITH ABOVE
1	5	D	0	2	7												INCLUDED WITH ABOVE
1	6	D	0	2	8												INCLUDED WITH ABOVE
1	7	D	0	2	9												INCLUDED WITH ABOVE
1	8	D	0	3	0												INCLUDED WITH ABOVE
1	9	D	0	3	2												INCLUDED WITH ABOVE
2	0	D	0	3	3												INCLUDED WITH ABOVE
2	1	D	0	3	4												INCLUDED WITH ABOVE
2	2	D	0	3	5												INCLUDED WITH ABOVE
2	3	D	0	3	6												INCLUDED WITH ABOVE
2	4	D	0	3	7												INCLUDED WITH ABOVE
2	5	D	0	3	8												INCLUDED WITH ABOVE
2	6	D	0	3	9												INCLUDED WITH ABOVE
2	7	D	0	4	0												INCLUDED WITH ABOVE
2	8	D	0	4	2												INCLUDED WITH ABOVE
2	9	D	0	4	3												INCLUDED WITH ABOVE
3	0	F	0	0	1												INCLUDED WITH ABOVE
3	1	F	0	0	2												INCLUDED WITH ABOVE
3	2	F	0	0	3												INCLUDED WITH ABOVE
3	3	F	0	0	4												INCLUDED WITH ABOVE
3	4	F	0	0	5												INCLUDED WITH ABOVE
3	5	F	0	0	6												INCLUDED WITH ABOVE
3	6	F	0	0	7												INCLUDED WITH ABOVE

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
1	F 0 0 9			T 0 4	Included with CPP-659 NWCF, ROOM 428 - MACROENCAPSULATION, Pg. 5(MM-1) of 6, Line 1
2	P 0 3 0				INCLUDED WITH ABOVE
3	P 0 9 8				INCLUDED WITH ABOVE
4	P 0 9 9				INCLUDED WITH ABOVE
5	P 1 0 6				INCLUDED WITH ABOVE
6	U 0 0 3				INCLUDED WITH ABOVE
7	U 1 0 3				INCLUDED WITH ABOVE
8	U 1 0 8				INCLUDED WITH ABOVE
9	U 1 3 4				INCLUDED WITH ABOVE
1 0	U 1 5 1				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					
3 4					
3 5					
3 6					

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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)									D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
	1	D	0	0	1	15	T	S	0	1							CPP-1659 NWCF, CONTAMINATED EQUIPMENT MAINTENANCE AREA - CONTAINER STORAGE
	2	D	0	0	2												INCLUDED WITH ABOVE
	3	D	0	0	3												INCLUDED WITH ABOVE
	4	D	0	0	4												INCLUDED WITH ABOVE
	5	D	0	0	5												INCLUDED WITH ABOVE
	6	D	0	0	6												INCLUDED WITH ABOVE
	7	D	0	0	7												INCLUDED WITH ABOVE
	8	D	0	0	8												INCLUDED WITH ABOVE
	9	D	0	0	9												INCLUDED WITH ABOVE
1	0	D	0	1	0												INCLUDED WITH ABOVE
1	1	D	0	1	1												INCLUDED WITH ABOVE
1	2	D	0	1	8												INCLUDED WITH ABOVE
1	3	D	0	1	9												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	6												INCLUDED WITH ABOVE
1	7	D	0	2	7												INCLUDED WITH ABOVE
1	8	D	0	2	8												INCLUDED WITH ABOVE
1	9	D	0	2	9												INCLUDED WITH ABOVE
2	0	D	0	3	0												INCLUDED WITH ABOVE
2	1	D	0	3	2												INCLUDED WITH ABOVE
2	2	D	0	3	3												INCLUDED WITH ABOVE
2	3	D	0	3	4												INCLUDED WITH ABOVE
2	4	D	0	3	5												INCLUDED WITH ABOVE
2	5	D	0	3	6												INCLUDED WITH ABOVE
2	6	D	0	3	7												INCLUDED WITH ABOVE
2	7	D	0	3	8												INCLUDED WITH ABOVE
2	8	D	0	3	9												INCLUDED WITH ABOVE
2	9	D	0	4	0												INCLUDED WITH ABOVE
3	0	D	0	4	2												INCLUDED WITH ABOVE
3	1	D	0	4	3												INCLUDED WITH ABOVE
3	2	F	0	0	1												INCLUDED WITH ABOVE
3	3	F	0	0	2												INCLUDED WITH ABOVE
3	4	F	0	0	3												INCLUDED WITH ABOVE
3	5	F	0	0	4												INCLUDED WITH ABOVE
3	6	F	0	0	5												INCLUDED WITH ABOVE

Table caption: 9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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 a code is not entered in 9.D(1))
	1	F	0	0	6			S	0	1							Included with CPP-1659, CONTAMINATED EQUIPMENT MAINTENANCE AREA - CONTAINER STORAGE, Pg. 5(NN-1) of 6, Line 1
	2	F	0	0	7												INCLUDED WITH ABOVE
	3	F	0	0	9												INCLUDED WITH ABOVE
	4	U	1	3	4												INCLUDED WITH ABOVE
	5																
	6																
	7																
	8																
	9																
1	0																
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																
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9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*																	
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 a code is not entered in 9.D(1))
	1	D	0	0	2	38	T	S	0	2							CPP-666 FDP CELL - TANK STORAGE (VES-FC-184), SORTING/SEGREGATING/SIZING/ COMPACTING, & ABSORBENT ADDITION
	2	D	0	0	4	210	T	T	0	4							INCLUDED WITH ABOVE
	3	D	0	0	5												INCLUDED WITH ABOVE
	4	D	0	0	6												INCLUDED WITH ABOVE
	5	D	0	0	7												INCLUDED WITH ABOVE
	6	D	0	0	8												INCLUDED WITH ABOVE
	7	D	0	0	9												INCLUDED WITH ABOVE
	8	D	0	1	0												INCLUDED WITH ABOVE
	9	D	0	1	1												INCLUDED WITH ABOVE
1	0	D	0	1	8												INCLUDED WITH ABOVE
1	1	D	0	1	9												INCLUDED WITH ABOVE
1	2	D	0	2	1												INCLUDED WITH ABOVE
1	3	D	0	2	2												INCLUDED WITH ABOVE
1	4	D	0	2	6												INCLUDED WITH ABOVE
1	5	D	0	2	8												INCLUDED WITH ABOVE
1	6	D	0	2	9												INCLUDED WITH ABOVE
1	7	D	0	3	2												INCLUDED WITH ABOVE
1	8	D	0	3	4												INCLUDED WITH ABOVE
1	9	D	0	3	5												INCLUDED WITH ABOVE
2	0	D	0	3	6												INCLUDED WITH ABOVE
2	1	D	0	3	8												INCLUDED WITH ABOVE
2	2	D	0	3	9												INCLUDED WITH ABOVE
2	3	D	0	4	0												INCLUDED WITH ABOVE
2	4	F	0	0	1												INCLUDED WITH ABOVE
2	5	F	0	0	2												INCLUDED WITH ABOVE
2	6	F	0	0	3												INCLUDED WITH ABOVE
2	7	F	0	0	5												INCLUDED WITH ABOVE
2	8	F	0	0	6												INCLUDED WITH ABOVE
2	9	F	0	0	7												INCLUDED WITH ABOVE
3	0	F	0	0	9												INCLUDED WITH ABOVE
3	1	U	1	3	4												INCLUDED WITH ABOVE
3	2																
3	3																
3	4																
3	5																
3	6																

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9. Description of Hazardous Wastes ***(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)***

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)									D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
	1	D	0	0	1	210	T	S	0	1	T	0	4				CPP-666 FDP CELL - CONTAINER STORAGE, DEACTIVATION (water immersion, misting/wetting w/i the ARS or exposure to air w/i the cell), & REPACKAGING OF IGNITABLE OR REACTIVE WASTES
	2	D	0	0	2												INCLUDED WITH ABOVE
	3	D	0	0	3												INCLUDED WITH ABOVE
	4	D	0	0	4												INCLUDED WITH ABOVE
	5	D	0	0	5												INCLUDED WITH ABOVE
	6	D	0	0	6												INCLUDED WITH ABOVE
	7	D	0	0	7												INCLUDED WITH ABOVE
	8	D	0	0	8												INCLUDED WITH ABOVE
	9	D	0	0	9												INCLUDED WITH ABOVE
1	0	D	0	1	0												INCLUDED WITH ABOVE
1	1	D	0	1	1												INCLUDED WITH ABOVE
1	2	D	0	1	8												INCLUDED WITH ABOVE
1	3	D	0	1	9												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	6												INCLUDED WITH ABOVE
1	7	D	0	2	8												INCLUDED WITH ABOVE
1	8	D	0	2	9												INCLUDED WITH ABOVE
1	9	D	0	3	2												INCLUDED WITH ABOVE
2	0	D	0	3	4												INCLUDED WITH ABOVE
2	1	D	0	3	5												INCLUDED WITH ABOVE
2	2	D	0	3	6												INCLUDED WITH ABOVE
2	3	D	0	3	8												INCLUDED WITH ABOVE
2	4	D	0	3	9												INCLUDED WITH ABOVE
2	5	D	0	4	0												INCLUDED WITH ABOVE
2	6	F	0	0	1												INCLUDED WITH ABOVE
2	7	F	0	0	2												INCLUDED WITH ABOVE
2	8	F	0	0	3												INCLUDED WITH ABOVE
2	9	F	0	0	5												INCLUDED WITH ABOVE
3	0	F	0	0	6												INCLUDED WITH ABOVE
3	1	F	0	0	7												INCLUDED WITH ABOVE
3	2	F	0	0	9												INCLUDED WITH ABOVE
3	3	U	1	3	4												INCLUDED WITH ABOVE
3	4																
3	5																
3	6																

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9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
1	D001	542	T	S01	CPP-666 FDP, ROOM 301 (entire +28 level) - CONTAINER STORAGE
2	D002				INCLUDED WITH ABOVE
3	D003				INCLUDED WITH ABOVE
4	D004				INCLUDED WITH ABOVE
5	D005				INCLUDED WITH ABOVE
6	D006				INCLUDED WITH ABOVE
7	D007				INCLUDED WITH ABOVE
8	D008				INCLUDED WITH ABOVE
9	D009				INCLUDED WITH ABOVE
10	D010				INCLUDED WITH ABOVE
11	D011				INCLUDED WITH ABOVE
12	D018				INCLUDED WITH ABOVE
13	D019				INCLUDED WITH ABOVE
14	D021				INCLUDED WITH ABOVE
15	D022				INCLUDED WITH ABOVE
16	D026				INCLUDED WITH ABOVE
17	D028				INCLUDED WITH ABOVE
18	D029				INCLUDED WITH ABOVE
19	D032				INCLUDED WITH ABOVE
20	D034				INCLUDED WITH ABOVE
21	D035				INCLUDED WITH ABOVE
22	D036				INCLUDED WITH ABOVE
23	D038				INCLUDED WITH ABOVE
24	D039				INCLUDED WITH ABOVE
25	D040				INCLUDED WITH ABOVE
26	F001				INCLUDED WITH ABOVE
27	F002				INCLUDED WITH ABOVE
28	F003				INCLUDED WITH ABOVE
29	F005				INCLUDED WITH ABOVE
30	F006				INCLUDED WITH ABOVE
31	F007				INCLUDED WITH ABOVE
32	F009				INCLUDED WITH ABOVE
33	U134				INCLUDED WITH ABOVE
34					
35					
36					

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9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)									D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
	1	D	0	0	1	15	T	S	0	1							CPP-666 FDP, ROOM 114C - CONTAINER STORAGE
	2	D	0	0	2												INCLUDED WITH ABOVE
	3	D	0	0	3												INCLUDED WITH ABOVE
	4	D	0	0	4												INCLUDED WITH ABOVE
	5	D	0	0	5												INCLUDED WITH ABOVE
	6	D	0	0	6												INCLUDED WITH ABOVE
	7	D	0	0	7												INCLUDED WITH ABOVE
	8	D	0	0	8												INCLUDED WITH ABOVE
	9	D	0	0	9												INCLUDED WITH ABOVE
1	0	D	0	1	0												INCLUDED WITH ABOVE
1	1	D	0	1	1												INCLUDED WITH ABOVE
1	2	D	0	1	8												INCLUDED WITH ABOVE
1	3	D	0	1	9												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	6												INCLUDED WITH ABOVE
1	7	D	0	2	8												INCLUDED WITH ABOVE
1	8	D	0	2	9												INCLUDED WITH ABOVE
1	9	D	0	3	2												INCLUDED WITH ABOVE
2	0	D	0	3	4												INCLUDED WITH ABOVE
2	1	D	0	3	5												INCLUDED WITH ABOVE
2	2	D	0	3	6												INCLUDED WITH ABOVE
2	3	D	0	3	8												INCLUDED WITH ABOVE
2	4	D	0	3	9												INCLUDED WITH ABOVE
2	5	D	0	4	0												INCLUDED WITH ABOVE
2	6	F	0	0	1												INCLUDED WITH ABOVE
2	7	F	0	0	2												INCLUDED WITH ABOVE
2	8	F	0	0	3												INCLUDED WITH ABOVE
2	9	F	0	0	5												INCLUDED WITH ABOVE
3	0	F	0	0	6												INCLUDED WITH ABOVE
3	1	F	0	0	7												INCLUDED WITH ABOVE
3	2	F	0	0	9												INCLUDED WITH ABOVE
3	3	U	1	3	4												INCLUDED WITH ABOVE
3	4																
3	5																
3	6																

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)									D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
	1	D	0	0	1	15	T	S	0	1							CPP-666 FDP, ROOM 115 - CONTAINER STORAGE
	2	D	0	0	2												INCLUDED WITH ABOVE
	3	D	0	0	3												INCLUDED WITH ABOVE
	4	D	0	0	4												INCLUDED WITH ABOVE
	5	D	0	0	5												INCLUDED WITH ABOVE
	6	D	0	0	6												INCLUDED WITH ABOVE
	7	D	0	0	7												INCLUDED WITH ABOVE
	8	D	0	0	8												INCLUDED WITH ABOVE
	9	D	0	0	9												INCLUDED WITH ABOVE
1	0	D	0	1	0												INCLUDED WITH ABOVE
1	1	D	0	1	1												INCLUDED WITH ABOVE
1	2	D	0	1	8												INCLUDED WITH ABOVE
1	3	D	0	1	9												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	6												INCLUDED WITH ABOVE
1	7	D	0	2	8												INCLUDED WITH ABOVE
1	8	D	0	2	9												INCLUDED WITH ABOVE
1	9	D	0	3	2												INCLUDED WITH ABOVE
2	0	D	0	3	4												INCLUDED WITH ABOVE
2	1	D	0	3	5												INCLUDED WITH ABOVE
2	2	D	0	3	6												INCLUDED WITH ABOVE
2	3	D	0	3	8												INCLUDED WITH ABOVE
2	4	D	0	3	9												INCLUDED WITH ABOVE
2	5	D	0	4	0												INCLUDED WITH ABOVE
2	6	F	0	0	1												INCLUDED WITH ABOVE
2	7	F	0	0	2												INCLUDED WITH ABOVE
2	8	F	0	0	3												INCLUDED WITH ABOVE
2	9	F	0	0	5												INCLUDED WITH ABOVE
3	0	F	0	0	6												INCLUDED WITH ABOVE
3	1	F	0	0	7												INCLUDED WITH ABOVE
3	2	F	0	0	9												INCLUDED WITH ABOVE
3	3	U	1	3	4												INCLUDED WITH ABOVE
3	4																
3	5																
3	6																

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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 a code is not entered in 9.D(1))
	1	D	0	0	1	15	T	S	0	1							CPP-666 FDP, ROOM 180 - CONTAINER STORAGE
	2	D	0	0	2												INCLUDED WITH ABOVE
	3	D	0	0	3												INCLUDED WITH ABOVE
	4	D	0	0	4												INCLUDED WITH ABOVE
	5	D	0	0	5												INCLUDED WITH ABOVE
	6	D	0	0	6												INCLUDED WITH ABOVE
	7	D	0	0	7												INCLUDED WITH ABOVE
	8	D	0	0	8												INCLUDED WITH ABOVE
	9	D	0	0	9												INCLUDED WITH ABOVE
1	0	D	0	1	0												INCLUDED WITH ABOVE
1	1	D	0	1	1												INCLUDED WITH ABOVE
1	2	D	0	1	8												INCLUDED WITH ABOVE
1	3	D	0	1	9												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	6												INCLUDED WITH ABOVE
1	7	D	0	2	8												INCLUDED WITH ABOVE
1	8	D	0	2	9												INCLUDED WITH ABOVE
1	9	D	0	3	2												INCLUDED WITH ABOVE
2	0	D	0	3	4												INCLUDED WITH ABOVE
2	1	D	0	3	5												INCLUDED WITH ABOVE
2	2	D	0	3	6												INCLUDED WITH ABOVE
2	3	D	0	3	8												INCLUDED WITH ABOVE
2	4	D	0	3	9												INCLUDED WITH ABOVE
2	5	D	0	4	0												INCLUDED WITH ABOVE
2	6	F	0	0	1												INCLUDED WITH ABOVE
2	7	F	0	0	2												INCLUDED WITH ABOVE
2	8	F	0	0	3												INCLUDED WITH ABOVE
2	9	F	0	0	5												INCLUDED WITH ABOVE
3	0	F	0	0	6												INCLUDED WITH ABOVE
3	1	F	0	0	7												INCLUDED WITH ABOVE
3	2	F	0	0	9												INCLUDED WITH ABOVE
3	3	U	1	3	4												INCLUDED WITH ABOVE
3	4																
3	5																
3	6																

9. Description of Hazardous Wastes ***(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)***

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)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
1	D001	10	T	S01	CPP-666 FDP, ROOM B-4 - CONTAINER STORAGE
2	D002				INCLUDED WITH ABOVE
3	D003				INCLUDED WITH ABOVE
4	D004				INCLUDED WITH ABOVE
5	D005				INCLUDED WITH ABOVE
6	D006				INCLUDED WITH ABOVE
7	D007				INCLUDED WITH ABOVE
8	D008				INCLUDED WITH ABOVE
9	D009				INCLUDED WITH ABOVE
10	D010				INCLUDED WITH ABOVE
11	D011				INCLUDED WITH ABOVE
12	D018				INCLUDED WITH ABOVE
13	D019				INCLUDED WITH ABOVE
14	D021				INCLUDED WITH ABOVE
15	D022				INCLUDED WITH ABOVE
16	D026				INCLUDED WITH ABOVE
17	D028				INCLUDED WITH ABOVE
18	D029				INCLUDED WITH ABOVE
19	D032				INCLUDED WITH ABOVE
20	D034				INCLUDED WITH ABOVE
21	D035				INCLUDED WITH ABOVE
22	D036				INCLUDED WITH ABOVE
23	D038				INCLUDED WITH ABOVE
24	D039				INCLUDED WITH ABOVE
25	D040				INCLUDED WITH ABOVE
26	F001				INCLUDED WITH ABOVE
27	F002				INCLUDED WITH ABOVE
28	F003				INCLUDED WITH ABOVE
29	F005				INCLUDED WITH ABOVE
30	F006				INCLUDED WITH ABOVE
31	F007				INCLUDED WITH ABOVE
32	F009				INCLUDED WITH ABOVE
33	U134				INCLUDED WITH ABOVE
34					
35					
36					

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
1	D001	10	T	S01	CPP-666 FDP, ROOM B-5 - CONTAINER STORAGE
2	D002				INCLUDED WITH ABOVE
3	D003				INCLUDED WITH ABOVE
4	D004				INCLUDED WITH ABOVE
5	D005				INCLUDED WITH ABOVE
6	D006				INCLUDED WITH ABOVE
7	D007				INCLUDED WITH ABOVE
8	D008				INCLUDED WITH ABOVE
9	D009				INCLUDED WITH ABOVE
10	D010				INCLUDED WITH ABOVE
11	D011				INCLUDED WITH ABOVE
12	D018				INCLUDED WITH ABOVE
13	D019				INCLUDED WITH ABOVE
14	D021				INCLUDED WITH ABOVE
15	D022				INCLUDED WITH ABOVE
16	D026				INCLUDED WITH ABOVE
17	D028				INCLUDED WITH ABOVE
18	D029				INCLUDED WITH ABOVE
19	D032				INCLUDED WITH ABOVE
20	D034				INCLUDED WITH ABOVE
21	D035				INCLUDED WITH ABOVE
22	D036				INCLUDED WITH ABOVE
23	D038				INCLUDED WITH ABOVE
24	D039				INCLUDED WITH ABOVE
25	D040				INCLUDED WITH ABOVE
26	F001				INCLUDED WITH ABOVE
27	F002				INCLUDED WITH ABOVE
28	F003				INCLUDED WITH ABOVE
29	F005				INCLUDED WITH ABOVE
30	F006				INCLUDED WITH ABOVE
31	F007				INCLUDED WITH ABOVE
32	F009				INCLUDED WITH ABOVE
33	U134				INCLUDED WITH ABOVE
34					
35					
36					

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9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)									D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
	1	D	0	0	1	210	T	S	0	1	S	0	2	T	0	4	CPP-666 FDP, ROOM SB-8 - CONTAINER STORAGE, TANK STORAGE (VES-FC-101, VES-FC-85A), DISTILLATION (VES-FC-101, VES-FC-85A)
	2	D	0	0	2												INCLUDED WITH ABOVE
	3	D	0	0	3												INCLUDED WITH ABOVE
	4	D	0	0	4												INCLUDED WITH ABOVE
	5	D	0	0	5												INCLUDED WITH ABOVE
	6	D	0	0	6												INCLUDED WITH ABOVE
	7	D	0	0	7												INCLUDED WITH ABOVE
	8	D	0	0	8												INCLUDED WITH ABOVE
	9	D	0	0	9												INCLUDED WITH ABOVE
1	0	D	0	1	0												INCLUDED WITH ABOVE
1	1	D	0	1	1												INCLUDED WITH ABOVE
1	2	D	0	1	8												INCLUDED WITH ABOVE
1	3	D	0	1	9												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	6												INCLUDED WITH ABOVE
1	7	D	0	2	8												INCLUDED WITH ABOVE
1	8	D	0	2	9												INCLUDED WITH ABOVE
1	9	D	0	3	2												INCLUDED WITH ABOVE
2	0	D	0	3	4												INCLUDED WITH ABOVE
2	1	D	0	3	5												INCLUDED WITH ABOVE
2	2	D	0	3	6												INCLUDED WITH ABOVE
2	3	D	0	3	8												INCLUDED WITH ABOVE
2	4	D	0	3	9												INCLUDED WITH ABOVE
2	5	D	0	4	0												INCLUDED WITH ABOVE
2	6	F	0	0	1												INCLUDED WITH ABOVE
2	7	F	0	0	2												INCLUDED WITH ABOVE
2	8	F	0	0	3												INCLUDED WITH ABOVE
2	9	F	0	0	5												INCLUDED WITH ABOVE
3	0	F	0	0	6												INCLUDED WITH ABOVE
3	1	F	0	0	7												INCLUDED WITH ABOVE
3	2	F	0	0	9												INCLUDED WITH ABOVE
3	3	U	1	3	4												INCLUDED WITH ABOVE
3	4																
3	5																
3	6																

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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 a code is not entered in 9.D(1))
	1	D	0	0	1	12,000	T	S	0	1							CPP-1617 RADIOACTIVE MIXED WASTE STAGING FACILITY (RMWSF) - CONTAINER STORAGE & MACROENCAPSULATION (COMMERCIAL & CUSTOM)
	2	D	0	0	2	312	T	T	0	4							INCLUDED WITH ABOVE
	3	D	0	0	3												INCLUDED WITH ABOVE
	4	D	0	0	4												INCLUDED WITH ABOVE
	5	D	0	0	5												INCLUDED WITH ABOVE
	6	D	0	0	6												INCLUDED WITH ABOVE
	7	D	0	0	7												INCLUDED WITH ABOVE
	8	D	0	0	8												INCLUDED WITH ABOVE
	9	D	0	0	9												INCLUDED WITH ABOVE
1	0	D	0	1	0												INCLUDED WITH ABOVE
1	1	D	0	1	1												INCLUDED WITH ABOVE
1	2	D	0	1	2												INCLUDED WITH ABOVE
1	3	D	0	1	3												INCLUDED WITH ABOVE
1	4	D	0	1	4												INCLUDED WITH ABOVE
1	5	D	0	1	5												INCLUDED WITH ABOVE
1	6	D	0	1	6												INCLUDED WITH ABOVE
1	7	D	0	1	7												INCLUDED WITH ABOVE
1	8	D	0	1	8												INCLUDED WITH ABOVE
1	9	D	0	1	9												INCLUDED WITH ABOVE
2	0	D	0	2	0												INCLUDED WITH ABOVE
2	1	D	0	2	1												INCLUDED WITH ABOVE
2	2	D	0	2	2												INCLUDED WITH ABOVE
2	3	D	0	2	3												INCLUDED WITH ABOVE
2	4	D	0	2	4												INCLUDED WITH ABOVE
2	5	D	0	2	5												INCLUDED WITH ABOVE
2	6	D	0	2	6												INCLUDED WITH ABOVE
2	7	D	0	2	7												INCLUDED WITH ABOVE
2	8	D	0	2	8												INCLUDED WITH ABOVE
2	9	D	0	2	9												INCLUDED WITH ABOVE
3	0	D	0	3	0												INCLUDED WITH ABOVE
3	1	D	0	3	1												INCLUDED WITH ABOVE
3	2	D	0	3	2												INCLUDED WITH ABOVE
3	3	D	0	3	3												INCLUDED WITH ABOVE
3	4	D	0	3	4												INCLUDED WITH ABOVE
3	5	D	0	3	5												INCLUDED WITH ABOVE
3	6	D	0	3	6												INCLUDED WITH ABOVE

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
1	D037				Included with CPP-1617 RMWSF, CONTAINER STORAGE & MACROENCAPSULATION, Pg. 5(XX-1) of 6, Lines 1-2
2	D038				INCLUDED WITH ABOVE
3	D039				INCLUDED WITH ABOVE
4	D040				INCLUDED WITH ABOVE
5	D041				INCLUDED WITH ABOVE
6	D042				INCLUDED WITH ABOVE
7	D043				INCLUDED WITH ABOVE
8	F001				INCLUDED WITH ABOVE
9	F002				INCLUDED WITH ABOVE
10	F003				INCLUDED WITH ABOVE
11	F004				INCLUDED WITH ABOVE
12	F005				INCLUDED WITH ABOVE
13	F006				INCLUDED WITH ABOVE
14	F007				INCLUDED WITH ABOVE
15	F008				INCLUDED WITH ABOVE
16	F009				INCLUDED WITH ABOVE
17	F010				INCLUDED WITH ABOVE
18	F011				INCLUDED WITH ABOVE
19	F012				INCLUDED WITH ABOVE
20	F019				INCLUDED WITH ABOVE
21	F020				INCLUDED WITH ABOVE
22	F021				INCLUDED WITH ABOVE
23	F022				INCLUDED WITH ABOVE
24	F023				INCLUDED WITH ABOVE
25	F024				INCLUDED WITH ABOVE
26	F026				INCLUDED WITH ABOVE
27	F027				INCLUDED WITH ABOVE
28	F028				INCLUDED WITH ABOVE
29	F039				INCLUDED WITH ABOVE
30	K001				INCLUDED WITH ABOVE
31	K015				INCLUDED WITH ABOVE
32	K069				INCLUDED WITH ABOVE
33	K100				INCLUDED WITH ABOVE
34	P001				INCLUDED WITH ABOVE
35	P002				INCLUDED WITH ABOVE
36	P003				INCLUDED WITH ABOVE

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9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*																		
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 a code is not entered in 9.D(1))
	1	P	0	0	4													Included with CPP-1617 RMWSF, CONTAINER STORAGE & MACROENCAPSULATION, Pg. 5(XX-1) of 6, Lines 1-2
	2	P	0	0	5													INCLUDED WITH ABOVE
	3	P	0	0	6													INCLUDED WITH ABOVE
	4	P	0	0	7													INCLUDED WITH ABOVE
	5	P	0	0	8													INCLUDED WITH ABOVE
	6	P	0	0	9													INCLUDED WITH ABOVE
	7	P	0	1	0													INCLUDED WITH ABOVE
	8	P	0	1	1													INCLUDED WITH ABOVE
	9	P	0	1	2													INCLUDED WITH ABOVE
1	0	P	0	1	3													INCLUDED WITH ABOVE
1	1	P	0	1	4													INCLUDED WITH ABOVE
1	2	P	0	1	5													INCLUDED WITH ABOVE
1	3	P	0	1	6													INCLUDED WITH ABOVE
1	4	P	0	1	7													INCLUDED WITH ABOVE
1	5	P	0	1	8													INCLUDED WITH ABOVE
1	6	P	0	2	0													INCLUDED WITH ABOVE
1	7	P	0	2	1													INCLUDED WITH ABOVE
1	8	P	0	2	2													INCLUDED WITH ABOVE
1	9	P	0	2	3													INCLUDED WITH ABOVE
2	0	P	0	2	4													INCLUDED WITH ABOVE
2	1	P	0	2	6													INCLUDED WITH ABOVE
2	2	P	0	2	7													INCLUDED WITH ABOVE
2	3	P	0	2	8													INCLUDED WITH ABOVE
2	4	P	0	2	9													INCLUDED WITH ABOVE
2	5	P	0	3	0													INCLUDED WITH ABOVE
2	6	P	0	3	1													INCLUDED WITH ABOVE
2	7	P	0	3	3													INCLUDED WITH ABOVE
2	8	P	0	3	4													INCLUDED WITH ABOVE
2	9	P	0	3	6													INCLUDED WITH ABOVE
3	0	P	0	3	7													INCLUDED WITH ABOVE
3	1	P	0	3	8													INCLUDED WITH ABOVE
3	2	P	0	3	9													INCLUDED WITH ABOVE
3	3	P	0	4	0													INCLUDED WITH ABOVE
3	4	P	0	4	1													INCLUDED WITH ABOVE
3	5	P	0	4	2													INCLUDED WITH ABOVE
3	6	P	0	4	3													INCLUDED WITH ABOVE

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*																		
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 a code is not entered in 9.D(1))
	1	P	0	4	4													Included with CPP-1617 RMWSF, CONTAINER STORAGE & MACROENCAPSULATION, Pg. 5(XX-1) of 6, Lines 1-2
	2	P	0	4	5													INCLUDED WITH ABOVE
	3	P	0	4	6													INCLUDED WITH ABOVE
	4	P	0	4	7													INCLUDED WITH ABOVE
	5	P	0	4	8													INCLUDED WITH ABOVE
	6	P	0	4	9													INCLUDED WITH ABOVE
	7	P	0	5	0													INCLUDED WITH ABOVE
	8	P	0	5	1													INCLUDED WITH ABOVE
	9	P	0	5	4													INCLUDED WITH ABOVE
1	0	P	0	5	6													INCLUDED WITH ABOVE
1	1	P	0	5	7													INCLUDED WITH ABOVE
1	2	P	0	5	8													INCLUDED WITH ABOVE
1	3	P	0	5	9													INCLUDED WITH ABOVE
1	4	P	0	6	0													INCLUDED WITH ABOVE
1	5	P	0	6	2													INCLUDED WITH ABOVE
1	6	P	0	6	3													INCLUDED WITH ABOVE
1	7	P	0	6	4													INCLUDED WITH ABOVE
1	8	P	0	6	5													INCLUDED WITH ABOVE
1	9	P	0	6	6													INCLUDED WITH ABOVE
2	0	P	0	6	7													INCLUDED WITH ABOVE
2	1	P	0	6	8													INCLUDED WITH ABOVE
2	2	P	0	6	9													INCLUDED WITH ABOVE
2	3	P	0	7	0													INCLUDED WITH ABOVE
2	4	P	0	7	1													INCLUDED WITH ABOVE
2	5	P	0	7	2													INCLUDED WITH ABOVE
2	6	P	0	7	3													INCLUDED WITH ABOVE
2	7	P	0	7	4													INCLUDED WITH ABOVE
2	8	P	0	7	5													INCLUDED WITH ABOVE
2	9	P	0	7	6													INCLUDED WITH ABOVE
3	0	P	0	7	7													INCLUDED WITH ABOVE
3	1	P	0	7	8													INCLUDED WITH ABOVE
3	2	P	0	8	1													INCLUDED WITH ABOVE
3	3	P	0	8	2													INCLUDED WITH ABOVE
3	4	P	0	8	4													INCLUDED WITH ABOVE
3	5	P	0	8	5													INCLUDED WITH ABOVE
3	6	P	0	8	7													INCLUDED WITH ABOVE

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9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
	1	P	0	8	8				Included with CPP-1617 RMWSF, CONTAINER STORAGE & MACROENCAPSULATION, Pg. 5(XX-1) of 6, Lines 1-2
	2	P	0	8	9				INCLUDED WITH ABOVE
	3	P	0	9	2				INCLUDED WITH ABOVE
	4	P	0	9	3				INCLUDED WITH ABOVE
	5	P	0	9	4				INCLUDED WITH ABOVE
	6	P	0	9	5				INCLUDED WITH ABOVE
	7	P	0	9	6				INCLUDED WITH ABOVE
	8	P	0	9	7				INCLUDED WITH ABOVE
	9	P	0	9	8				INCLUDED WITH ABOVE
1	0	P	0	9	9				INCLUDED WITH ABOVE
1	1	P	1	0	1				INCLUDED WITH ABOVE
1	2	P	1	0	2				INCLUDED WITH ABOVE
1	3	P	1	0	3				INCLUDED WITH ABOVE
1	4	P	1	0	4				INCLUDED WITH ABOVE
1	5	P	1	0	5				INCLUDED WITH ABOVE
1	6	P	1	0	6				INCLUDED WITH ABOVE
1	7	P	1	0	8				INCLUDED WITH ABOVE
1	8	P	1	0	9				INCLUDED WITH ABOVE
1	9	P	1	1	0				INCLUDED WITH ABOVE
2	0	P	1	1	1				INCLUDED WITH ABOVE
2	1	P	1	1	2				INCLUDED WITH ABOVE
2	2	P	1	1	3				INCLUDED WITH ABOVE
2	3	P	1	1	4				INCLUDED WITH ABOVE
2	4	P	1	1	5				INCLUDED WITH ABOVE
2	5	P	1	1	6				INCLUDED WITH ABOVE
2	6	P	1	1	8				INCLUDED WITH ABOVE
2	7	P	1	1	9				INCLUDED WITH ABOVE
2	8	P	1	2	0				INCLUDED WITH ABOVE
2	9	P	1	2	1				INCLUDED WITH ABOVE
3	0	P	1	2	2				INCLUDED WITH ABOVE
3	1	P	1	2	3				INCLUDED WITH ABOVE
3	2	U	0	0	1				INCLUDED WITH ABOVE
3	3	U	0	0	2				INCLUDED WITH ABOVE
3	4	U	0	0	3				INCLUDED WITH ABOVE
3	5	U	0	0	4				INCLUDED WITH ABOVE
3	6	U	0	0	5				INCLUDED WITH ABOVE

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9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)									D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
	1	U	0	0	6												Included with CPP-1617 RMWSF, CONTAINER STORAGE & MACROENCAPSULATION, Pg. 5(XX-1) of 6, Lines 1-2
	2	U	0	0	7												INCLUDED WITH ABOVE
	3	U	0	0	8												INCLUDED WITH ABOVE
	4	U	0	0	9												INCLUDED WITH ABOVE
	5	U	0	1	0												INCLUDED WITH ABOVE
	6	U	0	1	1												INCLUDED WITH ABOVE
	7	U	0	1	2												INCLUDED WITH ABOVE
	8	U	0	1	4												INCLUDED WITH ABOVE
	9	U	0	1	5												INCLUDED WITH ABOVE
1	0	U	0	1	6												INCLUDED WITH ABOVE
1	1	U	0	1	7												INCLUDED WITH ABOVE
1	2	U	0	1	8												INCLUDED WITH ABOVE
1	3	U	0	1	9												INCLUDED WITH ABOVE
1	4	U	0	2	0												INCLUDED WITH ABOVE
1	5	U	0	2	1												INCLUDED WITH ABOVE
1	6	U	0	2	2												INCLUDED WITH ABOVE
1	7	U	0	2	3												INCLUDED WITH ABOVE
1	8	U	0	2	4												INCLUDED WITH ABOVE
1	9	U	0	2	5												INCLUDED WITH ABOVE
2	0	U	0	2	6												INCLUDED WITH ABOVE
2	1	U	0	2	7												INCLUDED WITH ABOVE
2	2	U	0	2	8												INCLUDED WITH ABOVE
2	3	U	0	2	9												INCLUDED WITH ABOVE
2	4	U	0	3	0												INCLUDED WITH ABOVE
2	5	U	0	3	1												INCLUDED WITH ABOVE
2	6	U	0	3	2												INCLUDED WITH ABOVE
2	7	U	0	3	3												INCLUDED WITH ABOVE
2	8	U	0	3	4												INCLUDED WITH ABOVE
2	9	U	0	3	5												INCLUDED WITH ABOVE
3	0	U	0	3	6												INCLUDED WITH ABOVE
3	1	U	0	3	7												INCLUDED WITH ABOVE
3	2	U	0	3	8												INCLUDED WITH ABOVE
3	3	U	0	3	9												INCLUDED WITH ABOVE
3	4	U	0	4	1												INCLUDED WITH ABOVE
3	5	U	0	4	2												INCLUDED WITH ABOVE
3	6	U	0	4	3												INCLUDED WITH ABOVE

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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 a code is not entered in 9.D(1))
	1	U	0	4	4						Included with CPP-1617 RMWSF, CONTAINER STORAGE & MACROENCAPSULATION, Pg. 5(XX-1) of 6, Lines 1-2
	2	U	0	4	5						INCLUDED WITH ABOVE
	3	U	0	4	6						INCLUDED WITH ABOVE
	4	U	0	4	7						INCLUDED WITH ABOVE
	5	U	0	4	8						INCLUDED WITH ABOVE
	6	U	0	4	9						INCLUDED WITH ABOVE
	7	U	0	5	0						INCLUDED WITH ABOVE
	8	U	0	5	1						INCLUDED WITH ABOVE
	9	U	0	5	2						INCLUDED WITH ABOVE
1	0	U	0	5	3						INCLUDED WITH ABOVE
1	1	U	0	5	5						INCLUDED WITH ABOVE
1	2	U	0	5	6						INCLUDED WITH ABOVE
1	3	U	0	5	7						INCLUDED WITH ABOVE
1	4	U	0	5	8						INCLUDED WITH ABOVE
1	5	U	0	5	9						INCLUDED WITH ABOVE
1	6	U	0	6	0						INCLUDED WITH ABOVE
1	7	U	0	6	1						INCLUDED WITH ABOVE
1	8	U	0	6	2						INCLUDED WITH ABOVE
1	9	U	0	6	3						INCLUDED WITH ABOVE
2	0	U	0	6	4						INCLUDED WITH ABOVE
2	1	U	0	6	6						INCLUDED WITH ABOVE
2	2	U	0	6	7						INCLUDED WITH ABOVE
2	3	U	0	6	8						INCLUDED WITH ABOVE
2	4	U	0	6	9						INCLUDED WITH ABOVE
2	5	U	0	7	0						INCLUDED WITH ABOVE
2	6	U	0	7	1						INCLUDED WITH ABOVE
2	7	U	0	7	2						INCLUDED WITH ABOVE
2	8	U	0	7	3						INCLUDED WITH ABOVE
2	9	U	0	7	4						INCLUDED WITH ABOVE
3	0	U	0	7	5						INCLUDED WITH ABOVE
3	1	U	0	7	6						INCLUDED WITH ABOVE
3	2	U	0	7	7						INCLUDED WITH ABOVE
3	3	U	0	7	8						INCLUDED WITH ABOVE
3	4	U	0	7	9						INCLUDED WITH ABOVE
3	5	U	0	8	0						INCLUDED WITH ABOVE
3	6	U	0	8	1						INCLUDED WITH ABOVE

9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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 a code is not entered in 9.D(1))
	1	U	0	8	2				Included with CPP-1617 RMWSF, CONTAINER STORAGE & MACROENCAPSULATION, Pg. 5(XX-1) of 6, Lines 1-2
	2	U	0	8	3				INCLUDED WITH ABOVE
	3	U	0	8	4				INCLUDED WITH ABOVE
	4	U	0	8	5				INCLUDED WITH ABOVE
	5	U	0	8	6				INCLUDED WITH ABOVE
	6	U	0	8	7				INCLUDED WITH ABOVE
	7	U	0	8	8				INCLUDED WITH ABOVE
	8	U	0	8	9				INCLUDED WITH ABOVE
	9	U	0	9	0				INCLUDED WITH ABOVE
1	0	U	0	9	1				INCLUDED WITH ABOVE
1	1	U	0	9	2				INCLUDED WITH ABOVE
1	2	U	0	9	3				INCLUDED WITH ABOVE
1	3	U	0	9	4				INCLUDED WITH ABOVE
1	4	U	0	9	5				INCLUDED WITH ABOVE
1	5	U	0	9	6				INCLUDED WITH ABOVE
1	6	U	0	9	7				INCLUDED WITH ABOVE
1	7	U	0	9	8				INCLUDED WITH ABOVE
1	8	U	0	9	9				INCLUDED WITH ABOVE
1	9	U	1	0	1				INCLUDED WITH ABOVE
2	0	U	1	0	2				INCLUDED WITH ABOVE
2	1	U	1	0	3				INCLUDED WITH ABOVE
2	2	U	1	0	5				INCLUDED WITH ABOVE
2	3	U	1	0	6				INCLUDED WITH ABOVE
2	4	U	1	0	7				INCLUDED WITH ABOVE
2	5	U	1	0	8				INCLUDED WITH ABOVE
2	6	U	1	0	9				INCLUDED WITH ABOVE
2	7	U	1	1	0				INCLUDED WITH ABOVE
2	8	U	1	1	1				INCLUDED WITH ABOVE
2	9	U	1	1	2				INCLUDED WITH ABOVE
3	0	U	1	1	3				INCLUDED WITH ABOVE
3	1	U	1	1	4				INCLUDED WITH ABOVE
3	2	U	1	1	5				INCLUDED WITH ABOVE
3	3	U	1	1	6				INCLUDED WITH ABOVE
3	4	U	1	1	7				INCLUDED WITH ABOVE
3	5	U	1	1	8				INCLUDED WITH ABOVE
3	6	U	1	1	9				INCLUDED WITH ABOVE

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9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)			D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
	1	U	1	2	0						Included with CPP-1617 RMWSF, CONTAINER STORAGE & MACROENCAPSULATION, Pg. 5(XX-1) of 6, Lines 1-2
	2	U	1	2	1						INCLUDED WITH ABOVE
	3	U	1	2	2						INCLUDED WITH ABOVE
	4	U	1	2	3						INCLUDED WITH ABOVE
	5	U	1	2	4						INCLUDED WITH ABOVE
	6	U	1	2	5						INCLUDED WITH ABOVE
	7	U	1	2	6						INCLUDED WITH ABOVE
	8	U	1	2	7						INCLUDED WITH ABOVE
	9	U	1	2	8						INCLUDED WITH ABOVE
1	0	U	1	2	9						INCLUDED WITH ABOVE
1	1	U	1	3	0						INCLUDED WITH ABOVE
1	2	U	1	3	1						INCLUDED WITH ABOVE
1	3	U	1	3	2						INCLUDED WITH ABOVE
1	4	U	1	3	3						INCLUDED WITH ABOVE
1	5	U	1	3	4						INCLUDED WITH ABOVE
1	6	U	1	3	5						INCLUDED WITH ABOVE
1	7	U	1	3	6						INCLUDED WITH ABOVE
1	8	U	1	3	7						INCLUDED WITH ABOVE
1	9	U	1	3	8						INCLUDED WITH ABOVE
2	0	U	1	4	0						INCLUDED WITH ABOVE
2	1	U	1	4	1						INCLUDED WITH ABOVE
2	2	U	1	4	2						INCLUDED WITH ABOVE
2	3	U	1	4	3						INCLUDED WITH ABOVE
2	4	U	1	4	4						INCLUDED WITH ABOVE
2	5	U	1	4	5						INCLUDED WITH ABOVE
2	6	U	1	4	6						INCLUDED WITH ABOVE
2	7	U	1	4	7						INCLUDED WITH ABOVE
2	8	U	1	4	8						INCLUDED WITH ABOVE
2	9	U	1	4	9						INCLUDED WITH ABOVE
3	0	U	1	5	0						INCLUDED WITH ABOVE
3	1	U	1	5	1						INCLUDED WITH ABOVE
3	2	U	1	5	2						INCLUDED WITH ABOVE
3	3	U	1	5	3						INCLUDED WITH ABOVE
3	4	U	1	5	4						INCLUDED WITH ABOVE
3	5	U	1	5	5						INCLUDED WITH ABOVE
3	6	U	1	5	6						INCLUDED WITH ABOVE

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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)									D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
	1	U	1	5	7												Included with CPP-1617 RMWSF, CONTAINER STORAGE & MACROENCAPSULATION, Pg. 5(XX-1) of 6, Lines 1-2
	2	U	1	5	8												INCLUDED WITH ABOVE
	3	U	1	5	9												INCLUDED WITH ABOVE
	4	U	1	6	0												INCLUDED WITH ABOVE
	5	U	1	6	1												INCLUDED WITH ABOVE
	6	U	1	6	2												INCLUDED WITH ABOVE
	7	U	1	6	3												INCLUDED WITH ABOVE
	8	U	1	6	4												INCLUDED WITH ABOVE
	9	U	1	6	5												INCLUDED WITH ABOVE
1	0	U	1	6	6												INCLUDED WITH ABOVE
1	1	U	1	6	7												INCLUDED WITH ABOVE
1	2	U	1	6	8												INCLUDED WITH ABOVE
1	3	U	1	6	9												INCLUDED WITH ABOVE
1	4	U	1	7	0												INCLUDED WITH ABOVE
1	5	U	1	7	1												INCLUDED WITH ABOVE
1	6	U	1	7	2												INCLUDED WITH ABOVE
1	7	U	1	7	3												INCLUDED WITH ABOVE
1	8	U	1	7	4												INCLUDED WITH ABOVE
1	9	U	1	7	6												INCLUDED WITH ABOVE
2	0	U	1	7	7												INCLUDED WITH ABOVE
2	1	U	1	7	8												INCLUDED WITH ABOVE
2	2	U	1	7	9												INCLUDED WITH ABOVE
2	3	U	1	8	0												INCLUDED WITH ABOVE
2	4	U	1	8	1												INCLUDED WITH ABOVE
2	5	U	1	8	2												INCLUDED WITH ABOVE
2	6	U	1	8	3												INCLUDED WITH ABOVE
2	7	U	1	8	4												INCLUDED WITH ABOVE
2	8	U	1	8	5												INCLUDED WITH ABOVE
2	9	U	1	8	6												INCLUDED WITH ABOVE
3	0	U	1	8	7												INCLUDED WITH ABOVE
3	1	U	1	8	8												INCLUDED WITH ABOVE
3	2	U	1	8	9												INCLUDED WITH ABOVE
3	3	U	1	9	0												INCLUDED WITH ABOVE
3	4	U	1	9	1												INCLUDED WITH ABOVE
3	5	U	1	9	2												INCLUDED WITH ABOVE
3	6	U	1	9	3												INCLUDED WITH ABOVE

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9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
1	U194				Included with CPP-1617 RMWSF, CONTAINER STORAGE & MACROENCAPSULATION, Pg. 5(XX-1) of 6, Lines 1-2
2	U196				INCLUDED WITH ABOVE
3	U197				INCLUDED WITH ABOVE
4	U200				INCLUDED WITH ABOVE
5	U201				INCLUDED WITH ABOVE
6	U202				INCLUDED WITH ABOVE
7	U203				INCLUDED WITH ABOVE
8	U204				INCLUDED WITH ABOVE
9	U205				INCLUDED WITH ABOVE
10	U206				INCLUDED WITH ABOVE
11	U207				INCLUDED WITH ABOVE
12	U208				INCLUDED WITH ABOVE
13	U209				INCLUDED WITH ABOVE
14	U210				INCLUDED WITH ABOVE
15	U211				INCLUDED WITH ABOVE
16	U213				INCLUDED WITH ABOVE
17	U214				INCLUDED WITH ABOVE
18	U215				INCLUDED WITH ABOVE
19	U216				INCLUDED WITH ABOVE
20	U217				INCLUDED WITH ABOVE
21	U218				INCLUDED WITH ABOVE
22	U219				INCLUDED WITH ABOVE
23	U220				INCLUDED WITH ABOVE
24	U221				INCLUDED WITH ABOVE
25	U222				INCLUDED WITH ABOVE
26	U223				INCLUDED WITH ABOVE
27	U225				INCLUDED WITH ABOVE
28	U226				INCLUDED WITH ABOVE
29	U227				INCLUDED WITH ABOVE
30	U228				INCLUDED WITH ABOVE
31	U234				INCLUDED WITH ABOVE
32	U235				INCLUDED WITH ABOVE
33	U236				INCLUDED WITH ABOVE
34	U237				INCLUDED WITH ABOVE
35	U238				INCLUDED WITH ABOVE
36	U239				INCLUDED WITH ABOVE

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9. Description of Hazardous Wastes *(Continued. Use the additional sheet(s) as necessary; number pages as 5a, etc.)*

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 a code is not entered in 9.D(1))
	1	U	2	4	0						Included with CPP-1617 RMWSF, CONTAINER STORAGE & MACROENCAPSULATION, Pg. 5(XX-1) of 6, Lines 1-2
	2	U	2	4	3						INCLUDED WITH ABOVE
	3	U	2	4	4						INCLUDED WITH ABOVE
	4	U	2	4	6						INCLUDED WITH ABOVE
	5	U	2	4	7						INCLUDED WITH ABOVE
	6	U	2	4	8						INCLUDED WITH ABOVE
	7	U	2	4	9						INCLUDED WITH ABOVE
	8	U	3	2	8						INCLUDED WITH ABOVE
	9	U	3	5	3						INCLUDED WITH ABOVE
1	0	U	3	5	9						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										
3	4										
3	5										
3	6										

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 springs, rivers and other surface water bodies in this map area. See instructions for precise requirements.

NOTE: For the INTEC Topographic Map, please see Book 1, Attachment 1, Section B - Facility Description, of the Volume 18 INTEC/ARP/MFC HWMA/RCRA Storage and Treatment Permit

11. Facility Drawing

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

NOTE: For the INTEC Facility Drawings, please see the Book 2, Appendices of the Volume 18 INTEC/ARP/MFC HWMA/RCRA Storage and Treatment Permit

12. Photographs

All exiting 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).

NOTE: For the INTEC Facility Photographs, please see the Book 2, Appendices of the Volume 18 INTEC/ARP/MFC HWMA/RCRA Storage and Treatment Permit

13. Comments

For a description of hazardous debris categories treated, stored, or disposed of at the facility, as required by IDAPA 58.01.05.012 [40 CFR 270.13(n)], please see attached information titled: "ITEM 13. ADDITIONAL INFORMATION HAZARDOUS WASTE DEBRIS CATEGORIES"

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 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 60mm

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
- Plant Matter

Wood Debris
- Wood
- Plant Stumps

Category III - Natural Geologic Material

Rock
Cobbles
Boulders

HWMA/RCRA PART B PERMIT

FOR THE

IDAHO NATIONAL LABORATORY

Volume 18 – Idaho Nuclear Technology and Engineering Center

ATTACHMENT 1

Debris Treatment Processes
Holdup and Collection Tanks
CPP-659/-1659 Storage
CPP-666 FDP Cell and FDP Area Container Storage and Slab Tank Storage Unit
Other Miscellaneous Treatment Processes

Section B

Facility Description

Revision Date: February 12, 2016

CONTENTS

EXHIBITS

B. FACILITY DESCRIPTION

B-1. General Description [IDAPA 58.01.05.008; 40 CFR 270.14(b)(1)]

This section of this Resource Conservation and Recovery Act (RCRA) Part B permit addresses storage and treatment activities conducted at seven waste management units located at the Idaho Nuclear Technology and Engineering Center (INTEC) at the Idaho National Laboratory (INL). Four of these units are located within the New Waste Calcining Facility (NWCF): (1) debris treatment processes, (2) holdup and collection tanks, (3) CPP-659/-1659 storage, and (4) CPP-659 other miscellaneous treatment processes [i.e., sorting/segregating/repackaging, compaction, sizing (CPP-659 Rooms 216, 306, 308, 309, 323, 418,421, 422, and 428), sodium deactivation (CPP-659 Room 308), absorbent addition (CPP-659 Rooms 308, 309, and 418), and macroencapsulation (CPP-659 Room 428)]. The fifth, sixth, and seventh units, container storage, slab tank storage (VES-FC-184), and miscellaneous treatment [i.e., sorting/segregating/repackaging, compaction, sizing, sodium distillation (CPP-666 Room SB-8), sodium deactivation, and absorbent addition] are in the CPP-666 Fluorinel Dissolution Process (FDP) cell and within the CPP-666 building (Building CPP-666 is also known as the Fluorinel Dissolution Process and Fuel Storage [FAST] Facility).

The INTEC is located in the south-central portion of the INL in Butte County. The location of this complex on the INL Site is shown in Exhibit B-1. The locations of Building Numbers CPP-659 and CPP-666 are shown in Exhibit B-2. Building CPP-1659 is attached to the west wall of CPP-659. The physical conditions around these buildings are typical for the INL Site, approximately 5,000-ft above mean sea level, as shown in Exhibit B-3, topographical map. The area is relatively flat and receives little rainfall. However, poor drainage patterns can produce localized flooding during periods of rapid snowmelt and/or heavy rainfall. Due to the lack of rainfall and the poor quality of the surficial soils, the site has little agricultural value. Wind patterns are generally in a northeast/southwest axis, with some seasonal variability.

Exhibit B-4 is a diagram showing the principal culverts, ditches, and storm systems at the INTEC. Exhibit B-5 is a diagram showing the sanitary waste system at the INTEC. There are no recreation areas present on or adjacent to the INTEC.

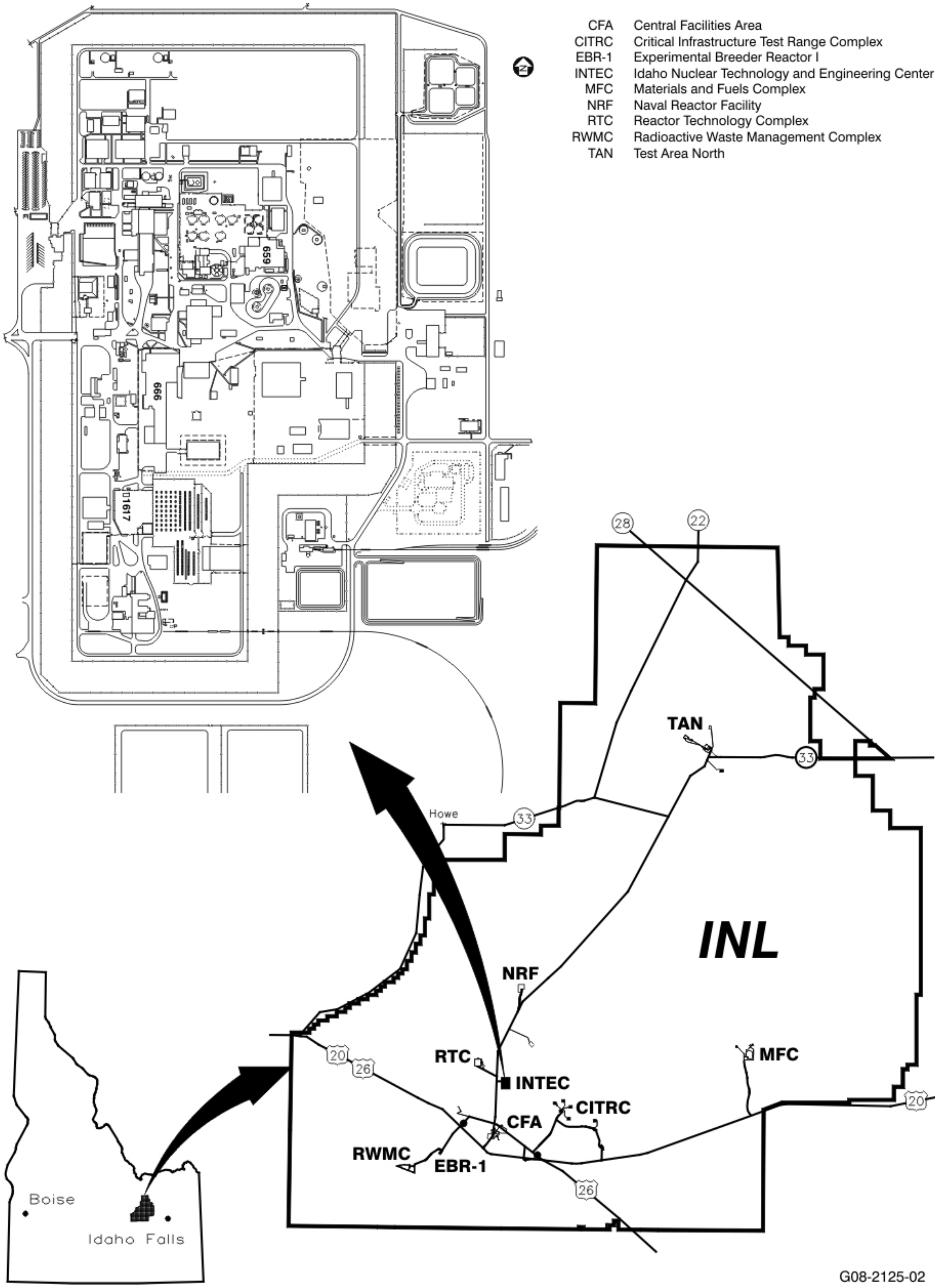


Exhibit B-1. Location of the INTEC at the INL.

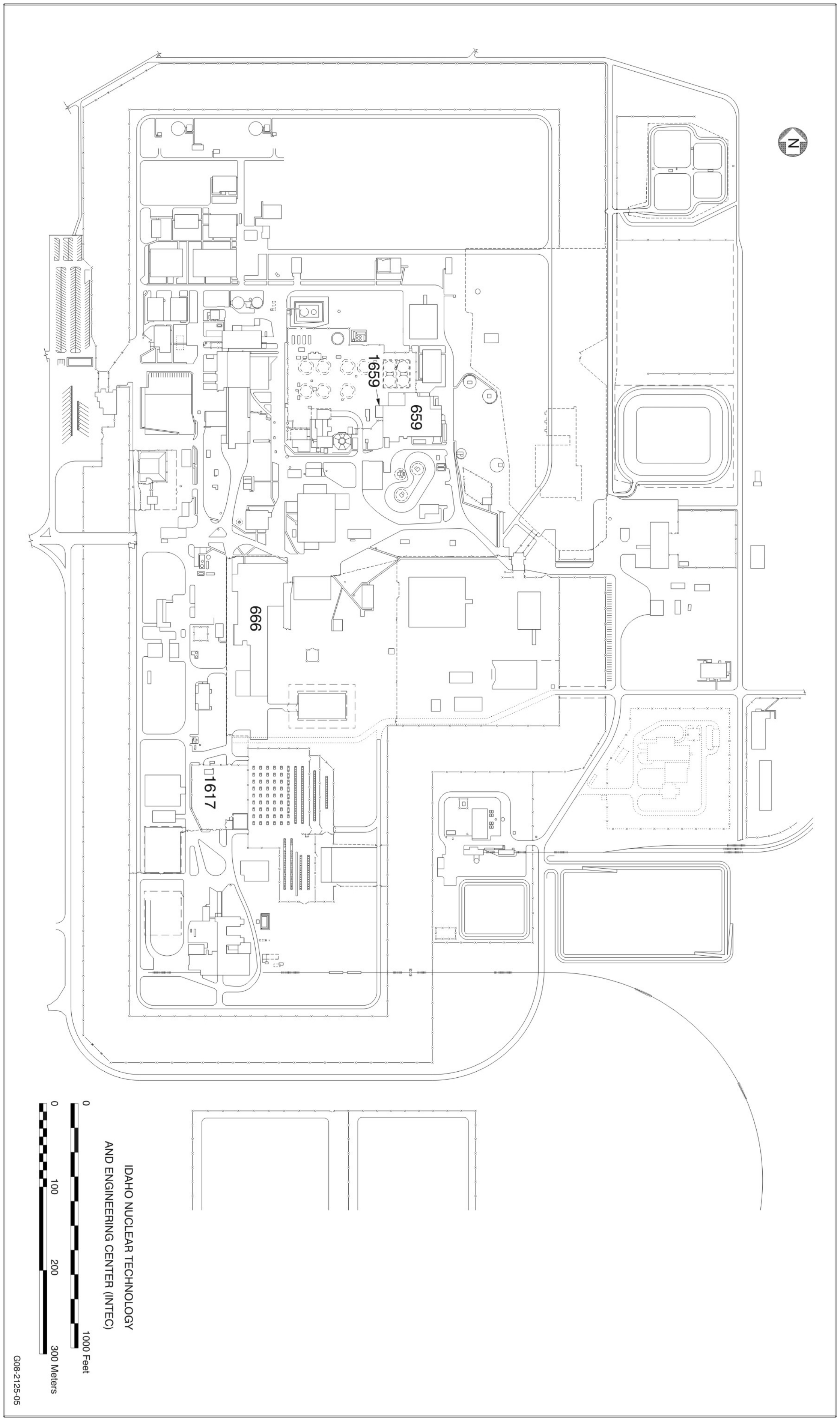


Exhibit B-2. Locations of Building Numbers CPP-659, CPP-1659, CPP-666, and CPP-1617 at the INTEC.

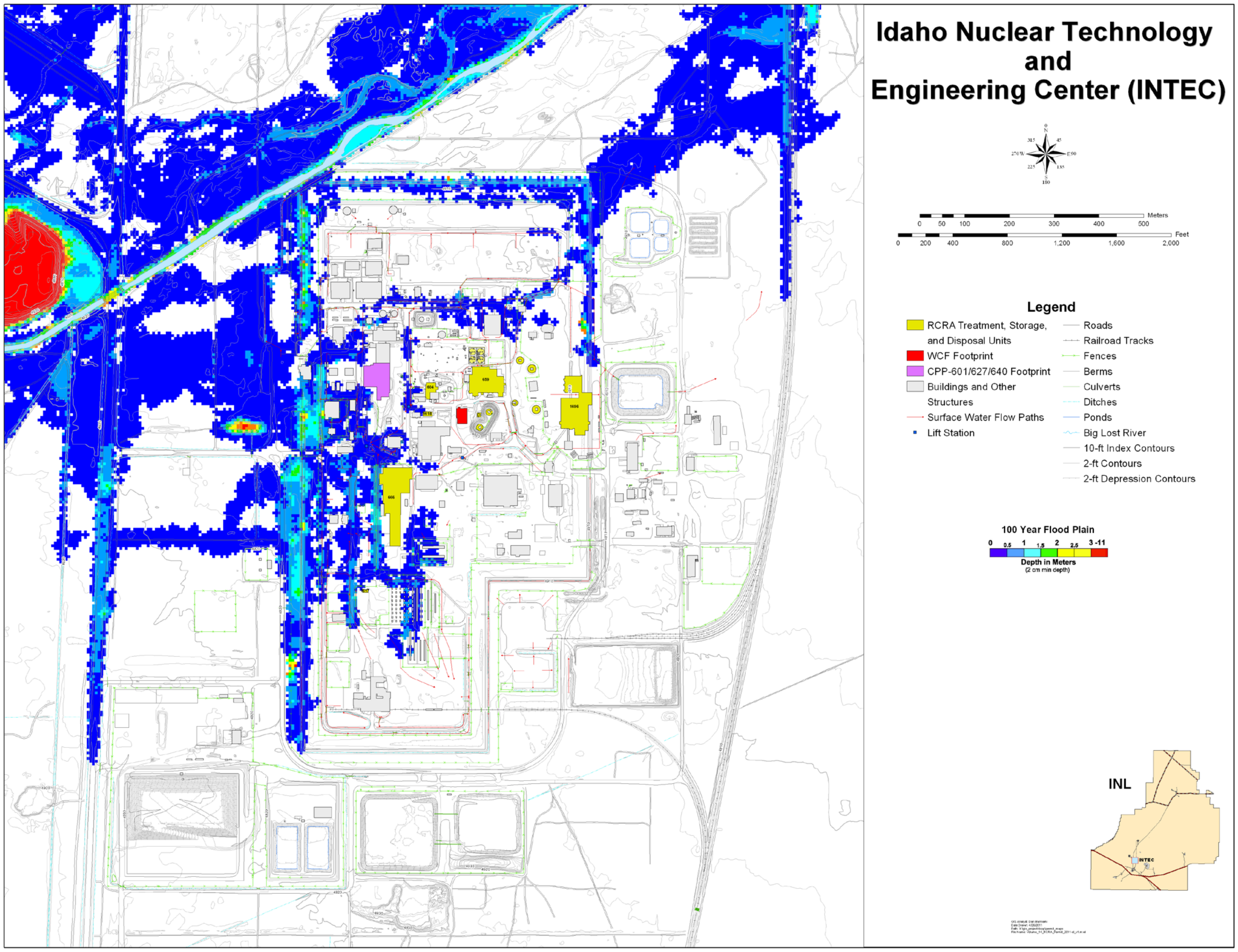


Exhibit B-3. Topographic map of the INTEC.

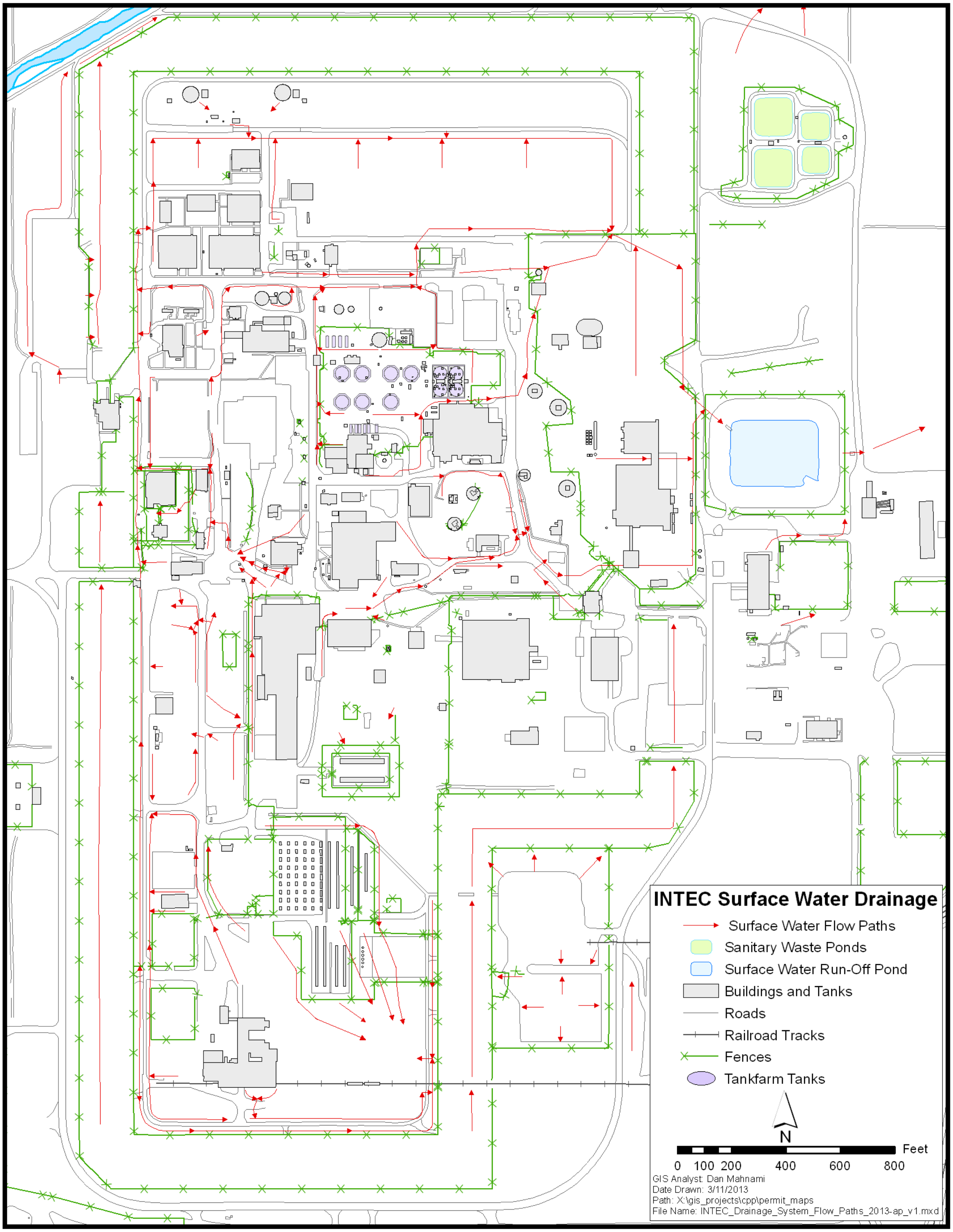


Exhibit B-4. Plant drainage system at the INTEC.

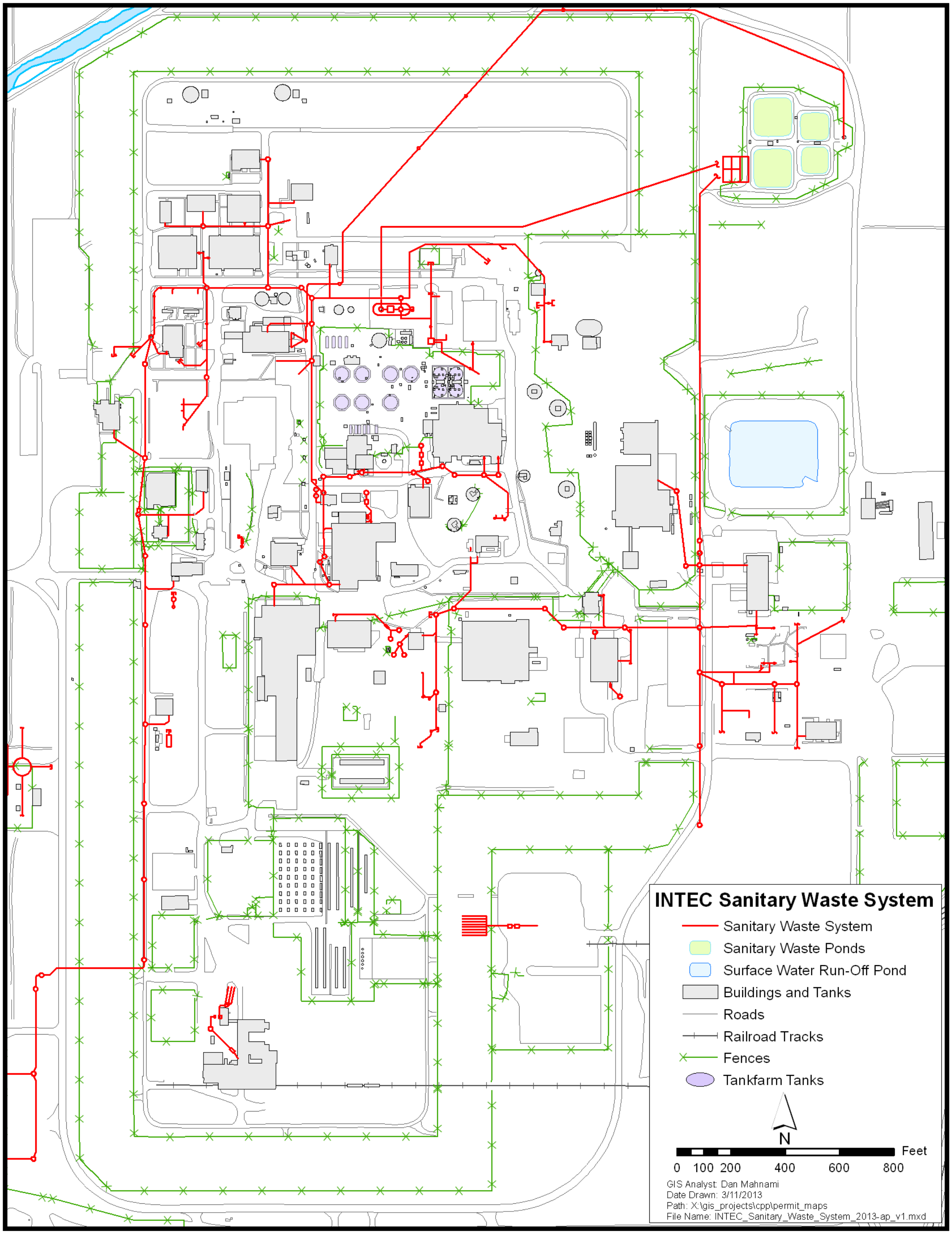


Exhibit B-5. Plant sanitary waste system at the INTEC.

CPP-659/-1659 Storage and Treatment

Building CPP-659 consists of three levels. The first is at ground level. The second and third levels are both belowgrade, with the third level being the lowest. Exhibit B-6 is an isometric of the building, showing all three levels. CPP-1659 is a single-story structure constructed on grade at the west wall of CPP-659.

The RCRA treatment and storage activities at CPP-659/-1659 occur primarily within the west portion of the building. Treatment of high-efficiency particulate air (HEPA) filters will occur in the HEPA Filter Leaching System (HFLS) located in the filter handling cell, room 309, on the second level of CPP-659. Besides the HFLS, the following will be used to treat debris in CPP-659/-1659: sinks with hoods and an ultrasonic cleaner (low-level decon room, room 415), portable soak tanks (used in decon cell, decon cubicles, and/or steam spray booth), decon cubicles (rooms 421 and 422), and steam spray booth (truck loading bay area of the equipment decon room, room 418). Additionally in CPP-659, other miscellaneous treatment processes [i.e., sorting/segregating/repackaging, sizing, compaction (Rooms 216, 306, 308, 309, 323, 418, 421, 422, and 428), macroencapsulation (Room 428) and sodium deactivation using water within the Argon Repackaging Station (Room 308) or exposure to air in the cell (Room 308)] will be used to treat debris waste. Containerized wastes containing free liquids will be treated via absorbent addition (Rooms 308, 309, and 418) or may be dispositioned to the INTEC Liquid Waste Management System (ILWMS) in accordance with the ILWMS Waste Acceptance Criteria.

Macroencapsulation using commercially available technologies will be conducted within CPP-659 Room 428 to meet the treatment standards for debris and radioactive lead solids. The technologies to be used are the same as those being used at CPP-1617 and are described in Attachment 1a.

Liquid treatment residuals from debris treatment are collected in the decon area holdup tank (VES-NCD-123) or the decon area collection tank (VES-NCD-129). VES-NCD-123 is located in the holdup tank cell, room 219. VES-NCD-129 is located in the collection tank cell, room 203. These tanks will be used primarily for storage, pending transfer to any of several waste processing destinations (which are not addressed in this permit). In addition, these tanks will be used occasionally for pH adjustment to meet the waste acceptance criteria of processing destinations.

Storage of wastes in containers and piles will occur in 21 rooms within CPP-659 and within building CPP-1659. Design features of these rooms include thick concrete walls and floors (as thick as 3 or 4 ft), steel reinforcement, stainless-steel-lined floors, stainless-steel wainscots, epoxy coatings, and trenches and drains.

Evaporation of liquid waste was also conducted in the calcining area on the east side of the building. However, any reference made to this operation in this permit is for informational purposes, and is not subject to this permit.

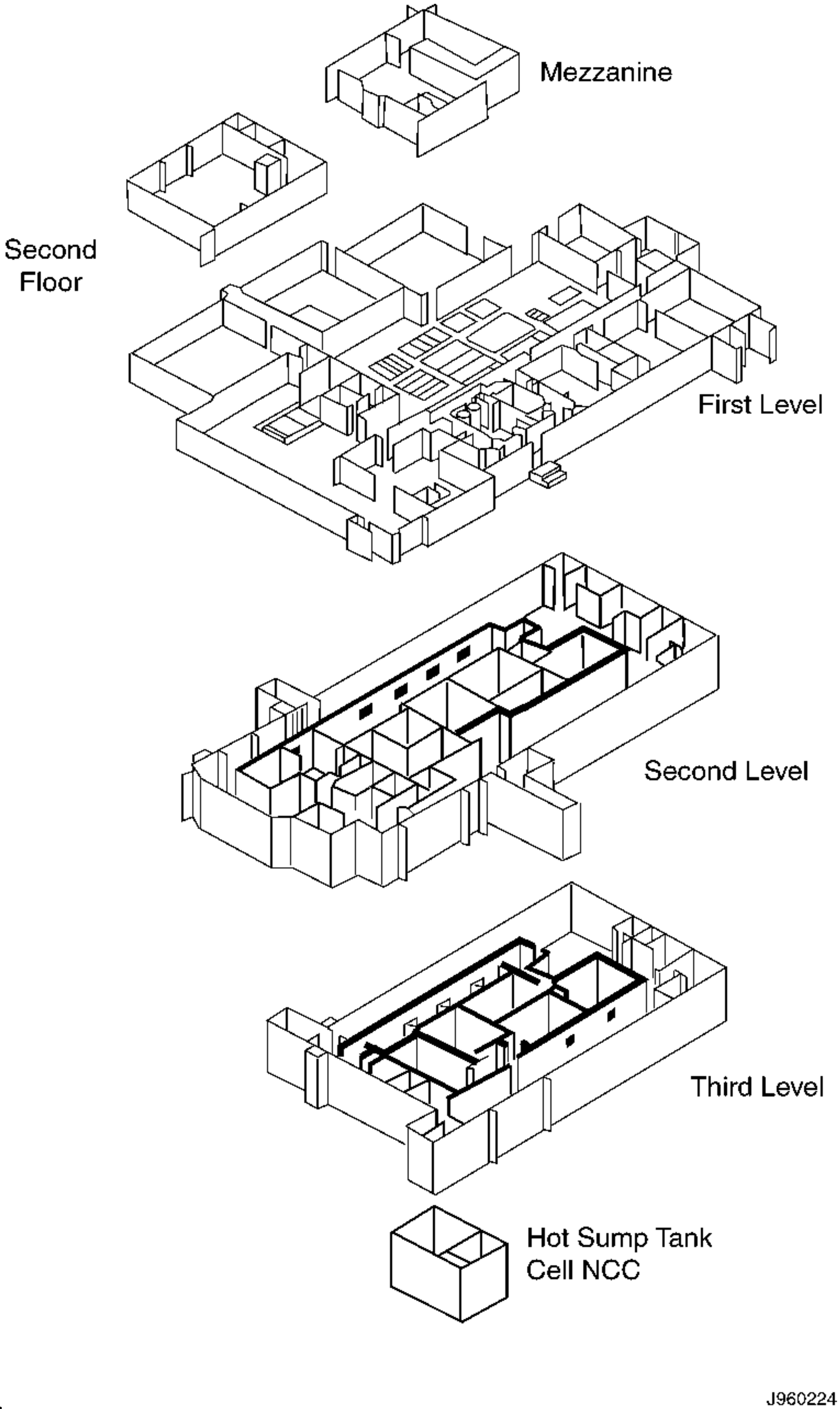


Exhibit B-6. Isometric of the New Waste Calcining Facility (CPP-659).

The following section presents design information for the overall building (CPP-659 and CPP-1659) structure.

Building CPP-659/-1659 Design Data

Building CPP-659 is approximately 250 ft long and 145 ft wide, and extends 57 ft belowgrade and 43 ft abovegrade. Building CPP-1659 is annexed to the west wall of CPP-659. CPP-1659 consists of a single floor at ground level and is approximately 56 ft 7 in. long and 34 ft wide.

Floors. The structural slab of CPP-659 is 3 ft of steel-reinforced concrete poured on top of 8 to 10 ft of concrete fill. The concrete fill occupies the space between the structural slab and the top of the bedrock. The construction joints in the structural slab have been constructed with waterstops consisting of a continuous carbon-steel strip, 4 in. by 1/8 in. The structural slab of CPP-1659 consists of a 6-in. concrete slab poured over a 2-in. concrete mud mat.

The process area floors of CPP-659 consist of a stainless-steel-lined concrete slab poured on top of the CPP-659 structural slab. The floor slab is 9 to 12 in. thick. The liner is 10-gauge, Series 300 stainless steel. The stainless-steel liner plate was fabricated and installed in accordance with Specification SP-453504-20-2, "Stainless-Steel Liner Plate," which references American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, American Society of Testing and Materials (ASTM), and American Welding Society (AWS) codes and standards. These specifications assure the structural integrity of the base and that the base is free of cracks and gaps. Liner seam welds were tested for leak tightness by the vacuum box method performed in accordance with Article 1 of Section V of the ASME Code and SP-453404-20-2, Appendix A, "Vacuum Box Examination of Liner Seam Welds." Leak-tested welds meet the acceptance criteria of Section III, Division 2, CC-5546 of the ASME Code.

To determine the effectiveness of the liner material, Type 300 stainless steel was exposed to three different types of process solutions, including 110 C, 3.4 M scrub solution, and three different types of decontamination solutions. Type 300 stainless steel had a maximum corrosion rate of 6.74 millimeters (mm) per month when exposed to boiling scrub solution. Process solution would normally be 40 C to 65 C. When exposed to a boiling (110 C) 8% oxalic acid solution, Series 300 stainless steel had a corrosion rate of 2.9 mm per month.

The stainless-steel liner is 10 gauge, which is nominally 127.1 to 141.9 mm thick. Given the maximum observed corrosion rate of 6.74 mm per month and the nominal 127.1 mm thickness of the liner, a liner service life of 19 months under continuous exposure to boiling process solutions is evident. However, the process areas are inspected daily for leakage and accumulated liquids when waste is present. The storage areas and the treatment areas all drain to tanks. Drainage ensures that the liner is not in contact with corrosive solutions for longer than 24 hours. Accordingly, actual corrosion rates are small fractions of the test corrosion rates.

Floors in two container storage areas are not lined with stainless steel: Rooms 205 and 419. The floors in these rooms are covered with three coats of Amercoat 66 or equivalent, which meets American National Standards Institute (ANSI) Standard N512-1974 for floor coverings and is compatible with the wastes to be stored.

Structural Parameters. In building CPP-659, belowgrade walls and floors and abovegrade floors, where storage and treatment will occur, are constructed of steel-reinforced concrete. The abovegrade building structure has been designed and constructed to meet applicable seismic and tornado design criteria. The abovegrade structure is constructed of a combination of a structural steel post and beam frame and steel-reinforced concrete. The abovegrade wall material is either steel-reinforced concrete, or exterior steel sheathing over 6 in. of insulation, with steel sheathing on the interior of the wall. Shielding walls limit radiation exposure to personnel and the environment. Building CPP-1659 is constructed of a structural steel post and beam frame with steel-reinforced concrete walls. Steel sheathing covers the exterior walls of CPP-1659.

Concrete construction in the floors and walls is in accordance with Specification SP-453504-10-2, "High Density Concrete Construction" (included in the appendices of the permit), which references American Concrete Institute (ACI) and ASTM codes and standards. Structural steel was fabricated and erected in accordance with Specification SP-453504-20-1, "Structural Steel" (included in the appendices of the permit), which references American Institute of Steel Construction (AISC), ASTM, and other codes and standards.

Exterior concrete surfaces belowgrade were coated with a bituminous damp-proofing hot-application method, using asphalt or coal tar pitch. A cold-application method using fibrous asphalt was used in confined spaces, where the use of hot bitumen would be hazardous to personnel. Surfaces receiving coal tar pitch damp-proofing were given a priming coat of creosote; surfaces receiving asphalt or fibrous asphalt damp-proofing were given a priming coat of asphalt primer. The hot-application method required that the surfaces be given two mop coats of hot coal tar pitch or two mop coats of hot asphalt. The cold-application method required that the surfaces receive two coats of fibrous asphalt, with the first coat applied by brush to provide full bond with the primed surface. The material requirements are as follows:

- Asphalt: ASTM D449-73, Type A
- Asphalt primer: ASTM D41-73
- Coal Tar Pitch: ASTM D450-71, Type B
- Creosote: ASTM D43-73
- Fibrous Asphalt: Fed. Spec. SS-A-694D.

All construction joints in external walls and in floor slabs have waterstops. Waterstop material is a continuous carbon-steel strip, 4 in. by 1/8 in., with butt-welded ends and corners. Construction joints were made according to the concrete construction specification found in appendices of the permit.

Joint sealant was used for the following:

- Joints and recesses, where frames and subsills of windows, doors, louvers, and vents adjoin masonry, concrete, or metal frames, and exterior and interior surfaces of exterior wall penetrations

- Masonry joints, where shelf angles occur

- Expansion and control joints

- Interior face of expansion joints in exterior concrete or masonry walls, where no metal expansion joint covers are required

- Openings, where items pass through exterior walls, Metal reglets when lead caulking rope is not used, where flashing is inserted into masonry joints, or where flashing is penetrated by coping dowels

- Metal-to-metal joints, where sealing or "caulking" is shown or specified

- Joints occurring between ends of gravel stops, fascias and/or copings and adjacent walls

- Bottom of exterior doorway frames

- Decks and walkways.

The joint sealant used was either a two-component, elastomeric-type compound conforming to Federal Specifications TT-S-00227, Type II, or a one-component, elastomeric-type compound conforming to TT-S-00230, Type II, or TT-S-001543.

Structural Roof Parameters. The roof areas of buildings CPP-659 and -1659 have been designed and constructed to provide adequate protection from precipitation. Roofing material on the building varies. Typically, the roof consists of a solid deck (either concrete or sheet metal) overlain by two layers of solid insulating material. Covering the insulating material is a layer of gravel to provide protection against the elements.

Heating, Ventilation, and Air Conditioning (HVAC) System

The hazardous and/or mixed waste storage and debris storage and treatment areas at CPP-659/-1659 are serviced by an HVAC system that has been in place since CPP-659 was constructed. See the appendices of the permit for details.

Building CPP-666 Container Storage, Tank Storage, and Other Miscellaneous Treatment

The FDP cell is housed within building CPP-666 (FAST facility) at the INTEC. Exhibit B-2 shows the location of FAST at the INTEC. FAST is a multiple-level, steel-reinforced concrete structure. The building is 571 ft long at its longest dimension, and 196 ft wide at its widest dimension. Construction of the FAST building was completed in 1982. The FDP cell was originally designed for the dissolution of spent nuclear fuel. The FDP went on line for the dissolution process in 1986, and completed its final processing campaign in August 1988. Operation was formally stopped in April 1992.

The FAST facility comprises two separate operating areas: the Fuel Storage Area and the FDP area. Both the FDP Cell and FDP area will be used for RCRA container storage. However, only the FDP Cell will be used for slab tank storage (VES-FC-184), and other miscellaneous treatment with the exception of the sodium distillation system (SDS) process equipment which is located in Room SB-8 in the FDP Area at the -31’ -0” level. The wastes stored in the container storage areas may be spent HEPA filters and other mixed waste and/or mixed waste debris. However, while not expected, if prohibited items are found during miscellaneous treatment operations, they will be removed and handled in a compliant fashion in other acceptable permitted locations. The waste stored in the slab tank will consist of liquids generated during operational activities that collect in the FDP cell sump. Wastes to be treated in the FDP Cell using other miscellaneous treatment methods (i.e., sorting/segregating/repackaging, compaction, sizing, sodium distillation, sodium deactivation, and absorption) will consist of mixed waste and or mixed waste debris from the Materials and Fuels Complex (MFC) to support the Remote-Handled Waste Disposition Project (RWDP), and other INL wastes which meet the unit waste acceptance criteria. Due to the size and complexity of the overall FAST building, only design information specific to the FDP cell and non-cell container storage areas and distillation room are addressed in this section. Exhibit B-7 presents a cutaway view of FAST, and shows the relationship of the FDP to the rest of the building processes.

FDP Cell Design Data

The FDP cell is constructed of steel-reinforced concrete. The cell is located entirely within the FAST building. The only portion of the building with exposure to the outside environment is the roof. The FDP cell has one level on grade (0'- 0") and two levels belowgrade (-13'- 0" and -27'- 0"). The FDP cell is approximately 100 ft long by 20 ft wide and approximately 55 ft high. The drawings related to the FDP cell are in the drawings package found in the appendices of the permit.

Located within the FDP cell are three dissolver vessels, three complexer vessels, and one product transfer vessel. The vessels were used in the fuel dissolution process. The three dissolver vessels and the product transfer vessel penetrate both the -13'- 0" and the 0'- 0" floor levels, and the three complexer vessels penetrate only the -13'- 0" level. These vessels are no longer in service, have been emptied of any process residues, and have been verified to not contain hazardous constituents.

The FDP was shutdown in 1988. The equipment has remained in-place except for some equipment that had been disconnected during and after processing operations. Much of this equipment was placed at the -13’ level of the FDP cell prior to it being permitted. The three lids were removed from the dissolver vessels to make more room for repackaging of the RH-TRU waste. All equipment (in-place and loose) will undergo a hazardous waste determination and will be addressed during closure of the unit.

Foundations and Floors. The floor at the FDP cell’s -27'- 0" level is a steel-reinforced concrete pad built upon fill material. The concrete floor is a minimum of 5 ft. thick. The concrete floor is covered with a Series 300 stainless-steel liner plate, which will prevent waste from contacting the concrete surface. The stainless-steel plate meets the specifications of ASTM-A240. The floor at this level is sloped from south to north. The south end of the floor is at -27'- 0" belowgrade. The floor slopes to -27'- 6" at the north end of the cell. A sump is located in the northwest corner of the cell to collect any free liquids that may enter the unit. The sump is 5 in. in diameter, and has a depth of 18 in. The slab tank (VES-FC-184) is located in the north end of the cell at the -27’-0” level and is geometrically safe from criticalities.

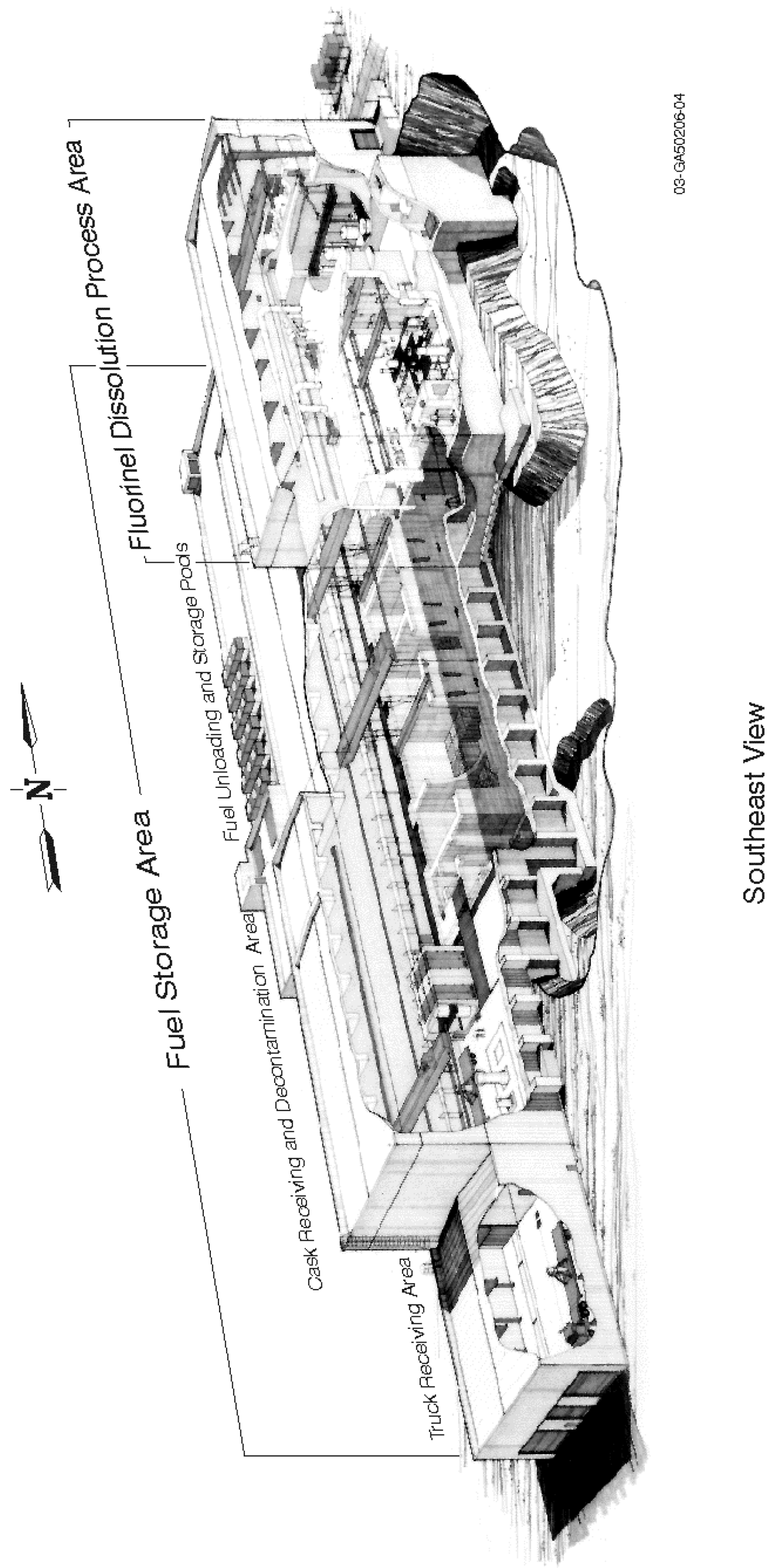


Exhibit B-7. Cutaway view of the FAST building.

The floors at both the 0'- 0" level and at the -13'- 0" level, where the majority of the container storage areas are located, are constructed of Series 300 stainless-steel grating. There are solid floors in the container storage area in the FDP Cell. Additionally, the lowest cell floor, at the -27'- 0" level, is solid. The grating main bars are 2 by 3/16 in., spaced 15/16 in. on center, with cross bars spaced 2 in. on center. The designed load-bearing capacity of the in-cell storage area on the grating is 500 lb/ft^2. The container storage areas outside the FDP Cell have floors that are made of concrete. SB-8 is of normal construction for the FDP area, with a stainless steel secondary containment liner. Any container storage area that stores liquid bearing waste will have adequate and compatible secondary containment for the specific waste type.

At the 0'- 0" level, the stainless-steel grating covers 57 linear ft of the cell area, for a total covered area of 1,140 ft^2. With the exception of the area taken up by the three dissolution vessels, the entire grated area may be used to store containerized waste. In addition, there is an area approximately 16 ft x 23 ft of solid floor at the south end of the 0’0” level that may also be used for container storage. There are two grated areas along the west wall at the -13'- 0" level for waste storage. The remainder of the -13'- 0" level is open.

Structural Parameters. The walls of the FDP cell are constructed of precast steel-reinforced concrete. Each wall is 5 ft thick. The design standard for the concrete is for a compressive strength of 5,000 psi. The interior and exterior walls of the cell are lined with Series 300 stainless-steel panels.

Cell Access

Because of high radiation levels, personnel are not allowed into the FDP cell. The FDP cell is accessed through various manways, and remotely, from a series of hatches located at the southern end of the cell. The hatch plugs are constructed of concrete and are lined with lead and stainless steel. Each of the operating levels at which waste can be stored (in containers) is equipped with viewing windows. Five viewing windows are located along the east corridor and two along the west corridor, at the 0'- 0" level. Six viewing windows are located along the west corridor, at the -13'- 0" level.

Heating, Ventilation, and Air Conditioning

The FDP cell is equipped with its own HEPA filtration system.

FDP Area (FDPA) Container Storage Areas (outside the FDP Cell)

Container storage areas in the FDPA (i.e., non-FDP cell) have epoxy coated concrete floors that are sufficient for storage and transport of waste materials. Secondary containment will be provided for any liquid bearing wastes. The secondary containment will be appropriate for the waste type present. In most cases the secondary containment will consist of ISCs, shielded overpack containers, or secondary containment pans.

The FDPA with its supporting systems and facilities occupies approximately 37,876 square feet of the CPP-666 building. The FDPA consists of a shielded cell (discussed above), various access corridors around the FDP cell, a chemical makeup area, and supporting systems.

Foundation and Floors. All levels of the FDPA, including first, second and third floors, as well as the first and second basement floors, are constructed with reinforced concrete floors, walls, and ceilings. The third and fourth floor mezzanine is constructed with built-up composition roof on rigid insulation on steel deck and structure on an exposed engineered steel structure. Concrete has been added to the third floor roof for radiological shielding, up to 1 ft. thick. The third floor is concrete with 3-ft.-thick reinforced concrete access plates (i.e., hatch covers) to the cells below; the mezzanine floor is concrete on metal deck on steel beams and columns. The exterior walls are insulated metal panels.

Ventilation. Ventilation flow originates in areas where there is minimal potential for contamination (air flows from clean areas to contaminated areas). It is then directed through occupied areas and operating areas, and from there, into secondary confinement areas that contain primary confinement systems.

HWMA/RCRA PART B PERMIT

FOR THE

IDAHO NATIONAL LABORATORY

Volume 18 – Idaho Nuclear Technology and Engineering Center

BOOK 1, ATTACHMENT 1

Debris Treatment Processes
Holdup and Collection Tanks
CPP-659/-1659 Storage
CPP-666 FDP Cell and FDP Area Container Storage and Slab Tank Storage
Other Miscellaneous Treatment Processes

Section D

Process Description

Revision Date: February 12, 2016

CONTENTS

EXHIBITS

TABLES

APPENDICES

D. PROCESS INFORMATION

This section provides process information for the Idaho Nuclear Technology and Engineering Center (INTEC) waste management units addressed in this permit: debris treatment processes, holdup and collection tanks, storage in Building Number CPP-659/-1659, container storage and slab tank (VES-FC-184) storage and other miscellaneous treatment processes [i.e., sizing, compaction, sodium distillation (CPP-666 Room SB-8), sodium deactivation, and sorting/segregating/repackaging of debris waste and absorbent addition to liquid bearing waste] in the CPP-666 Fluorinel Dissolution Process (FDP) Cell and container storage in the FDP Area (FDPA), and other miscellaneous treatment processes [i.e., sizing, compaction, sorting/segregating/repackaging of debris waste (in Rooms 216, 306, 308, 309, 323, 418, 421, 422, and 428), macroencapsulation (Room 428), sodium deactivation (using water within the ARS or exposure to air in the cell) in Room 308, and absorbent addition to liquid bearing waste (Rooms 308, 309 and 418)] will be conducted in CPP-659. References to sodium deactivation and sodium distillation throughout this document are inclusive for sodium and sodium potassium alloy (NaK).

Debris Treatment Processes

The following will be used to treat mixed waste debris in CPP-659/-1659: high-efficiency particulate air (HEPA) Filter Leaching System (HFLS), sinks (with hoods), portable soak tanks, ultrasonic cleaner, decon cubicles, decon cell, and steam spray booth (including liquid abrasive spray glove box). The HFLS, sinks, and ultrasonic cleaner are permitted as tank treatment systems (process code T01). The soak tanks are permitted as other treatment units (process code T04). The steam spray booth, the decon cubicles, and decon cell are permitted as miscellaneous units (process codes X02 and X99 for booth, and X99 for cubicles and decon cell). Additionally, in CPP-659, other miscellaneous treatment (T04) processes will consist of sizing, compacting and repackaging mixed waste debris, absorbent addition to non-debris waste, and sodium deactivation in Room 308. Sodium deactivation in Room 308 will be completed using the same process as currently being used in the FDP Cell. The treated waste will subsequently be stored (S01) in CPP-659/-1659 or CPP-1617 pending off-Site shipment to an approved TSDF for final disposition.

Treatment of HEPA filters in the HFLS involves the leaching of hazardous waste contaminants from the filters using a nitric acid solution, followed by rinsing with water and drying. The HFLS is located in the filter handling cell (Room 309). The HFLS may also be used for the radiological decontamination (pre-treatment) of HEPA filters. When performing pre-treatment of HEPA filters, the number/length of leaching and rinsing cycles may be reduced and filter drying may or may not be performed. Steam may also be used to pre-dry the filters to drive off most of the residual liquid.

The sinks, located in the low-level decon room (Room 415), are used for hands-on washing of debris items such as small piping sections or small valves. The soak tanks are used for the soaking of small to large and odd sized items, such as valves, blower components, piping, etc., in treatment solutions for extended periods of time. The ultrasonic cleaner, located in Room 415, is used to treat small to intermediate size items by ultrasonic cavitation in water or chemical solutions. The decon cubicles, Rooms 421 and 422, are used for hands-on treatment of debris items, waste storage, and for treatment of debris within portable soak tanks. The steam spray booth is a confinement area for treatment of mixed waste debris by chemical extraction (e.g., scrubbing with water-based chemicals) or physical extraction [e.g., steam, high pressure hot water, carbon dioxide (CO_2) blasting]. A liquid abrasive spray glove box on the exterior of the steam spray booth is used for treatment by liquid abrasive spray blasting, high pressure hot water washing, or CO_2 blasting. A portable soak tank may occasionally be moved into the booth for debris treatment. Also, treatment such as spalling/scarification by means of an integrated vacuum/scabbling system may be conducted in the booth. The steam spray booth and glove box are located in the truck bay loading/unloading area of the equipment decon room, Room 418. These rooms serve not only the New Waste Calcining Facility (NWCF) but also other INTEC areas and other INL facilities. These rooms have also been, and will in the future be used, for decontamination of radioactive, nonhazardous items.

Waste characterization, verification, and treatment are conducted in CPP-659 Cell 308 to ensure that waste is appropriately packaged and acceptable for transport to the Waste Isolation Pilot Plant (WIPP) or other off-site facility for disposal. This effort consists of some or all of the following steps: removing multiple smaller waste cans from canisters, spreading the contents on the sorting tables to identify/remove/treat WIPP prohibited items (such as liquids, ignitables, reactives, etc.), and repackaging of the contents into standard-sized containers that can be processed through the necessary physical and radiological characterization equipment to demonstrate compliance with the waste acceptance criteria for WIPP or other off-site facility.

Ignitable or reactive waste treatment in CPP-659 Cell 308 is performed by deactivation of sodium. Sodium deactivation in Cell 308 is conducted in miscellaneous treatment units. A majority of the treatment is conducted within Argon Repackaging Stations (ARS). The ARS has secondary containment sufficient to contain the treatment process solutions and waste. The ARS is maintained with an oxygen deficient environment. During treatment in the ARS, the oxygen levels are initially established at or below 3.3% oxygen as measured at the lower sensor in the ARS. It is noted that operational activities during treatment (cutting, manipulator movement, etc.) will displace argon and temporarily allow the oxygen level to rise above 3.3%. This condition is planned for and expected.

Ignitable/reactive waste treatment methods are:

(1) Repackaging/sizing/compaction/absorbent addition of ignitable or reactive waste is performed in the ARS (except as noted below).

(2) Sizing of special case components outside the ARS: All containers will be opened in the ARS and inspected for visible sodium in an inert atmosphere. If required due to difficult configurations or angles of cuts, the waste component may be transferred to the sizing table and sized as necessary in preparation for distillation, further deactivation in the ARS or repackaging into drums to be removed from the cell. The debris will be returned to the ARS after sizing for any additional activities. Mitigating actions to be taken include: an application of inert gas in the cutting zone, use of a catch pan for collection of fines, exclusion of combustibles and liquids from the table area, fire watch, and proximity of fire extinguishing media.

(3) Air treatment of fines: Ignitable or reactive fine material (fines) is mixed with Met-L-X in the ARS then exposed to the air and raked/mixed during air exposure. Treatment is complete when there is no reaction for 30 minutes in air.

(4) Air treatment of debris: If no evidence of sodium contamination is present on debris removed from an ignitable/reactive container, it will be removed from the ARS and exposed to air. The debris will be raked or stirred periodically to ensure complete air exposure. Treatment is complete when there is no reaction for 30 minutes in air.

(5) Water treatment of sodium and sodium containing or contaminated debris: Water treatment is conducted in the oxygen deficient environment in the ARS. Water treatment may include spritzing/misting of the sodium to completion of the reaction or immersing the debris in water. During immersion treatment, the reaction is considered complete 10 minutes after the reaction has slowed to discrete non-connecting bubbles. For both water treatment techniques, water treatment is followed by 30 minutes of air exposure with no observed reaction to verify the treatment is complete.

(6) Air treatment of NaK: NaK is reacted by exposure to the limited oxygen content in the oxygen deficient environment of the ARS to control the reaction. NaK is spread in a pan into thin layers and manipulated allowing for the exposed surfaces to react. To complete the NaK reaction in the ARS, the NaK pan is lightly misted with water. Following misting, the pan is removed for 30 minutes of air exposure with no observed reaction to verify the treatment is complete.

Because sodium reacts in water and air, controls are established to minimize the risk of fire. These controls include the use of the oxygen deficient environment in the ARS, use of inert gas when sizing special case components on the sizing table and having fire extinguishing media staged in the CPP-659 Cell 308 for use (Met-L-X, sodium carbonate, or other inert material). Thermal events are expected during treatment of ignitable and reactive waste. A controlled area around the treatment unit will be established during sizing, air treatment, and water treatment as part of the work control procedures. Thermal reactions within this controlled area that do not damage the operational integrity of the ARS and/or secondary containment are a planned event. Activities that may be performed to maintain a controlled thermal reaction are, stop activities that may be contributing to the thermal reaction, maximize the argon purge, monitor the event, and/or apply Met-L-X. Thermal reactions within these parameters are considered to be a part of the treatment process, and as such do not require activation of the contingency plan or reporting process.

If the thermal reaction results in a fire outside of the controlled area or results in damaging the operational integrity of the ARS and/or secondary containment, then the RCRA Contingency Plan will be activated and a verbal notification will be provided to the DEQ, and a 15-day follow-up report will be completed.

The ARS enclosure provides an inert cover gas of argon to minimize the potential for reactions with air during opening, inspections, and segregating of waste contents in CPP-659 Room 308. The ARS consists of an open top box of varied dimensions depending on the specific ARS (See Book 2, Appendix 2 drawings 790816 and 792396 for detailed specifications). The bottom is constructed from stainless steel, and provides containment for liquids within the ARS. The front, sides, and back are made from a clear fire resistant Lexan that allows visual observation by both operators and in cell cameras. The atmosphere inside the ARS is monitored by two oxygen (O2) sensors to ensure O2 levels remain low during the repackaging operation. Incoming argon gas is directed near the bottom of the ARS through an inlet distribution manifold. Two additional delivery lines are also provided to deliver argon gas to the opposite end of the enclosure as well as provide specific gas delivery should operations need to purge internal containers such as paint cans. As argon flows into the ARS it will displace the ambient atmosphere. A continuous flow of argon will be maintained during repackaging operations.

There are three different ARS types; ARS-1, ARS-2, and ARS-3 (See Book 2, Appendix 2 drawings 790816 and 792396 for detailed specifications). The specific ARS type to be used is dependent on the waste stream to be treated. Any combination of these ARS units can be staged to process waste. The ARS's in the cell that are not being used for processing waste will not be inspected.

ARS-1 and ARS-3 secondary containments are designed with an expansion plug. Dependent on the waste streams to be processed in ARS-1 and ARS-3 the expansion plug maybe removed and a drain bottle installed to provide the necessary criticality controls.

Water will be managed as a secondary waste after completion of each batch of immersion/misting treatment. The pH of the water is expected to increase in direct correlation to the amount of sodium that is reacted. The water will be declared to be corrosive (EPA Hazardous Waste Number D002) as a conservative measure. The water will undergo elementary neutralization or be absorbed with an approved absorbent per this permit.

Sizing/repackaging of HEPA filters will be completed in the Decon Cell (Room 308) and the Filter Handling Cell (Room 309). HEPA filter media will be removed from the metal housing/frame. The filter media may be removed from the housing by employing various techniques such as conventional sawing, use of a punch, etc., ensuring that the appropriate tool/method is used for the job at hand. Once the media has been removed from its housing, it will be sampled, as necessary. Sampling will be completed to establish acceptable knowledge to meet the waste acceptance criteria for disposal of the filters. After sampling has been completed, the filter media will be compacted into either a 30 or 55-gallon drum. An example of a compaction method that may be use is placing a heavy object such as a concrete block/cylinder on top of the filter media to compress it within a 30 or a 55-gallon waste drum. Other compaction tools/methods may be used to ensure that compaction is appropriately achieved. Up to 10 compacted HEPA filters may be packaged into a 55-gallon waste drum, fewer in a 30-gallon drum. These waste drums may then be stored (S01) in the Crane Maintenance Area (CPP-659, Room 428). Prior to off-Site shipment, the waste drums will be appropriately staged and then be subsequently loaded into either a CNS 10-160B or RH-72B shielded shipping cask/trailer assembly. The waste will then be shipped to an approved disposal facility for final disposition.

Macroencapsulation (T04 - other treatment) of hazardous or mixed waste debris and radioactive lead solids will be completed in CPP-659 Room 428 (Crane Maintenance Area). The treatment process will consist of either of the commercially available macroencapsulation processes (the same as those used at CPP-1617) to meet the treatment standards for debris waste and radioactive lead solids. Prior to treatment of the waste, the treatment technology process will be reviewed by the proposed off-site disposal facility to ensure the waste meets the waste acceptance criteria for the proposed disposal facility. The treatment unit provides isolation from potential leaching media by use of a jacket of high density polyethylene.

Sampling activities may consist of Head Space Gas Sampling (HSGS), Non-destructive Examination (NDE), Non-destructive Assay (NDA), etc. using portable equipment similar to that used at the Radioactive Waste Management Complex but modified as necessary for remote-handled wastes (both RCRA and non-RCRA). In addition to sampling/repackaging activities, removal of prohibited items and addition of absorbents may be completed for the non-RCRA wastes.

Holdup and Collection Tanks

Liquid treatment solution from the tank treatment systems addressed in this permit are collected in the decon area holdup tank (VES-NCD-123) or the decon area collection tank (VES-NCD-129). These tanks are used primarily for storage, pending transfer to any of several waste processing destinations (which are not addressed in this permit). In addition, these tanks are used occasionally for pH adjustment to meet the waste acceptance criteria of processing destinations. These tanks are permitted for tank storage (S02) and tank treatment (T01).

Storage in CPP-659/-1659

Waste is stored within designated rooms of CPP-659/-1659, in waste piles and in containers. This unit carries the process codes of S01 (container storage) and S03 (waste pile). Wastes to be stored include hazardous and/or mixed waste and debris, such as spent HEPA filters from INTEC and other INL processes, various other types of debris, and solid residuals generated during debris treatment.

Storage of waste may occur in CPP-1659 (Contaminated Equipment Maintenance Area) or the following rooms of CPP-659: 205, 206, 207, 214, 215, 216, 218, 306, 308, 309, 322 (allowed for waste pile storage only), 323, 326, 415, 416, 417, 418, 419, 421, 422, and 428 (Crane Maintenance Area). Radiation/contamination levels will determine in part the room in which a given waste will be stored.

Storage and Repackaging of Ignitable or Reactive Waste in CPP-659/-1659 and CPP-666

Ignitable or reactive wastes may be stored in CPP-659 NWCF Rooms 306, 308, 309, 417, 418, 428, and CPP-1659 Contaminated Equipment Maintenance Area. Ignitable or reactive wastes may be treated via sorting/segregating/repackaging, compaction, sizing, and sodium deactivation in CPP-659 Room 308. Additionally, ignitable or reactive wastes may be stored in CPP-666 FDP Cell and Rooms 301, 114C, 115, 180, B-4, B-5, and SB-8. Ignitable or reactive wastes may be treated via repackaging or sodium deactivation in CPP-666 FDP Cell, or sodium distillation in Room SB-8. Any ignitable or reactive waste will be stored in accordance with the requirements of 40 CFR 264.17.

Waste characterization, verification, and treatment are conducted to ensure that waste is appropriately packaged and acceptable for transport to the Waste Isolation Pilot Plant (WIPP) or other off-site facility for disposal. This effort consists of some or all of the following steps: removing multiple smaller waste cans from canisters, spreading the contents on the sorting tables to identify/remove/treat

WIPP prohibited items (such as liquids, ignitables, reactives, etc.), and repackaging of the contents into standard-sized containers that can be processed through the necessary physical and radiological characterization equipment to demonstrate compliance with the waste acceptance criteria for WIPP or other off-site facility.

Ignitable or reactive waste treatment in CPP-659 Cell 308 and CPP-666 FDP Cell is performed by deactivation of sodium. Sodium deactivation in Cell 308 and CPP-666 FDP Cell is conducted in miscellaneous treatment units. A majority of the treatment is conducted within Argon Repackaging Stations (ARS). The ARS has secondary containment sufficient to contain the treatment process solutions and waste. The ARS is maintained with an oxygen deficient environment. During treatment in the ARS, the oxygen levels are initially established at or below 3.3% oxygen as measured at the lower sensor in the ARS. It is noted that operational activities during treatment (cutting, manipulator movement, etc.) will displace argon and temporarily allow the oxygen level to rise above 3.3%. This condition is planned for and expected.

Ignitable/reactive waste treatment methods are:

(1) Repackaging/sizing/compaction/absorbent addition of ignitable or reactive waste is performed in the ARS (except as noted below).
(2) Sizing of special case components outside the ARS: All containers will be opened in the ARS and inspected for visible sodium in an inert atmosphere. If required due to difficult configurations or angles of cuts, the waste component may be transferred to the sizing table and sized as necessary in preparation for distillation, further deactivation in the ARS or repackaging into drums to be removed from the cell. The debris will be returned to the ARS after sizing for any additional activities. Mitigating actions to be taken include: an application of inert gas in the cutting zone, use of a catch pan for collection of fines, exclusion of combustibles and liquids from the table area, fire watch, and proximity of fire extinguishing media.
(3) Air treatment of fines: Ignitable or reactive fine material (fines) is mixed with Met-L-X in the ARS then exposed to the air and raked/mixed during air exposure. Treatment is complete when there is no reaction for 30 minutes in air.
(4) Air treatment of debris: If no evidence of sodium contamination is present on debris removed from an ignitable/reactive container, it will be removed from the ARS and exposed to air. The debris will be raked or stirred periodically to ensure complete air exposure. Treatment is complete when there is no reaction for 30 minutes in air.

(5) Water treatment of sodium and sodium containing or contaminated debris: Water treatment is conducted in the oxygen deficient environment in the ARS. Water treatment may include spritzing/misting of the sodium to completion of the reaction or immersing the debris in water. During immersion treatment, the reaction is considered complete 10 minutes after the reaction has slowed to discrete non-connecting bubbles. For both water treatment techniques, water treatment is followed by 30 minutes of air exposure with no observed reaction to verify the treatment is complete.

(6) Air treatment of NaK: NaK is reacted by exposure to the limited oxygen content in the oxygen deficient environment of the ARS to control the reaction. NaK is spread in a pan into thin layers and manipulated allowing for the exposed surfaces to react. To complete the NaK reaction in the ARS, the NaK pan is lightly misted with water. Following misting, the pan is removed for 30 minutes of air exposure with no observed reaction to verify the treatment is complete.

Because sodium reacts in water and air, controls are established to minimize the risk of fire. These controls include the use of the oxygen deficient environment in the ARS, use of inert gas when sizing special case components on the sizing table and having fire extinguishing media staged in the Cell for use (Met-L-X, sodium carbonate, or other inert material). Thermal events are expected during treatment of ignitable and reactive waste. A controlled area around the treatment unit will be established during sizing, air treatment, and water treatment as part of the work control process. Thermal reactions within this controlled area that do not damage the operational integrity of the ARS and/or secondary containment are a planned event. Activities that may be performed to maintain a controlled thermal reaction are, stop activities that may be contributing to the thermal reaction, maximize the argon purge, monitor the event, and/or apply Met-L-X. Thermal reactions within these parameters are considered to be a part of the treatment process, and as such do not require activation of the contingency plan or reporting process.

If the thermal reaction results in a fire outside of the controlled area, or results in damaging the operational integrity of the ARS and/or secondary containment, then the RCRA Contingency Plan will be activated and a verbal notification will be provided to the DEQ, and a 15-day follow-up report will be completed.

Container Storage in CPP-666 FDP Cell and FDP Area (FDPA)

The FDP cell container storage area is designated for storage of spent HEPA filters from the FDP air handling system and other INTEC processes, and storage of other mixed waste and mixed waste debris. Any ignitable or reactive waste will be stored in accordance with the requirements of 40 CFR 264.17. The waste will be segregated and protected from ignition sources and while it is being handled it will be protected from open flame. Smoking is not allowed in the CPP-666 facility and “No Smoking” signs are conspicuously posted. The applicable process category for this unit is S01 (container storage). The FDP cell is located in the Fluorinel Dissolution Process and Fuel Storage (FAST) facility.

Mixed wastes will be stored in the FDPA, on the +28’ level – room 301, on the 0’0” level – rooms 114C, 115, and 180, on the -13’0” level – rooms B-4 and B-5, and on the -31’0” level room SB-8. Additionally, ignitable or reactive wastes may be stored in these container storage areas. Any ignitable or reactive waste will be stored in accordance with the requirements of 40 CFR 264.17. The waste will be segregated and protected from ignition sources and while it is being handled it will be protected from open flame. Smoking is not allowed in the CPP-666 facility and “No Smoking” signs are conspicuously posted.

Slab Tank Storage in CPP-666 FDP Cell

The FDP cell slab tank (VES-FC-184) storage unit is to be used for the storage of liquids generated during operational activities that collect in the FDP cell sump. The applicable process category for this unit is S02 (tank storage).

Other Miscellaneous Treatment in CPP-666 FDP Cell

Wastes to be treated in the FDP Cell using other miscellaneous treatment methods [i.e., sorting/segregating/repackaging, compaction, sizing, sodium deactivation, sodium distillation (CPP-666 Room SB-8) and absorbent addition] will consist of mixed waste and/or mixed waste debris. The applicable process category for this unit is T04 (other treatment). Additionally, ignitable or reactive wastes may be treated via waste repackaging, sodium deactivation in FDP Cell, and sodium distillation in Room SB-8. Any ignitable or reactive waste will be treated in accordance with the requirements of 40 CFR 264.17. The sodium distillation system is maintained/operated under an inert atmosphere to prevent ignition or reaction of waste being treated or storage within the system in accordance with the requirements of 40 CFR 264.198(a)(2).

Ignitable or reactive waste treatment in FDP Cell includes sodium deactivation or sodium distillation (Room SB-8). Sodium deactivation in the FDP Cell is conducted in miscellaneous treatment units. A majority of the treatment is conducted within Argon Repackaging Stations (ARS). The ARS has secondary containment sufficient to contain the treatment process solutions and waste. The ARS is maintained with an oxygen deficient environment. During treatment in the ARS, the oxygen levels are initially established at or below 3.3% oxygen as measured at the lower sensor in the ARS. It is noted that operational activities during treatment (cutting, manipulator movement, etc.) will displace argon and temporarily allow the oxygen level to rise above 3.3%. This condition is planned for and expected.

Ignitable/reactive waste treatment methods are:

(1) Repackaging/sizing/compaction/absorbent addition of ignitable or reactive waste is performed in the ARS (except as noted below).
(2) Sizing of special case components outside the ARS: All containers will be opened in the ARS and inspected for visible sodium in an inert atmosphere. If required due to difficult configurations or angles of cuts, the waste component may be transferred to the sizing table and sized as necessary in preparation for distillation, further deactivation in the ARS or repackaging into drums to be removed from the cell. The debris will be returned to the ARS after sizing for any additional activities. Mitigating actions to be taken include: an application of inert gas in the cutting zone, use of a catch pan for collection of fines, exclusion of combustibles and liquids from the table area, fire watch, and proximity of fire extinguishing media.
(3) Air treatment of fines: Ignitable or reactive fine material (fines) is mixed with Met-L-X in the ARS then exposed to the air and raked/mixed during air exposure. Treatment is complete when there is no reaction for 30 minutes in air.
(4) Air treatment of debris: If no evidence of sodium contamination is present on debris removed from an ignitable/reactive container, it will be removed from the ARS and exposed to air. The debris will be raked or stirred periodically to ensure complete air exposure. Treatment is complete when there is no reaction for 30 minutes in air.
(5) Water treatment of sodium and sodium containing or contaminated debris: Water treatment is conducted in the oxygen deficient environment in the ARS. Water treatment may include spritzing/misting of the sodium to completion of the reaction or immersing the debris in water. During immersion treatment, the reaction is considered complete 10 minutes after the reaction has slowed to discrete non-connecting bubbles. For both water treatment techniques,

(6) water treatment is followed by 30 minutes of air exposure with no observed reaction to verify the treatment is complete.

(7) Air treatment of NaK: NaK is reacted by exposure to the limited oxygen content in the oxygen deficient environment of the ARS to control the reaction. NaK is spread in a pan into thin layers and manipulated allowing for the exposed surfaces to react. To complete the NaK reaction in the ARS, the NaK pan is lightly misted with water. Following misting, the pan is removed for 30 minutes of air exposure with no observed reaction to verify the treatment is complete.

Because sodium reacts in water and air, controls are established to minimize the risk of fire. These controls include the use of the oxygen deficient environment in the ARS, use of inert gas when sizing special case components on the sizing table and having fire extinguishing media staged in the FDP Cell for use (Met-L-X, sodium carbonate, or other inert material). Thermal events are expected during treatment of ignitable and reactive waste. A controlled area around the treatment unit will be establishedduring sizing, air treatment, and water treatment as part of the work control process. Thermal reactions within this controlled area that do not damage the operational integrity of the ARS and/or secondary containment are a planned event. Activities that may be performed to maintain a controlled thermal reaction are, stop activities that may be contributing to the thermal reaction, maximize the argon purge, monitor the event, and/or apply Met-L-X. Thermal reactions within these parameters are considered to be a part of the treatment process, and as such do not require activation of the contingency plan or reporting process.

If the thermal reaction results in a fire outside of the controlled area, or results in damaging the operational integrity of the ARS and/or secondary containment, then the RCRA Contingency Plan will be activated and a verbal notification will be provided to the DEQ, and a 15-day follow-up report will be completed.

The sodium distillation system (SDS) is a vacuum distillation system, maintained/operated under an inert atmosphere, that consists of a distillation vessel (VES-FC-101) with a knife gate valve and electric furnace, combination collection vessel (VES-FS-85A/condenser which is heated and cooled by a thermal fluid system, a filter, and a vacuum pump. The sodium distillation process separates sodium contamination from the waste, and allows both exiting waste streams a disposition pathway.

Sodium contaminated waste to be treated in the sodium distillation system, will be prepared for distillation in the ARS in the FDP cell. This consists primarily of verifying an open pathway for vapor extraction is present, removing visible combustible/incompatible materials and placing the waste into a bucket that is used to lower the waste into the distillation vessel, hold the waste during the distillation process, and raise the waste after distillation, into the FDP cell for packaging. The bucket, under an inert atmosphere, may be stored in the FDP Cell pending distillation treatment.

The SDS was installed in Room SB-8 on the -31' level of CPP-666. The existing 22-inch diameter, 20' long, ¼-inch thick stainless steel delayed neutron interrogator tube which extends from the FDP cell 0' 0" level down into Room SB-8 will be used as a pass-through to lower the bucket of waste to the sodium distillation vessel. The top of the sodium distillation vessel is located within a contamination control enclosure to prevent the spread of radioactive contamination in the SB-8 room. Once the waste has been secured in the sodium distillation vessel, the lifting device used to lower the waste into the vessel from the FDP cell will be detached and removed from the vessel. The vessel is then sealed automatically using the electrically actuated knife gate valve on the top of the vessel, the vacuum pump is started, and a vacuum is drawn on the system. After a vacuum of 10 Torr is achieved, the electric furnace is turned on and heat is applied to the distillation vessel until the boiling point of sodium (~714 °F) is obtained and the sodium is boiled off the waste.

The sodium vapor will be drawn from the distillation vessel under vacuum, and then enters the condenser. The condenser is operated at a temperature below the boiling point of sodium and above its melting point (~208 °F). The condenser is heated and cooled by a vendor-supplied skid-mounted thermal fluid system using silicone fluid as the heat transfer medium. Silicone oil is non-reactive with sodium, and is non-toxic.

The sodium vapor condenses in the condenser and the liquid sodium flows into the collection vessel. The collection vessel contains the sodium under an inert atmosphere.

The remaining vapor stream continues to the filter (cold trap), which is operated at room temperature, where any remaining condensable vapors are filtered out and collected. The filter elements are replaceable, and will be changed as necessary to support distillation operations.

The gas stream then travels through the vacuum pump and is discharged into the contamination control enclosure at the top of the distillation vessel. The enclosure vents the gas stream into the FDP cell where it is handled by the cell/building ventilation system.

Upon completion of the distillation cycle, the vessel is depressurized (venting into the FDP cell). The lifting device within the pass-through tube is lowered and reattached to the bucket, and then raised to the FDP cell.

The collection vessel is equipped with a continuous level switch which shuts down the distillation process when the preset level is reached. When the filled collection vessel is cooled, it is then disconnected and a new one attached. A notification will be sent to the DEQ when changeout of the collection vessel is completed.

The control station for the sodium distillation process will be located on the 0’ 0” level outside the FDP cell. Cameras will be used for monitoring the process equipment and for performing inspections if radiological concerns prevent entry to Room SB-8.

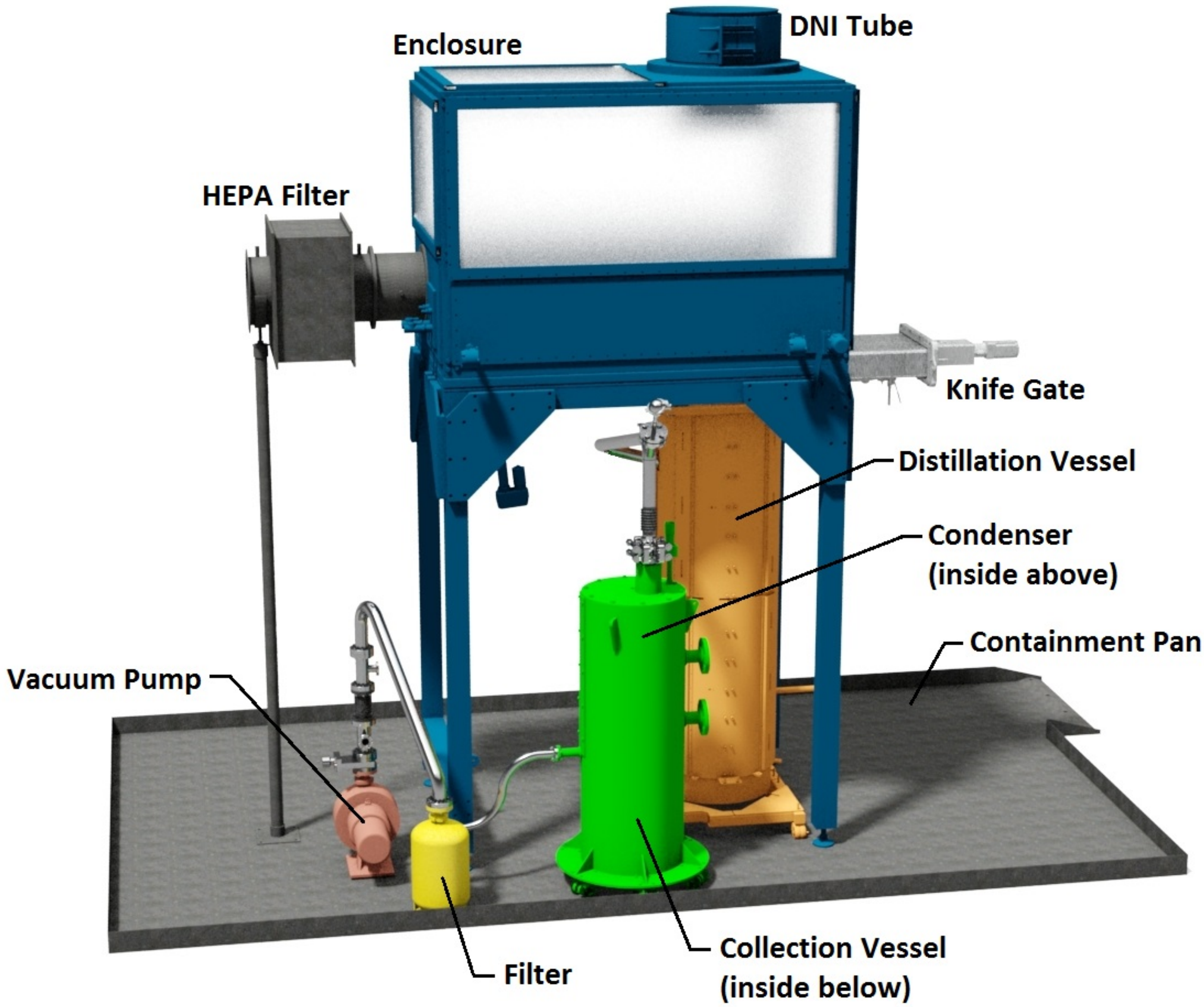


Exhibit D-1. Distillation System.

NWCF Operations

Three basic processes are conducted at the NWCF, CPP-659: (1) decontamination of radioactive INL and NWCF process equipment in the Decontamination Area, (2) treatment of mixed waste debris in the Decontamination Area, and (3) evaporation of liquid waste. Evaporation of liquid waste is not addressed in this permit. Likewise, decontamination of radioactive, nonhazardous items is not addressed in this permit. The following background information is provided to acquaint the reader with the building areas within which storage of hazardous and or mixed waste and debris and the treatment of hazardous and mixed debris will occur.

Decontamination Area

The Decon Area was incorporated into the design of the NWCF, in part to minimize the radiation exposures personnel receive from hands-on decontamination. The decon facility has three major areas: the low-level decon room, the equipment decon area, and the remote shielded cells. Since startup of the decon facility in 1982, factors such as radiation levels, potential spread of contamination, and equipment size have determined where a given item was decontaminated. These factors will also be instrumental in determining where a given debris item will be treated.

The low-level decon room is used for treatment of small to intermediate size debris items that have low levels of radiation. The low-level decon room also contains a makeup area, including two tanks for mixing water, nitric acid, or various dry chemicals, which are used for makeup of most debris treatment solutions. The equipment decon room is used for treatment of larger debris items that cannot be handled in the low-level decon room, and has facilities for items with higher potential for airborne contamination. The remote shielded cells (filter handling cell, decon cell, and equipment decon storage area) are used for storing hazardous and/or mixed waste and storing and/or treating debris items with high levels of contamination and radiation. Other treatment areas include the decon cubicles and the steam spray booth. In addition to treatment of mixed waste debris, the Decon Area will continue to be used for the decontamination of radioactive, nonhazardous items.

The Decon Area includes one level abovegrade and one level belowgrade on the west end of the NWCF. The collection and holdup tanks for radioactively contaminated and hazardous process liquid waste solutions generated during decontamination and treatment activities are located belowgrade on the third level in the Calciner Area. Exhibits D-2, D-3, and D-4 are simplified floor plans of CPP-659, and show the locations of treatment areas and equipment.

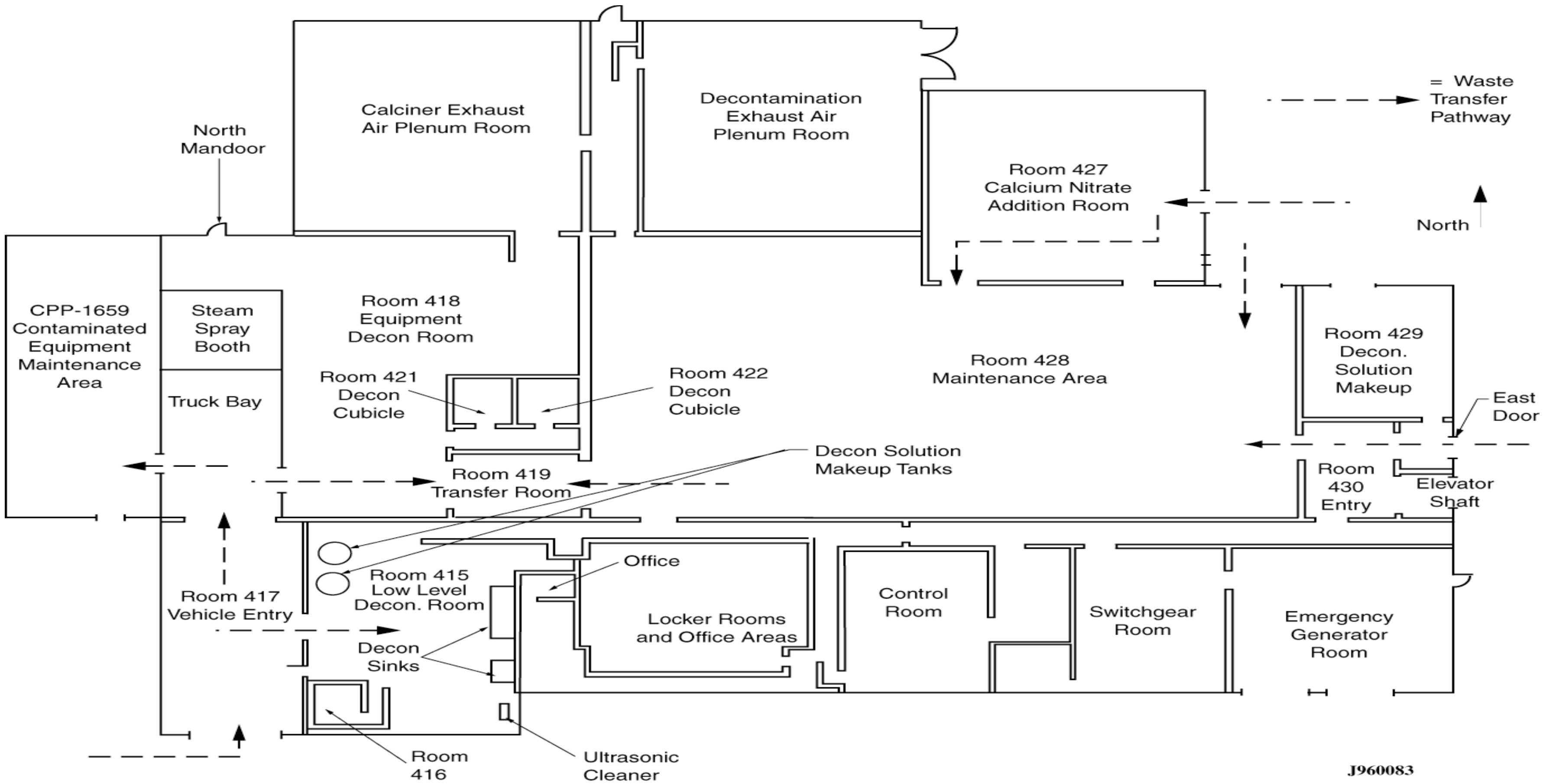


Exhibit D-2. Simplified floor plan for first level of CPP-659.

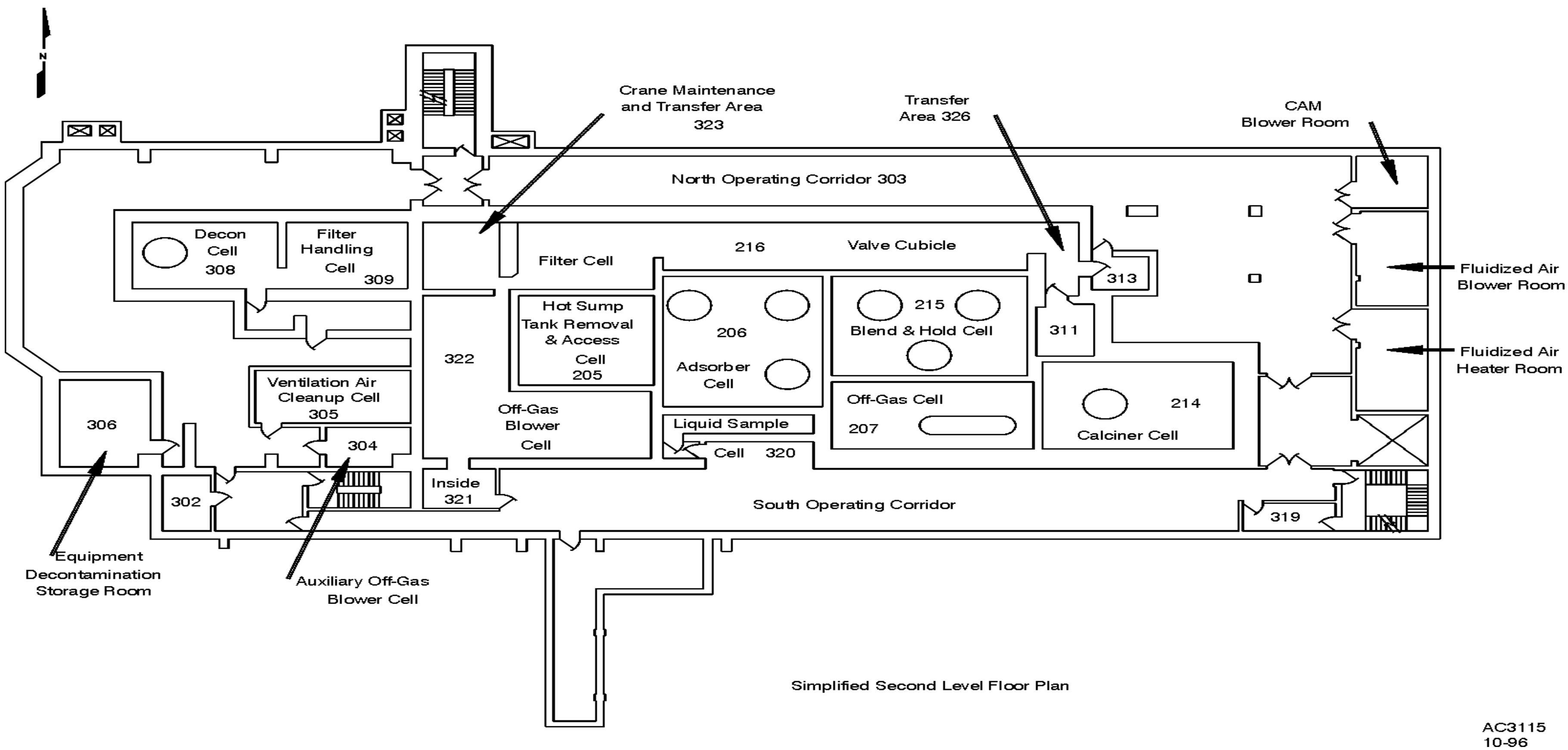


Exhibit D-3. Simplified floor plan for second level of CPP-659.

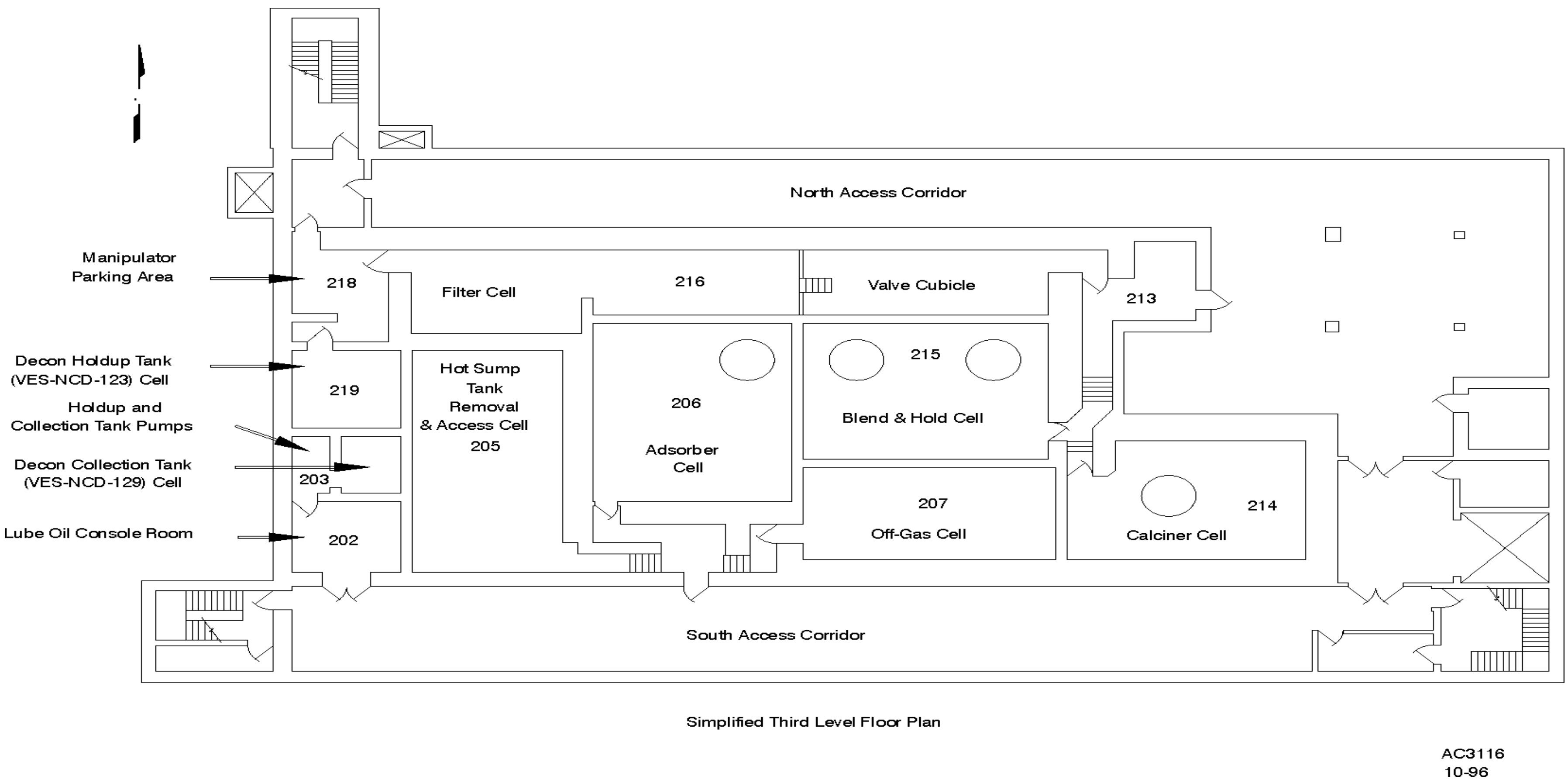


Exhibit D-4. Simplified floor plan for third level of CPP-659.

FDP Operations

FDP operations to recover uranium from irradiated spent nuclear fuel began in 1986. Due to a 1992 mission change, irradiated nuclear fuel is no longer processed in the FDP.

D-1. Containers

General building descriptions of CPP-659/-1659 and CPP-666 are located in Section B of this permit. Supporting drawings are found in the drawings package located in the appendices of this permit. The container storage areas of CPP-659 are located on three different levels within the building. See Exhibit B-6 for an isometric of CPP-659. CPP-1659 is annexed to the northwest corner of CPP-659, and consists of a single floor at ground level. Containers of hazardous and/or mixed waste and of debris, such as HEPA filters, may be stored in any room listed in Table D-1. This table gives a detailed room-by-room summary, including room name, dimensions, type of floor liner, and waste transfer pathway into these rooms.

The FDP cell container storage area is located at two elevations within the FDP cell: the -13'- 0" level and the 0'- 0" level. Spent FDP HEPA filters were stored in containers at the -13'- 0" level, awaiting treatment at the HFLS. See the photograph package for a picture of containers that have been previously stored at the -13'- 0" level. Spent HEPA filters and other mixed waste and/or mixed waste debris may be stored at both levels.

Mixed wastes will be stored in the FDPA container storage areas on the +28’ level – room 301, on the 0’0” level – rooms 114C, 115, and 180, on the -13’0” level – rooms B-4 and B-5, and on the -31’0” level – Room SB-8.

Treatment

The soak tanks are used to treat small to large and odd sized items, such as valves, blower components, piping, etc., by chemical extraction [as defined in Title 40 Code of Federal Regulations (CFR) Part 268.45]. Three soak tanks (TK-NCD-137, VES-NCD-138, and TK-NCD-139), all of which are portable, may be used in Rooms 308, 421, 422, and the steam spray booth.

Table D-1. CPP-659/-1659 areas for storage in containers.

Room #	Room Name	Room Dimensions	Floor Liner	Waste Transfer Pathway into Room/Cell
205	Hot Sump Tank Removal and Access Cell	19.8 x 39.3 ft	Drip pan(s) that are compatible with the liquid bearing waste being stored	Hatch entry from Room 428 via overhead crane down into 200 level, or hand carried into cell
206	Adsorber Cell	26.5 x 31.5 ft	Stainless steel Series 300	Hatch entry from Room 428 via overhead crane down into 200 level, or hand carried into cell
207	Off-Gas Cell	32.3 x 24 ft	Stainless steel Series 300	Hatch entry from Room 428 via overhead crane down into 200 level, or hand carried into cell
214	Calciner Cell	31.5 x 21 ft	Stainless steel Series 300	Hatch entry from Room 428 via overhead crane down into 200 level, or hand carried into cell
215	Blend & Hold Cell	33.3 x 16.3 ft	Stainless steel Series 300	Hatch entry from Room 428 via overhead crane down into 200 level, or hand carried into cell
216	Filter Cell/Valve Cubicle	30.5 x 22.5 ft	Stainless steel Series 300	Hatch entry from Room 428 via overhead crane or via in cell overhead crane from room 323, or hand carried into cell
218	PaR Parking Area	12.8 x 16.8 ft	Stainless steel Series 300	Overhead crane and/or in cell crane from Room 216, or hand carried into room
306	Equipment Decon Storage Room	15 x 21 ft	Stainless steel Series 300	Hatch entry from Room 418 via overhead crane or personnel door into the room, or hand carried via Room 306 entry
308	Remote Decon Cell	24 x 16 ft	Stainless steel Series 300	Hatch entry from Room 418 via overhead crane down into 300 level, or hand carried via Room 307 entry
309	Filter Handling Cell	20 x 16 ft	Stainless steel Series 300	Hatch entry via overhead crane from Room 418 and from Room 216 via in-cell crane, or hand carried via Room 307 entry
323	Crane Maintenance and Transfer Area	12.8 x 16.8 ft	Stainless steel Series 300	From Room 216 via in-cell crane or hatch entry from Room 428, or via in-cell crane from Room 309
326	Transfer Area	8.5 x 9.5 ft	Stainless steel Series 300	From Room 216 via in-cell crane, or via in-cell crane from Room 309
415	Low-Level Decontamination Room	40.8 x 38.5 ft	Stainless steel Series 300	From Room 417 through a sliding door or personnel door located on the west side of Room 415

Table D-1. CPP-659/-1659 areas for storage in containers (continued).

Room #	Room Name	Room Dimensions	Floor Liner	Waste Transfer Pathway into Room/Cell
416	Shielded Storage Room	10 x 12 ft	Stainless steel Series 300	From Room 417 via overhead crane or carried by personnel through the labyrinth-type entry
417	Vehicle Entry Way	26.4 x 61.9 ft	Stainless steel Series 300	From outside through a roll-up door on the south end, or from outside through personnel door at the west end of Room 417
418	Equipment Decontamination Room	54.3 x 73.3 ft	Stainless steel Series 300	From Room 417 through a roll-up door on the north end of Room 417, or through the north man door on north wall in Room 418
419	Transfer Room	25.8 x 17.1 ft	Drip pan(s) that are compatible with the liquid bearing waste being stored	From Room 418 through a roll-up door on the west end of Room 419, or from Room 428 via a roll-up door on the east end of Room 419
421	Decontamination Room	12.3 x 13.75 ft	Stainless steel Series 300	From Room 418 through personnel door into entry way 420 through personnel door into Room 421
422	Decontamination Room	12.3 x 13.75 ft	Stainless steel Series 300	From Room 418 through personnel door into entry way 420 through personnel door into Room 422
428	Crane Maintenance Area	168.2 x 67.2	Drip pan(s) that are compatible with the liquid bearing waste being stored	From Room 418 through transfer room (419) and through a roll-up door on the west end of Room 419 into Room 428, or from the North roll-up door of Room 428
CPP-1659	Contaminated Equipment Maintenance Area	50.8 x 35.8 ft	Stainless steel Series 300	From Room 418 through a roll-up door on the west end of Room 418, or through a man door on south side of CPP-1659

D-1a. Containers with Free Liquids

Mixed waste with free liquids will not be stored in the NWCF waste pile storage areas. Mixed waste with free liquids will be stored in the NWCF and FDP container storage areas. Any waste containing free liquids will have adequate secondary containment and will be inspected on a weekly basis looking for leaks, deterioration, etc.

Mixed waste debris will be treated with treatment solutions within the portable soak tanks (container treatment). Treatment solutions from the tanks will be drained to the holdup tank (VES-NCD-123) or the collection tank (VES-NCD-129) or other appropriate input point to the INTEC liquid waste management system as operationally feasible.

D-1a(1) Description of Containers [IDAPA 58.01.05.008; 40 CFR 264.171 and 264.172]

Soak tanks, all of which are portable, may be used in Rooms 308, 421, 422 and the steam spray booth (Room 418). Materials of the soak tanks are of Series 300 stainless steel. The three of the soak tanks were placed in service in 1982.

Soak tank VES-NCD-138 stands 7 ft high, has an internal diameter of 4 ft, and measures 5 ft from tangent to tangent. Its capacity is about 538 gal.

Soak Tank TK-NCD-139 is 60 x 35 x 14 in deep. Its capacity is approximately 127 gal.

Soak tank TK-NCD-137 is 48 x 36 x 36 in. deep. Its capacity is approximately 270 gal.

For all soak tanks, the capacities will not be reached during debris treatment, since the debris will displace some of the available volume.

Various containers may be used to store acceptable waste types within the designated storage areas of CPP-659/-1659 and the FDP cell and FDPA. If a container holding hazardous and/or mixed waste or debris is not in good condition, the waste will be transferred into a container that is in good condition. The containers will be compatible with the waste stored. Table D-2 contains examples of acceptable package types, including their construction materials, dimensions, usable volumes, and other specifications. Any non-standard waste packaging may also be received at the container storage units.

Any non-standard waste packaging requires INL facility manager approval prior to the non-standard waste package being stored at the container storage units.

D-1a(2) Container Management Practices [IDAPA 58.01.05.008; 40 CFR 264.173]

Except for the soak tanks, all containers will remain closed except for when waste is being added or removed. However, the tops of the soak tanks may be open during debris treatment. The tanks will be visually monitored periodically by operators/technicians during treatment to ensure that overflows or leaks do not occur.

Any of the portable soak tanks may be used for debris treatment in the decon cell, the two decon cubicles, or the steam spray booth. When being moved to a different location, the tanks will not contain mixed waste debris or liquids. If it is necessary to move a tank into or out of any of these processing areas, then cranes, hoists, and associated lifting accessories will be used to move the tank through removable hatches in the area's ceiling.

Mixed waste debris items to be treated will be transferred within appropriate packaging to the applicable soak tank. The debris will be placed into the soak tanks manually or by means of cranes, hoists, or other equipment. Debris placed in soak tanks will be soaked for a minimum of 15 minutes at a time. Based on radiological surveys and clean debris surface requirements, additional soaking time may be required.

After treating mixed waste debris, each tank will be completely emptied. The tank is then rinsed with water, followed by a chemical rinse as necessary to help clean the tank, then followed by another water rinse, and then completely drained again. The rinses help maintain the integrity of the tank and the hoses used to drain the tank. This cleaning cycle is completed prior to the tank being moved to another location for use or prior to the tank being stored away until it is needed for future use. The hoses are constructed of chemical-resistant materials that are compatible with the wastes being treated, for example, high-density polybutylene rubber, and are inspected prior to each use to determine wear and/or leakage.

To drain a soak tank after debris treatment in a decon cubicle, the decon cell, or the steam spray booth, the liquid waste will be allowed to flow out the bottom of the tank and (according to floor sloping) into the trench/drain, or a flex line may be utilized. In the decon cell and steam spray booth the liquid waste is routed to Tank VES-NCD-123 or -129 [see Section D-1a(3)(b)]. In the decon cubicles, the floor drains to tanks VES-NCD-123 and -129 have been permanently plugged as part of the CPP-659

Embedded Lines Upgrade Project. Therefore, liquid wastes in these cubicles will be collected in compatible containers and then transferred to the INTEC liquid waste management system at an appropriate input point.

Whenever a soak tank or other treatment container is used in the decon cell and any waste piles are present, a flex line connected directly between the tank/container drain and the cell drain will be used to avoid contact between treatment solutions and the waste piles.

Containers will be kept closed during storage, except when waste is being added or removed (such as sampling/verification activities). Containers will not be opened, handled, or stored in a manner that may cause them to rupture or to leak. Containers with free liquids will be separated/segregated from waste piles in those areas where waste pile storage and container storage are co-located. INTEC personnel follow established procedures designed to minimize the probability of waste container accidents.

Waste is generally received at INTEC by flatbed semitrailers or trucks from other areas on the INL. Waste movement between buildings within INTEC is generally by flatbed semitrailers, truck, or forklift.

Containers of hazardous and/or mixed waste and debris generated within the INTEC perimeter and stored in the container storage areas are subject to the marking/labeling requirements of INTEC, which are consistent with Resource Conservation and Recovery Act (RCRA) regulations. For remote handled waste, the outer container (e.g., ISC, shipping cask) that is accessible to personnel will be labeled in accordance with the INTEC and RCRA labeling requirements. However, the inner container may or may not be RCRA labeled.

Hazardous materials shipments, including hazardous waste shipments generated outside of the INTEC (or shipped from the INTEC), must comply with applicable U. S. Department of Energy (DOE), Department of Transportation (DOT), U. S. Environmental Protection Agency (EPA), and operating contractor requirements, as specified in the packaging and transportation procedures. Container loading and unloading activities are conducted according to established procedures for:

- Work Control
- Receipt, inspection, and documentation of waste
- Operations at CPP-659/-1659 and CPP-666

- Log keeping practices and checklists
- Radiation and contamination control
- Industrial and fire safety
- As low as reasonably achievable (ALARA) radiation protection program
- Truck waste container unloading
- General waste movement within INTEC.

INL personnel may include on the label any other information deemed helpful to waste storage and treatment operations. The information may indicate that the waste contains hazardous substances or that the waste requires special handling.

In container storage areas in Rooms 114C, 115, and 301 a 36-inch aisle space will be maintained on one side of the container to allow for access of emergency equipment. A 1-foot space will be maintained between containers and room structures to allow for visual inspections on all sides of the container(s). Container storage areas in Rooms B-4, B-5, and 180 are for the storage of a single drum so the container is visible for inspection and accessible for emergency equipment. Container storage within Room SB-8 is specific to a single loaded collection vessel, containing solid sodium, that has been disconnected from the distillation system. The shielded container is inspected, and does not impede personnel egress or access to emergency equipment. Additionally, containers within the FDPA will not be stacked.

D-1a(3) Secondary Containment System Design and Operation [IDAPA 58.01.05.012 and 58.01.05.008; 40 CFR 270.15(a)(1), 264.175(a), and 264.175(d)]

For details on the secondary containment system of the decon cell, see Drawing 134621; of the decon cubicles, see Drawing 132464; of the steam spray booth, see Drawing 384861. These drawings are located in the drawings package found in the appendices of this permit.

Secondary containment in the FDPA will be provided as necessary to contain any leaks or spills from the primary container. For example, if a storage container located in the FDPA is known to contain liquids, compatible secondary containment equal to 10% of the volume of containers or the volume of the largest container, whichever is greater, will be provided. The secondary containment devices may consist of ISCs (with drain plug in place), drip pans, etc. All containers will be elevated on a grid, etc., so that should a leak/spill occur, the primary container will not be in contact with any released material.

D-1a(3)(a) Requirement for the Base or Liner to Contain Liquids [IDAPA 58.01.05.008; 40 CFR 264.175(b)(1)]

The decon cell has approximately 380 ft^2 (24 x 16 ft) of floor space. The walls are of 3 ft thick, high-density concrete. The cell is entirely lined with 300 Series stainless steel, including the bottoms of the roof hatches. The floor is constructed of ½-in. stainless steel, which can be part of the secondary containment system for container treatment. The walls and hatch bottoms are constructed of 1/16-in. stainless steel.

Each of the two decon cubicles has about 192 ft^2 (12 x 16 ft) of floor space. The floors are lined with 300 Series stainless steel, which can be part of the secondary containment system for tank treatment. The walls are concrete with epoxy coating. Each cubicle has a 6-in. high stainless-steel wainscot.

The steam spray booth has about 589 ft^2 (31 x 19 ft) of floor space. The booth has a 3/16-in. stainless-steel primary containment floor and is placed on a 1/4-in. Series 300 stainless-steel (original) floor, that is part of the secondary containment system.

The floors and liners of the decon cell, decon cubicles, and steam spray booth have been certified free of cracks or gaps, as documented in leak test reports. The floors and liners in these areas are impervious to, and compatible with, wastes to be treated in the soak tanks.

The FDP Cell floor is reinforced concrete lined with stainless steel. Additionally, the cell floor provides secondary containment that is free of cracks or gaps and is impervious to liquids so as to contain any leaks or spills. CPP-666 Room SB-8 is reinforced concrete lined with a 12 gauge stainless steel secondary containment. The dimensions of the secondary containment are about 144 ft^2 (16 x 9 ft) of floor space with a 4-in. high stainless steel wainscot and a 0.75" threshold into the doorway.

D-1a(3)(b) Containment System Drainage [IDAPA 58.01.05.012 and 58.01.05.008; 40 CFR 270.15(a)(2) and 264.175(b)(2)]

The decon cell floor is sloped toward a trench located on the west side of the cell, running the length of the west wall from north to south. The trench is sloped southerly, toward a cell drain. The trench also has a spare drain. The drains are routed to VES-NCD-123 or -129, which can be a part of and the collection point of the secondary containment system, depending on if the drain valves are open or closed.

In each decon cubicle the floor is sloped toward a gutter along the north wall. Each gutter is sloped toward a drain that has been plugged as part of the CPP-659 Embedded Lines Upgrade Project. Therefore, any liquid wastes in these cubicles will be placed in compatible containers and then transferred to the INTEC liquid waste management system at an appropriate input point.

In the steam spray booth the floor is sloped toward a drain. The drain line is routed to VES-NCD-123, which is part of and a collection point of the secondary containment system.

The matrix in Appendix D-1 of this attachment defines the boundaries of primary and secondary containment for each treatment unit under various drain scenarios possible in CPP-659.

The FDP Cell and FDPA secondary containment is designed and operated so that any leaks or spills may be removed. Additionally, any containers with free liquids will be elevated to prevent contact with any accumulated liquid.

D-1a(3)(c) Containment System Capacity [IDAPA 58.01.05.012 and 58.01.05.008; 40 CFR 270.15(a)(3) and 264.175(b)(3)]

The containment system for each location in which tank treatment may occur has sufficient capacity to contain the liquid contents of the largest container (VES-NCD-138 ~520 gal). Except for the decon cubicles, any leak or spill would be collected on the floor of the area where the treatment is taking place and drained to VES-NCD-123 (~3800 gal) or VES-NCD-129 (~520 gal) where the leak would be detected. In the decon cubicles, the floor drains to VES-NCD-123 and -129 have been permanently plugged as part of the CPP-659 Embedded Lines Upgrade Project. Therefore, liquid wastes in these cubicles will be collected in compatible containers and then transferred to the INTEC liquid waste management system at an appropriate input point.

Tank monitoring is achieved via level instrumentation, data readings, and level alarms. High-level alarm set points for VES-NCD-123 and VES-NCD-129 allow sufficient reserve head capacity for unexpected additions and secondary containment needs. In addition, whenever permitted areas are used VES-NCD-123 and/or VES-NCD-129 fluid level instrumentation is inspected to ensure adequate head capacity exists for the treatment activity to take place.

The containment system capacity for containers that contain free liquids in the FDP Cell and FDPA will contain 10% of the volume of the containers or the volume of the largest container, whichever is greater.

D-1a(3)(d) Control of Run-on [IDAPA 58.01.05.012 and 58.01.05.008; 40 CFR 270.15(a)(4) and 264.175(b)(4)]

Treatment in the soak tanks will occur in rooms within a completely enclosed, self-supporting structure that is designed and constructed of manmade materials of sufficient strength and thickness to support themselves, the waste contents, and any personnel and heavy equipment that operate within the individual rooms. Building entry floors are elevated abovegrade by several feet. The CPP-659 Level 1 floors are at an elevation of about 4,917 ft, with the surrounding grade at elevations varying from 4,914 ft to below 4,913 ft near the bottom end of the south ramp up into the truck bay. This elevation difference of 3 to 4 ft prevents run-on from entering the building. Thus, the soak tank treatment areas in CPP-659 will not be susceptible to run-on.

The container storage areas in the FDP Cell and the FDP area are in rooms within a completely enclosed, self-supporting structure that is designed and constructed of manmade materials of sufficient strength and thickness to support themselves, the waste contents, and any personnel and heavy equipment that operate within the individual rooms. Building entry floors are elevated abovegrade.

D-1a(3)(e) Removal of Liquids from Containment System [IDAPA 58.01.05.012 and 58.01.05.008; 40 CFR 270.15(a)(5) and 264.175(b)(5)]

The valves on the drain line from the decon cell will be open during debris treatment in soak tanks in these areas. The steam spray booth has no drain valve. The drain line from the decon cell is routed to VES-NCD-123 or -129 (normally -123). The drain line from the steam spray booth is routed to -123. Thus, any liquid wastes spilled or leaked in these processing areas will be detected and collected in VES-NCD-123 or -129.

In the decon cubicles, the floor drains to tanks VES-NCD-123 and -129 have been permanently plugged as part of the CPP-659 Embedded Lines Upgrade Project. Therefore, liquid wastes in these cubicles will be collected in compatible containers and then transferred to the INTEC liquid waste management system at an appropriate input point.

See the following drawings (located in the drawings package of the appendices of this permit) for details on the trenches, drains, and piping used to remove liquids from the decon cell(134621), the decon cubicles (132464 and 133446), and the steam spray booth (384870).

In the FDP Cell and FDPA any spilled or leaked wastes will be removed from the secondary containment in a timely manner. Generally, liquid wastes will be absorbed with appropriate absorbent materials and subsequently dispositioned as determined by the hazardous waste determination. In the event of a sprinkler system activation in the FDPA where containers are stored in secondary containment pans, the firewater which collects in the secondary containment will be removed as part of the recovery actions following termination of emergency response. Characterization and disposition of the accumulated fire water will be completed by waste generator services personnel.

D-1b. Containers without Free Liquids

D-1b(1) Test for Free Liquids [IDAPA 58.01.05.012; 40 CFR 270.15(b)(1)]

Wastes to be stored in the container storage areas in the FDP cell and FDPA may or may not be verified to not contain free liquids prior to acceptance. This verification may be done in one of three ways: (1) visual examination of the waste, (2) testing by means of the paint filter liquids test (*SW-846* Method 9095), or (3) process knowledge of the waste.

The following process information assures no free liquids are in the FDP HEPA filters. The FDP dissolver off-gas system contained a series of fine mesh demisters, which trapped collected condensate from the vented air before it passed through the HEPA filters. The air was then subjected to a heating element, which raised the temperature to approximately 65°C and drove off the remaining moisture before it entered the filter. During the years that the FDP was operated, periodic inspections of the HEPA filter housing were conducted during filter change out to look for any signs of corrosion caused by moisture. These inspections have never shown evidence of corrosion. The cell off-gas system also has a series of demisters and a preheater.

The following process information assures no free liquids are associated with the NWCF HEPA filters. Liquid droplets of scrub solution and dissolved solids are removed in a de-entrainment separator and a mist eliminator. Process off-gas then passes through an adsorber superheater to ensure the off-gas temperature is above the dewpoint before the off-gas enters ruthenium absorbers. Prior to passing through the final HEPA filters, the off-gas passes through a mist collector and heater to prevent condensation of water vapor in the HEPA filter housings. Vessel off-gas (air from sparging, purging, and jet operations) joins the process off-gas just prior to the mist collector.

D-1b(2) Description of Containers [IDAPA 58.01.05.008; 40 CFR 264.171 and 264.172]

Various containers may be used to store acceptable waste types within the designated storage areas of CPP-659/-1659 and the FDP cell and FDPA. If a container holding hazardous and/or mixed waste or debris is not in good condition, the waste will be transferred into a container that is in good condition. The containers will be compatible with the waste stored. Table D-2 contains examples of acceptable package types, including their construction materials, dimensions, usable volumes, and other specifications.

D-1b(3) Container Management Practices [IDAPA 58.01.05.008; 40 CFR 264.173]

Containers will be kept closed during storage, except when waste is being added or removed (such as sampling/verification activities). Containers will not be opened, handled, or stored in a manner that may cause them to rupture or to leak. Containers of ignitable or reactive wastes will be segregated and protected from ignition sources and while it is being handled it will be protected from open flame. Containers with free liquids will be separated/segregated from waste piles in those areas where waste pile storage and container storage are co-located. INTEC personnel follow established procedures designed to minimize the probability of waste container accidents.

Waste is generally received at INTEC by flatbed semitrailers or trucks from other areas on the INL. Waste movement between buildings within INTEC is generally by flatbed semitrailers, truck, or forklift.

Containers of hazardous and/or mixed waste and debris generated within the INTEC perimeter and stored in the container storage areas are subject to the marking/labeling requirements of INTEC, which are consistent with Resource Conservation and Recovery Act (RCRA) regulations. For remote handled waste, the outer container (e.g., ISC, shipping cask) that is accessible to personnel will be labeled in accordance with the INTEC and RCRA labeling requirements. However, the inner container may or may not be RCRA labeled.

Hazardous materials shipments, including hazardous waste shipments generated outside of the INTEC (or shipped from the INTEC), must comply with applicable U. S. Department of Energy (DOE), Department of Transportation (DOT), U. S. Environmental Protection Agency (EPA), and operating contractor requirements, as specified in the packaging and transportation procedures. Container loading and unloading activities are conducted according to established procedures for:

- Work Control
- Receipt, inspection, and documentation of waste
- Operations at CPP-659/-1659 and CPP-666
- Log keeping practices and checklists
- Radiation and contamination control
- Industrial and fire safety
- As low as reasonably achievable (ALARA) radiation protection program
- Truck waste container unloading
- General waste movement within INTEC.

INL personnel may include on the label any other information deemed helpful to waste storage and treatment operations. The information may indicate that the waste contains hazardous substances or that the waste requires special handling.

Table D-2. Examples of acceptable waste containers for storage and transport.

Container	Size	Comments
Shipping transfer drum	17 Gallons	Stainless steel
Container	55 Gallons	With 80-mil poly liner. Equipped with lifting bail
Container	35 Gallons	Without liner. Equipped with lifting bail
Container	30 Gallons	Without liner
Container	8 Gallons	Without liner
Container	55 Gallons	Without liner
Container	15 Gallons	
Container	55 Gallons	Stainless steel
Container	30 Gallons	Stainless steel
Container	15 Gallons	Stainless steel

Table D-2. (Continued)

Container	Size	Comments
Composite drum	55 Gallons	Steel, with 40-mil liner
Fiber drum	55 Gallons	
Plywood box	Various	INL wooden waste boxes with 8-mil poly liner
Filter box	25.5 x 25.5 x 49.5 in.	Series 300 stainless steel
Metal bin	4 x 4 x 6 ft	INL B-25 metal waste bin
Metal bin	4 x 4 x 6 ft	INL Modified B-25 metal waste bin
Approved poly bags	Various	4 mil
TX4 box or Solid Waste Box (SWB)	Various	Mild steel welded construction with a gasketed bolted closure. Comes in various sizes from 69-92 in. long, 46-52 in. wide, and 36-57 in. high
Interim Storage Container (ISC)	6 ft 8 in x 6 ft 8 in x 3ft 7 in or ~4 ft x ~4 ft x ~8 ft	Lidded weatherproof concrete box with 4 vents and one drain that may be plugged. ISC may hold 4 drums (30- or 55-gallon). 55-Gallon drums may be overpacked in 83- or 85-gallon overpacks if floor grating is removed. ISCs are designed for storage of remote handled (RH) transuranic (TRU) waste drums or HFEF-5 cans.
Storage and Characterization Shielded Overpack Container	32 in x 32 in	Lidded, weatherproof drum for overpack/storage of RH TRU waste drums
Remote Waste Box	70 gallons	Open topped bin with lifting bail used for containment of debris waste and waste piles in approved storage locations in CPP-659
FDP Remote Wooden Waste Box	~2 ft 6 in x ~2 ft 6 in x ~2 ft 3 in	Lidded box with lifting bail used in FDP cell. Capable of holding up to two cell off gas filters
45 gallon drum	~21 in x ~32 in	Steel drum
HFEF-5/ANL-E Can Assembly	~12.75 in x ~73.5 in	
HFEF Liner	~16 in and ~24 in	
KNAACK/4830	~48 in x ~30 in x ~32 in (~22.25 cubic feet)	
SLSF	~22.5 in x ~8 ft 9 in or ~22.5 in x ~13 ft	11 gauge stainless steel
Sodium Collection Vessel	~15 in x 10.75 in OD	Small stainless steel vessel designed for transport of sodium from the distillation system
Sodium distillation bucket	~11.5 in nominal diameter in lengths up to 5 ft	Carbon steel solid can used for containing waste undergoing distillation or sealed with inert gas for storage in the FDP Cell prior to distillation

Operating personnel visually inspect the container storage areas in the FDP cell, the FDPA, and CPP-659/-1659 by direct visual examination, by looking through the shielding windows, via camera, or by other means as necessary. Inspections are recorded and maintained at the facility for at least three years. Details on inspections are provided in Section F of this permit.

CPP-659/-1659

Typically, waste may be brought into CPP-1659 through one of two doors, a telescoping door (14 x 20 ft) on the west end of Room 418 and a man door on the south end of CPP-1659.

Typically, waste may be brought into CPP-659 through one of two entrances: the vehicle entry way (417) or the unloading dock on the north side of the building into Room 428 (see Exhibit D-1). Waste is transferred to lower-level areas through hatches in Room 418 or 428. Overhead cranes are used to transfer the waste to the lower levels of CPP-659.

Waste enters from the north loading dock either through telescoping doors (14 ft x 16 ft) on the north end of Room 428 or through Room 427 via telescoping doors (10 x 14 ft) on the east, and into Room 428 through telescoping doors (8 x 10 ft) on the south of Room 427.

The vehicle entrance prevents direct exposure of the equipment decon room (418) and the low-level decon room (415) to the outside atmosphere. The outside door, an 18 ft x 20 ft-high roll-up door, opens to the south. The entrance area is 65 ft long and 26 ft wide, with a 4-ft walkway on either side. The floor is of Type 304 1/4-in. stainless steel and is recessed 4 in. below the walkways. The floor slopes from the outer door to prevent spills from moving outside of the controlled area. A 12 x 1-1/2 x 1-1/2 ft trench with a removable stainless-steel grating drains the area to the holdup tank, VES-NCD-123. See the photograph package for a picture of the vehicle entrance. See Exhibit D-1 for waste transfer pathways.

Once in the vehicle entrance, items can be transferred through 10-ft wide x 22-ft high sliding doors or a man door into the low-level decon room (415) or the vehicle can be moved into the truck bay in the equipment decon room (418) through an 18-ft wide x 20-ft high roll-up door. Normally, before either transfer is made, the outer door is closed to ensure proper ventilation flow. However, if the size of the load is unusually large, both inner and outer doors may be opened briefly to allow the load to enter the building. Once the load is transported completely within the building, the outer door will be closed. Waste transfers within Rooms 416 and 417 are made by hand, by forklift, or by a 3-ton monorail hoist. A hoist runs nearly the entire length of the vehicle entry area and into Room 415. See the photograph package found in the appendices of this permit for a picture of the truck bay.

Free air transfers of unshielded items with high radiation levels may be made from Room 418 directly into Room 308/309, Room 306, or Rooms 421 and 422 (decon rooms). An overhead bridge crane services Room 418, including the truck bay area, for loading and unloading large items. Another crane is used to lower waste into the 200 level, via Room 428. Smaller items may be hand carried or moved by stainless-steel carts or hand trucks.

Items from the NWCF Calciner Area may be transferred directly into the Decon Area as follows. Hazardous and/or mixed waste and debris from the calciner cells can be moved through the transfer room (419). The transfer room is a 16 x 26 ft area connecting Rooms 428 and 418. Telescoping doors, 12 ft wide x 14 ft high, on the east and west ends of Room 419 are used to control ventilation and potential airborne contamination. During transfer, only one door is open at a time. Bridge cranes in Rooms 428 and 418 do not overlap. Items to be moved are set on a transfer cart in the calciner area with the calciner overhead bridge crane and moved with an appropriate vehicle through Room 419 into Room 418. The decon area bridge crane may lower items into Room 308/309, or Room 306 through removable roof hatches. Forklifts may also be used to move wastes inside Room 418.

Access to Rooms 308 and 309 is through hatches using a crane or through a personnel access door on the second level (entry way 307). The concrete hatches can be removed by the decon area bridge crane and items lowered into the rooms. Personnel entry to Rooms 308/309 is prohibited when waste is present.

Within Room 418, containers may be hand carried through personnel doors or moved by forklift, pallet lifter, overhead crane, etc. Carts or hand trucks may be used to move hazardous and/or mixed waste and debris inside the facility. The forklift, pallet lifter, and overhead crane(s) will be maintained in accordance with current procedures for equipment maintenance and control.

Container storage will involve a stacking arrangement of no more than three containers high and no more than two containers wide in all container storage areas of CPP-659/-1659. An adequate aisle space will be maintained between containers. An adequate aisle space will be maintained between rows of containers. Exceptions to these rules are in Rooms 205, 216, 306, 308, and 309.

Room 205, the hot sump tank removal and access cell, may contain hazardous and/or mixed waste and debris, such as containerized HEPA filters. HEPA filters stored in Room 205 may be transferred to Room 309 for treatment in the HFLS. The storage configuration in Room 205 is protective of human health and the environment. The radiation level for the HEPA filters stored in Room 205 is >50 rem/hr on contact.

The wastes/waste containers will be segregated within the CPP-659/-1659 container storage areas according to the following criteria:

- Flammability/Ignitability. Flammable or ignitable wastes will be segregated from other wastes but will only be allowed to be stored in Rooms 308, 417, 418, 428, and CPP-1659 Contaminated Equipment Maintenance Area . Any flammable/ignitable waste will be segregated and protected from ignition sources and while it is being handled it will be protected from open flame.

- Compatibility. Wastes will be evaluated for compatibility according to waste compatibility groups and concentration of constituents. Incompatible wastes and materials will be kept separate. The compatibility requirements of 40 CFR 264, Appendix V, are the standard for determining compatibility (although these requirements do not take into account concentration of constituents).

FDP Cell and FDPA

Previously, the HEPA filters that were in storage in the FDP cell were segregated according to their generation source. Most of these filters were from the FDP dissolver off-gas system, located inside the main FDP cell. Others were from the FDP dissolver off-gas system, located outside the main FDP cell.

During the dissolution process, two stages of HEPA filtration were used for off-gas cleanup as part of the dissolver off-gas system. The first stage of HEPA filtration was located inside the main FDP cell. The in-cell dissolver off-gas system filter bank contained two filters (one operational and one backup) for each of the three dissolver trains.

The second stage of dissolver off-gas system HEPA filtration was located in the process off-gas room (206) outside the main FDP cell. The out-of-cell filter bank also contained two filters for each of the three dissolver trains.

In addition, the FDP cell off-gas system, which continues to operate, contains HEPA filters. The cell off-gas HEPA filter bank is located outside the main FDP cell at the -31'- 0" level.

In-cell filters and out-of-cell filters may be stored in 35- and 55-gal drums or in acceptable wooden waste boxes. The FDP process is no longer operated, so no more filters will be generated from the dissolver off-gas system.

The FDP Cell and FDPA receive waste and then store this waste in containers for subsequent treatment (e.g., sorting/ segregating/ sizing/repackaging/ absorbent addition/sodium deactivation/ sodium distillation) prior to final disposition of this waste. Waste handled within both the FDP cell and FDPA includes both incoming waste for processing and out-going waste post processing. The characteristics of these wastes are consistent between areas and meet the requirements of acceptability for the area, i.e. Part A requirements and Section C Waste Characteristics of this Permit.

Waste characterization, verification, and treatment are conducted in FDP to ensure that waste is appropriately packaged and acceptable for transport to the Waste Isolation Pilot Plant (WIPP) or other off-site facility for disposal. This effort consists of some or all of the following steps: removing multiple smaller waste cans from canisters, spreading the contents on the sorting tables to identify/remove/treat WIPP prohibited items (such as liquids, ignitables, reactives, etc.), and repackaging of the contents into standard-sized containers that can be processed through the necessary physical and radiological characterization equipment to demonstrate compliance with the waste acceptance criteria for WIPP or other off-site facility.

Because sodium reacts in water and air, controls are established to minimize the risk of fire. These controls include the use of the oxygen deficient environment in the ARS, use of inert gas when sizing special case components on the sizing table and having fire extinguishing media staged in the FDP Cell for use (Met-L-X, sodium carbonate, or other inert material). Thermal events are expected during treatment of ignitable and reactive waste. A controlled area around the treatment unit will be established during sizing, air treatment, and water treatment as part of the work control process. Thermal reactions within this controlled area that do not damage the operational integrity of the ARS and/or secondary containment are a planned event. Activities that may be performed to maintain a controlled thermal reaction are, stop activities that may be contributing to the thermal reaction, maximize the argon purge, monitor the event, and/or apply Met-L-X. Thermal reactions within these parameters are considered to be a part of the treatment process, and as such do not require activation of the contingency plan or reporting process.

If the thermal reaction results in a fire outside of the controlled area, or results in damaging the operational integrity of the ARS and/or secondary containment, then the RCRA Contingency Plan will be activated and a verbal notification will be provided to the DEQ, and a 15-day follow-up report will be completed.

In the FDP cell, containers may be stored on grating at the -13'- 0" level. Containers may also be stored on the 0'- 0" level. Exhibit D-5 depicts the two container storage areas at the -13'- 0" level of the FDP cell. Exhibit D-6 depicts the container storage areas and other miscellaneous treatment areas located at the 0'- 0" level of the FDP cell and FDPA. Exhibit D-7 depicts the container storage areas located at the -13’-0” level of the FDPA and Exhibit D-8 depicts the container storage area (Room 301) located at the +28’ level of the FDPA.

The requirement for adequate aisle space is for the movement of emergency equipment in the storage area. No emergency equipment (other than remotely used fire response chemicals) will be used in the FDP cell. Liquids that will be stored in the container storage areas will be kept to a minimum and the containers will not be exposed to any other factors that may induce deterioration. Therefore, aisle space will be kept at a minimum to allow for the maximum of area for waste storage. Inspections from the shielded windows will be adequate to detect deterioration. In container storage areas in Rooms 114C, 115, and 301 a 36-inch aisle space will be maintained on one side of the container to allow for access of emergency equipment. A 1-foot space will be maintained between containers and room structures to allow for visual inspections on all sides of the container(s). Container storage areas in Rooms B-4, B-5, and 180 are for the storage of a single drum so the container is visible for inspection and accessible for emergency equipment. Additionally, containers within the FDPA will not be stacked.

The wastes/waste containers will be segregated within the CPP-666 FDP Cell and FDPA container storage areas according to the following criteria:

- Flammability/Ignitability. Flammable or ignitable wastes will be segregated from other wastes and protected from ignition sources. While it is being handled in the FDP Cell, it will be protected from open flame.

- Compatibility. Wastes will be evaluated for compatibility according to waste compatibility groups and concentration of constituents. Incompatible wastes and materials will be kept separate. The compatibility requirements of 40 CFR 264,

Appendix V, are the standard for determining compatibility (although these requirements do not take into account concentration of constituents).

Wastes are transferred in and out of the FDP cell remotely by means of cranes and hoists. A 30-ton crane located at the +28'- 0" level can be used to transfer large equipment and waste in or out of the cell. Smaller equipment may be transferred by hand into the cell via the crane maintenance area. The waste loadout system is located adjacent to the southeast end of the FDP cell at the -13' elevation. The waste loadout system allows for the remote removal of equipment and contaminated wastes from the FDP cell via the waste transfer cart and the waste transfer box. The waste transfer box can accommodate either the 35 gallon or 55 gallon drums. The cell is equipped with a 7.5-ton bridge crane, which travels the full length of the FDP cell. This bridge also has an auxiliary hoist with a capacity of 5.0 tons. Also, an electromechanical in-cell manipulator, mounted on the trolley of the bridge crane, can be used to handle wastes. This manipulator has a wrist, shoulder, elbow, and telescoping tube. Also mounted on the trolley is a 2-ton auxiliary hoist. The cell is additionally equipped with 16 master slave manipulators at the 0'- 0" level and 12 at the -13'- 0" level. These are located along the perimeter walls of the cell and have a hand lift capacity of 100 lb.

Prior to movement of waste, the operators must check the preventative maintenance tag to ensure the equipment is usable. If the tag is out-of-date, preventative maintenance must be performed on the equipment prior to use or an engineering evaluation must be completed and approved by the facility manager prior to equipment use.

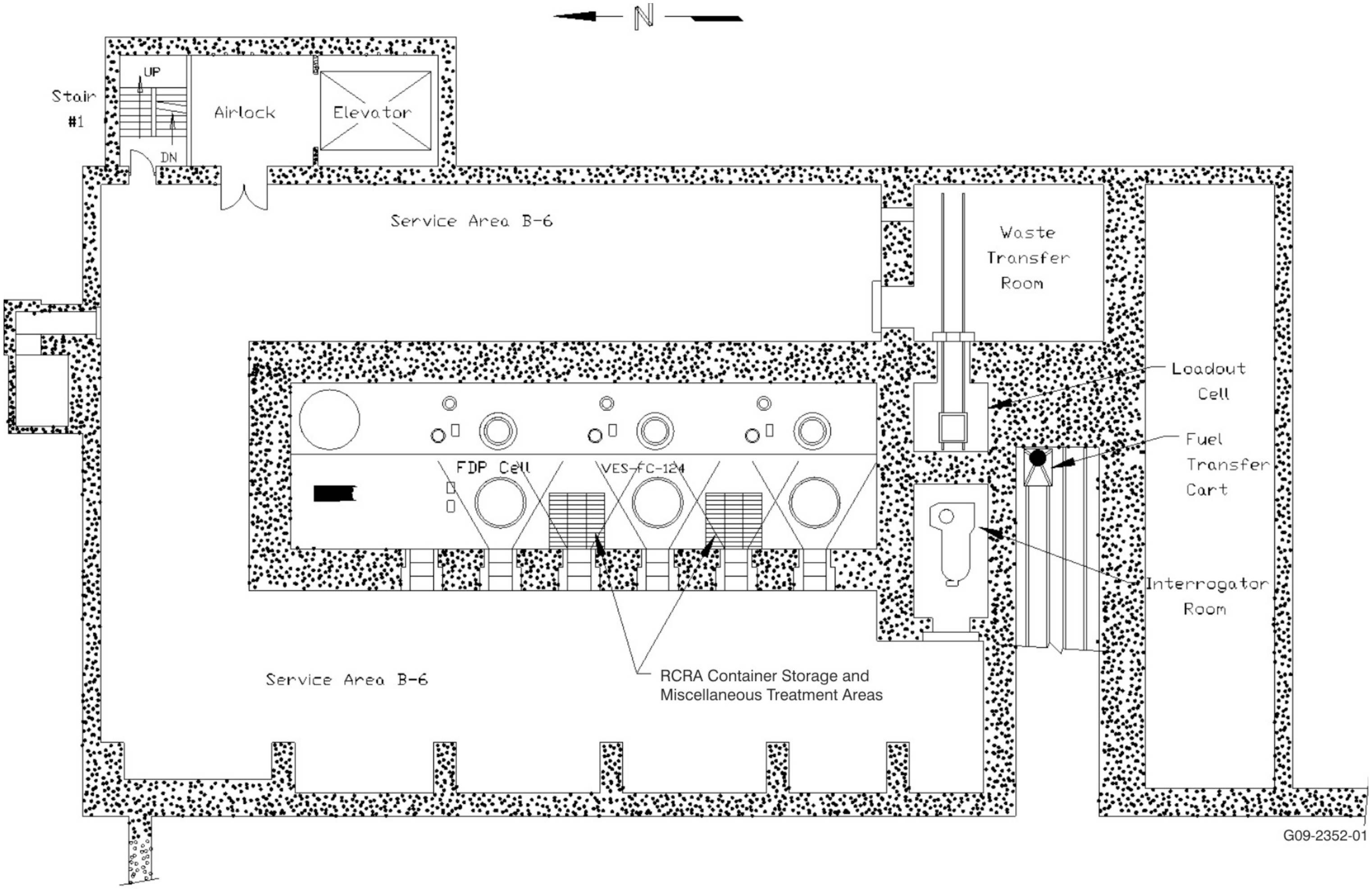


Exhibit D-5. Container storage areas and other miscellaneous treatment areas at the -13' -0" level of the FDP cell.

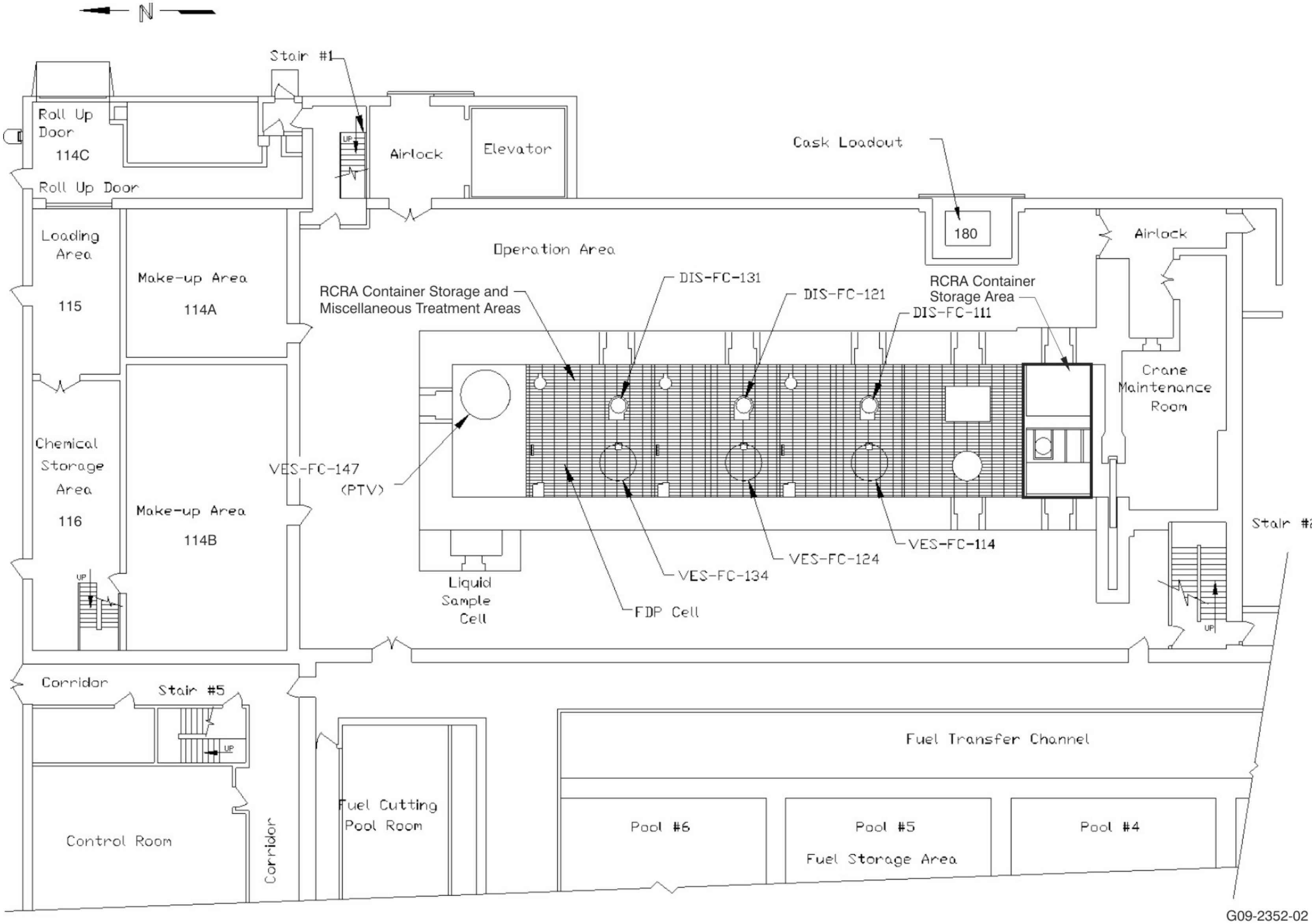


Exhibit D-6. Container storage and other miscellaneous treatment areas at the -0' -0" level of the FDP cell and FDPA.

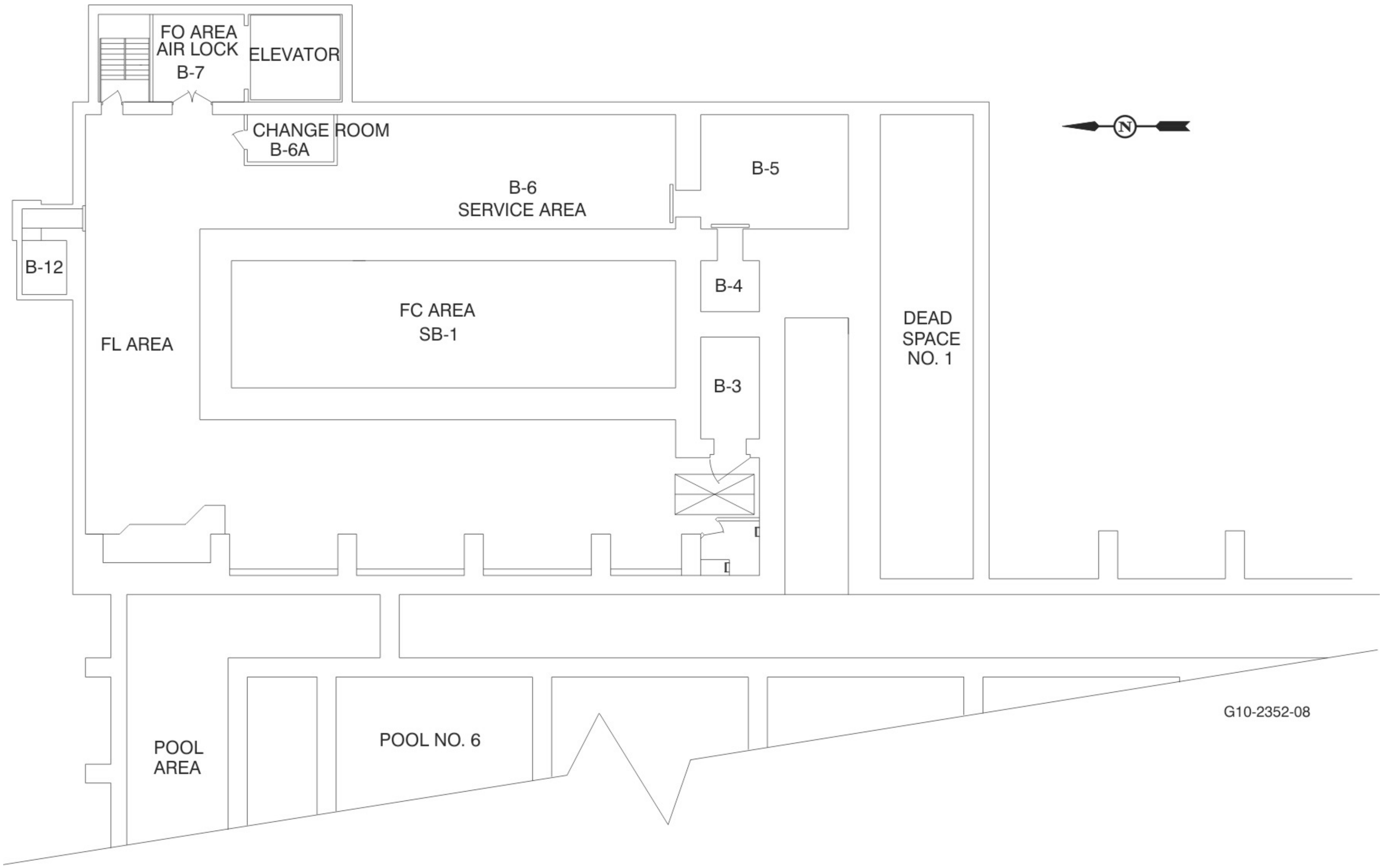


Exhibit D-7. Container storage areas at the -13' -0" of the FDPA

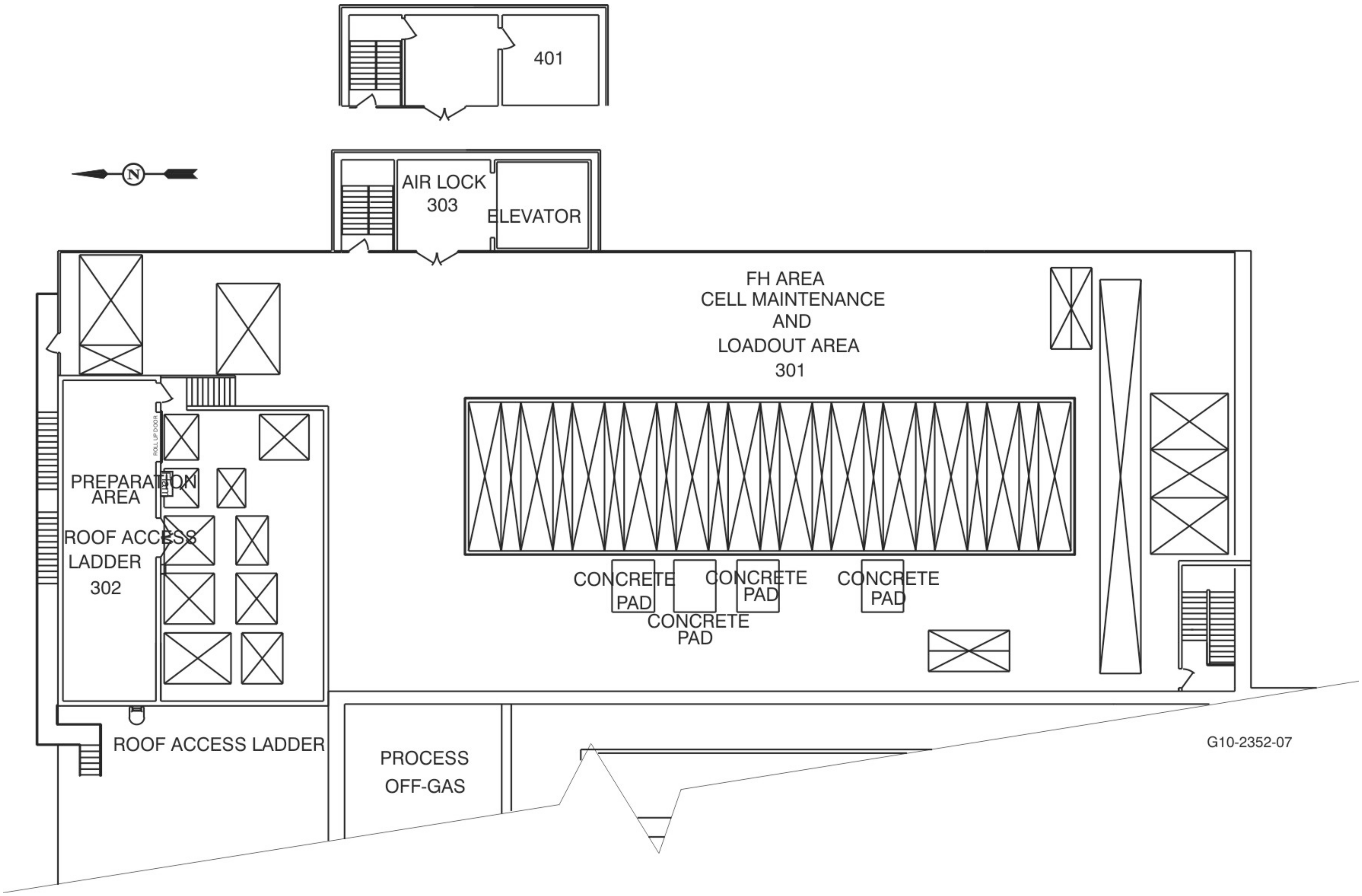


Exhibit D-8. Container storage area (Room 301) located at the +28' level of the FDPA

Waste containers are normally transferred into and out of the FDP cell through the waste loadout system. The waste transfer pathway is shown in Exhibit D-9. Waste containers are brought into the FDP cell by essentially reversing the removal steps described below. The waste containers are removed from the FDP cell in a shielded waste transfer box, which is stored in the waste transfer room at the -13'- 0" level of the FDP area. The waste transfer box holds one 55-gal drum at a time, or two 35-gal containers, or one wooden box. The waste containers are removed for transfer to the HFLS or another unit according to the following procedure.

First, the shielded waste transfer box is transferred, using the cable-driven waste transfer cart, from the waste transfer room to the waste loadout cell, also at the -13'- 0" level of the FDP area. The cart and shielded waste transfer box are positioned directly under the loadout cell hatch cover, which is located in the floor at the 0'- 0" level of the FDP cell, and the hatch is removed by the in-cell crane. Finally, the hazardous waste container is lowered by crane into the shielded waste transfer box below.

The waste transfer cart returns the shielded waste transfer box containing the waste container to the waste transfer room, where the shielded waste transfer box lid is placed on the box. The box is positioned directly in line with the waste transfer room hatch cover (PLUG-FA-941) and 15-ton overhead monorail hoist (HST-FA-901), and the box is lifted from the room with the hoist and placed on a flatbed truck for transport within the INTEC.

Drawing 142423 represents the shielded waste transfer box that is used to transport the containers within the FDP cell area. Drawing 142404 gives details on the hatch covers for the waste loadout cell and waste transfer room. These drawings are located in the drawings package which is found in the appendices of this permit.

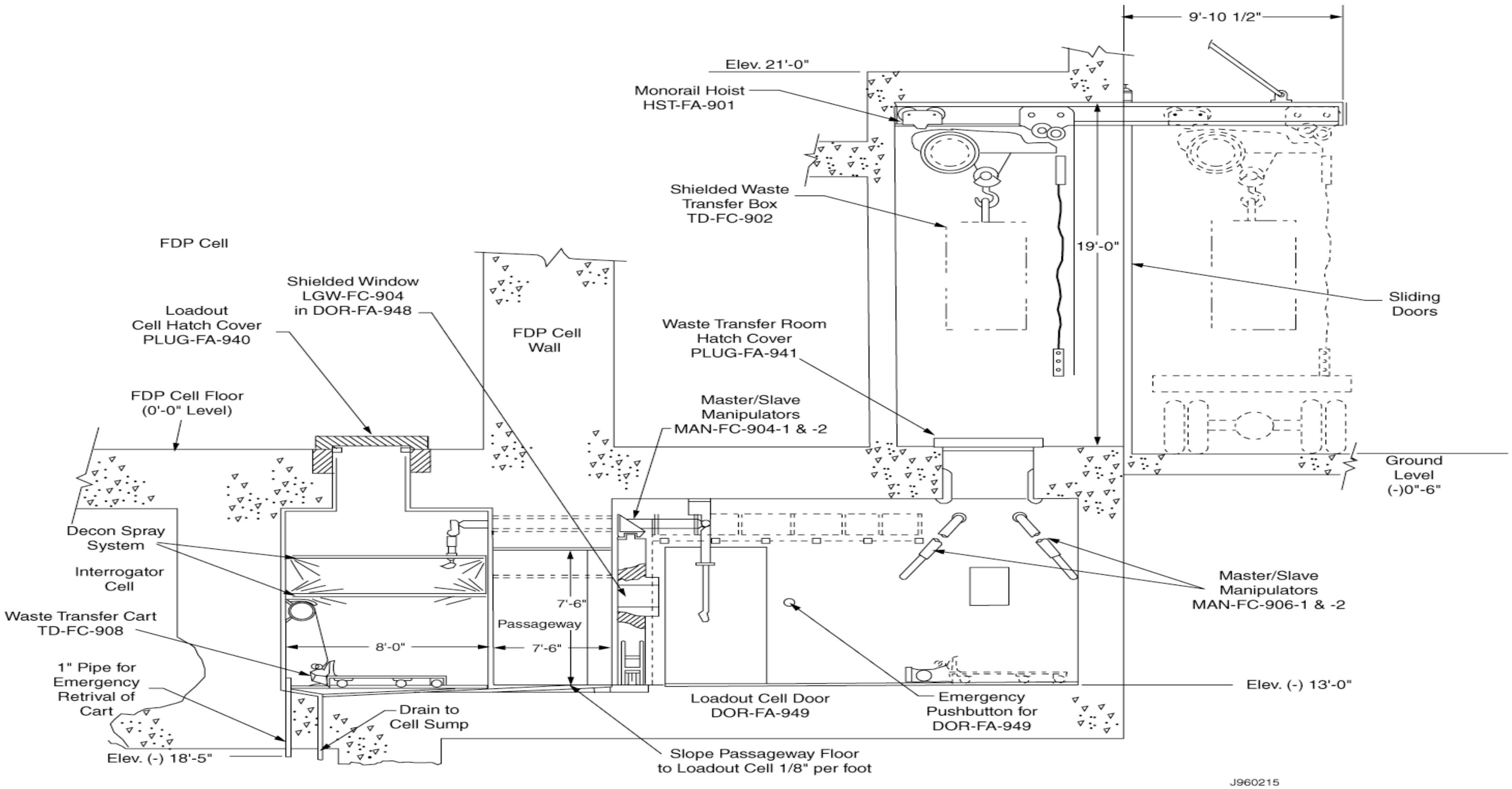


Exhibit D-9. FDP cell waste transfer pathway.

HFEF-5 Can insertion into the FDP Cell

Utilizing the Interim Storage Container (ISC) Trailer, an ISC is first placed into the NE transfer area within the FDPA. The ISC lid is removed and an HFEF-5 can is removed from the ISC using the 30 ton crane. The HFEF-5 can is then hoisted to the +28 ft. elevation and relocated to the Can-In insertion port of the 11W FDP cell hatch cover, (Exhibit D-10). The 28 ft. elevation transfer hatch is closed and the Shielded Transfer Port (STP) is opened and the HFEF-5 can is lowered into a receiving stand in the FDP cell. After the crane hook is removed from the cell, the STP cover is returned to the closed position.

Upon placement of the HFEF-5 can in the Receiving Silo (RS), the HFEF-5 can and the inner carbon steel can are both penetrated with a drill bit to vent each container. After venting holes are drilled, the can may be relocated to the 12 Can Rack Stand for Lag Storage. When the can is set to be processed, the HFEF can is placed in a vertical configuration in the clamshell cutter. The clamshell cutter operates much like a pipe cutter by rotating around the outer stainless steel can and a rolling cutting edge cuts into the can.

The HFEF-5 can outer stainless steel can (OSSC) is cut with a pneumatic can cutter that is similar to a pipe cutter. No sparks are generated during this process, however; due to the outer can flexing, a small portion of the outer can circumference may not fully be cut. Current processing shows roughly a 350 degree cut is obtained; necessitating another means to finalize the outer can cut. This is accomplished using a grinder with a thin cutting wheel. As the project progresses, other mechanical means may be employed to cut open the outer can.

After the outer can is cut and the top portion removed, the shield plug is removed from the top of the inner can. The inner can is then moved by overhead crane to a repackaging table and placed in a tilting device. At this point, the inner can lid is removed by removal of the bolts securing the lid. The lid is removed, the HFEF inner can is tilted to allow access to the waste, and the waste is drawn out to the table and sorted into two pre-staged 30-gallon drums.

Waste removed from the HFEF-5 cans will require sorting and segregation. General waste that meets WIPP Waste Acceptance Criteria (WAC) will be packaged in 30-gal drums within the FDP cell. The drums will be removed to the +28 ft. elevation via the Drum Out Transfer Port. As an alternative, drums may also be removed/transferred through the waste load out area. As the 30-gal waste drum is removed from the Drum Out Port, it is bagged out such that contaminants on the external surface of the drum are contained.

After the drum bag out process is completed, the drum is placed into a Shielded Overpack (SOP) located within the Drum Out tent located on the top of the FDP cell Drum Out hatch cover. The SOP will contain a preloaded contamination free 55-gal drum. Once the bagged 30-gal drum is positioned within the clean 55-gal drum, a drum lid is attached to the 55-gal drum and the drum is then relocated to a 55-gal drum ISC for relocation to the waste characterization facility. Other waste will be packaged for load-out through the existing FDP in-cell load out system or be removed via the Drum Out system. Packaging of CH waste is assumed to be in 55-gal drums. Packaging of CH waste will be in accordance with the appropriate waste disposal facility WAC. Packaged waste will be loaded out and shipped to the designated storage or disposal facility.

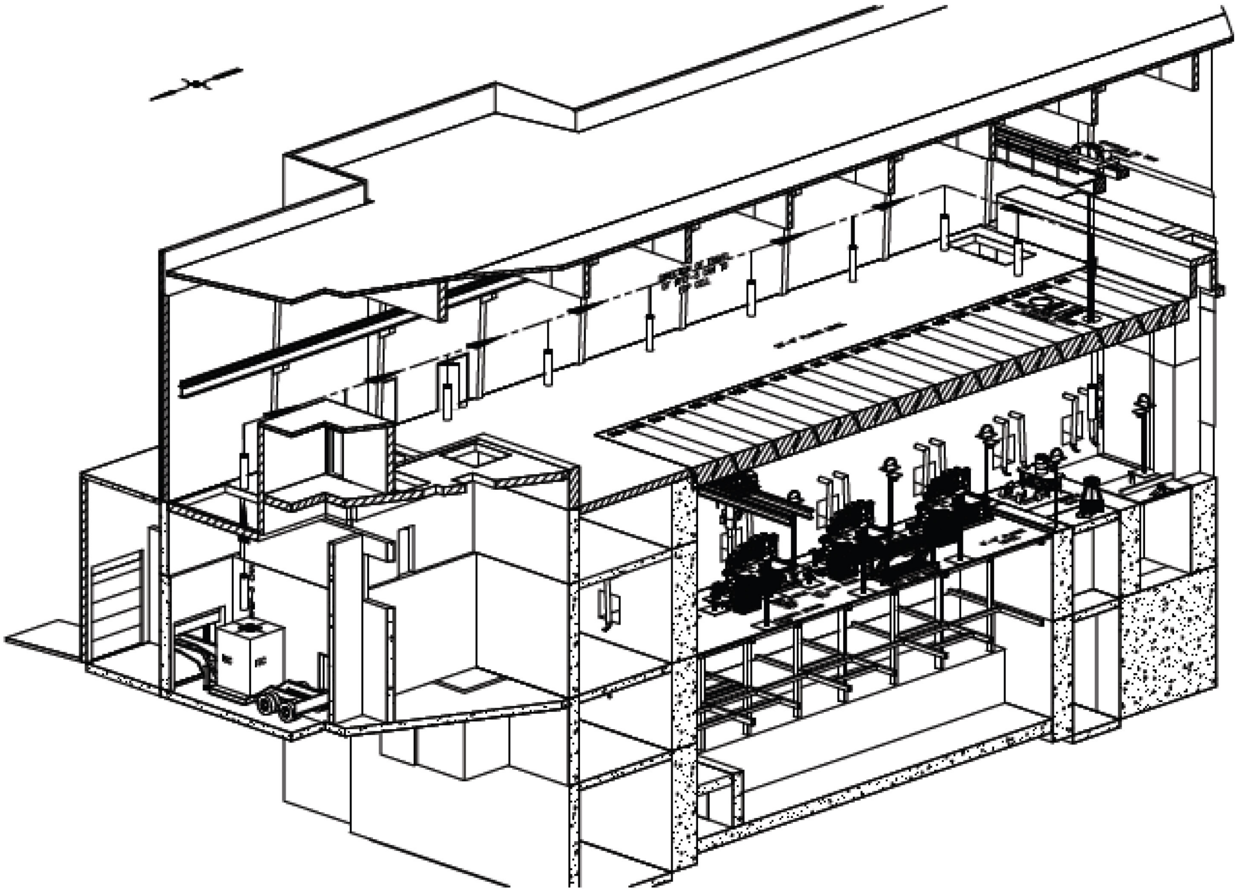


Exhibit D-10. Can-In Insertion Port of the 11W FDP Cell Hatch Cover.

The following equations illustrate the typical load/ft^2 for each type of waste container currently in storage in the FDP cell container storage area. The combined load of waste containers and treatment operations in the FDP cell, on the grating, will not exceed 500 lb/ft^2, which is the maximum loading for the grating in the FDP cell.

Load/ft^2 = Total Weight ÷ Area of Container

17-gal Stainless-Steel Container:

Area of container base = 2.13 ft^2

Total weight = 150 lb/container + 40 lb (filters, for example) = 190 lb

Load/ft^2 = 190 lb ÷ 2.13 ft^2 = 89.2 lb/ft^2.

35-gal Carbon Steel Drum:

Area of container base = 2.18 ft^2

Total weight = 20 lb/drum + 52 lb (filters, for example) = 72 lb

Load/ft^2 = 72 lb ÷ 2.18 ft^2 = 33 lb/ft^2.

55-gal Carbon Steel Drum:

Area of drum base = 3.14 ft^2

Total weight = 30 lb/drum + 170 lb (filters, for example) = 200 lb

Load/ft^2 = 200 lb ÷ 3.14 ft^2 = 63.7 lb/ft^2.

Wooden Box Container:

Area of box base = 9 ft^2

Total weight = 60 lb/box + 25 lb (filters, for example) = 85 lb

Load/ft^2 = 85 lb ÷ 9 ft^2 = 9.4 lb/ft^2.

HFEF-5 Can Assembly/Other Miscellaneous Treatment – Work Stations and Storage Rack

Not applicable for grating as the repackaging tables and storage rack are located over the support beams which provide sufficient structural support.

D-1b(4) Container Storage Area Drainage [IDAPA 58.01.05.012 and 58.01.05.008; 40 CFR 270.15(b)(2) and 264.175(c)]

CPP-659/-1659 Container Storage Areas

The containment systems in the CPP-659/-1659 container storage areas are designed and operated to collect and remove liquids resulting from leaks or spills from processes. Except for the decon cubicles, the floors are sloped toward drains that lead to area liquid accumulation tanks: the decon area holdup tank (VES-NCD-123), the decon area collection tank (VES-NCD-129), the fluoride hot sump tank (VES-NCC-119), and the non-fluoride hot sump tank (VES-NCC-122). Liquids accumulated in these tanks are used as feed for the NWCF processes, the Process Equipment Waste Evaporator (PEWE), or the Tank Farm Facility (TFF). In the decon cubicles, the floor drains to tanks VES-NCD-123 and -129 have been permanently plugged as part of the CPP-659 Embedded Lines Upgrade Project. Therefore, liquid wastes in these cubicles will be collected in compatible containers and then transferred to the INTEC liquid waste management system at an appropriate location.

VES-NCD-123 and VES-NCD-129 are described later in this permit. VES-NCC-119 and VES-NCC-122 are permitted as multipurpose tanks under the Volume 14 INTEC Liquid Waste Management System (ILWMS) HWMA/RCRA Permit and are therefore not part of this permit. These tanks are part of the secondary containment for the waste tanks for the Evaporator Tank System (ETS), overflow protection for equipment associated with the ETS, and a draining point for the sample station when sampling other tanks in the building.

FDP Cell

The containment system in the FDP cell was designed and operated to drain and remove liquids resulting from leaks or spills from process and cell equipment. The floor at the (-)27' 0" level is constructed of 3-ft thick concrete lined with 300 Series stainless steel. The floor slopes toward the northwest corner of the cell, where liquids would be collected in a sump with an internal diameter of 5 in. and a depth of 18 in. Exhibits D-11 and D-12 illustrate the (-)27' 0" level of the FDP cell. The tanks in the cell, formerly used for processing spent nuclear fuel, have been emptied of any process residues and have been verified to not contain hazardous constituents. Disposition of these tanks/process equipment was addressed under the Voluntary Consent Order (VCO) Project.

General information on the floodplain determination and prevention of run-on is located in Section B-3(b) of Volume 3 of the INL RCRA Part B Permit Application. Run-on to CPP-659 and the FDP Cell/FDP Area is specifically addressed in Attachment 6 of this permit.

D-2. Tank Systems

The tank systems addressed in this permit are the HFLS, the sinks, the ultrasonic cleaner, the holdup and collection tanks, the FDP cell slab tank (VES-FC-184), and the FDP sodium distillation system (VES-FC-101 distillation vessel and VES-FC-85A collection vessel).

Debris items may be sized in the debris treatment areas in order to fit the items into treatment units. Examples of sizing are cutting of pipe or manual disassembly of valves.

Sizing will not reduce the size of debris to less than 60 mm. Sizing will not be used to circumvent the debris treatment standard for evaluation of a clean surface.

For information applicable to all these units regarding the vent scrubbing system and heating, ventilation, and air conditioning systems, see Appendix D-2 of this attachment; for information on the makeup of treatment solutions, see Appendix D-3 of this attachment.

D-2a. Existing Tank Systems

Existing tank systems (as defined at 40 CFR 260.10) addressed in this permit are the sinks, ultrasonic cleaner, the holdup and collection tanks, and the FDP cell slab tank (VES-FC-184).

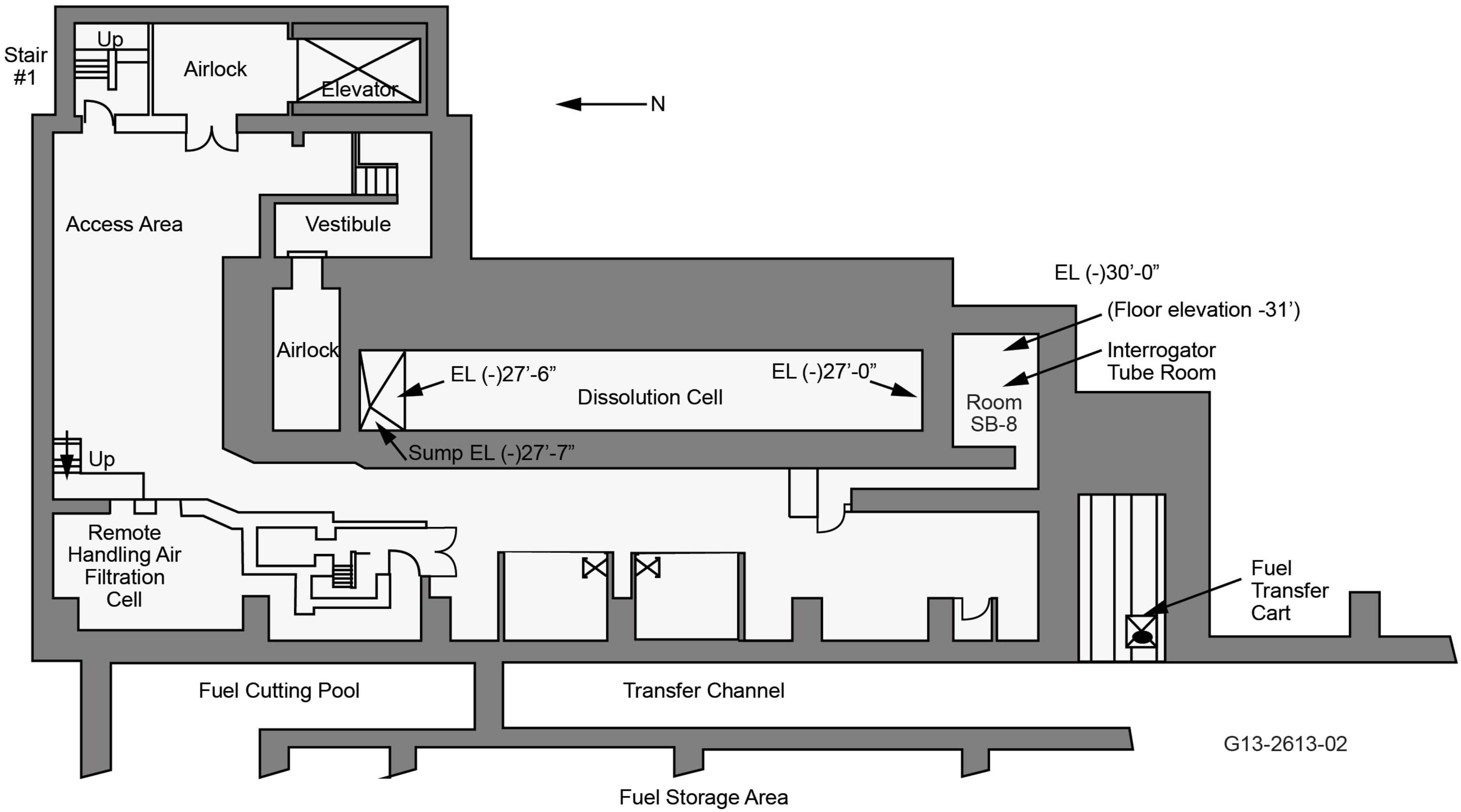


Exhibit D-11. FDP cell floor (-27' 0" elevation).

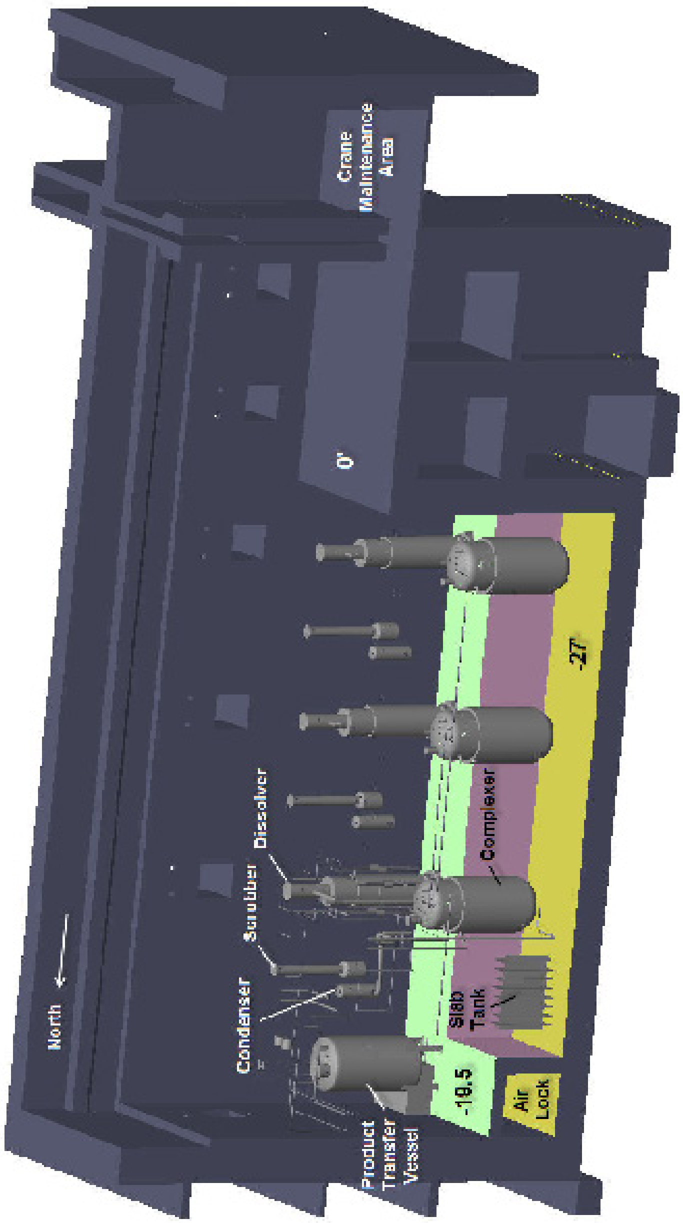


Exhibit D-12. Cutaway view of the FDP Cell showing the location of the slab tank (Grating at the 0' and -13' levels is not shown)

Sinks

Small Sink

The small sink (SH-NCD-934), located in the low-level decon room (415), is a stainless-steel sink set in a slightly recessed counter within a hood. Utilities are available within the hood. The sink drains to the decon holdup tank (VES-NCD-123) through a 1 ½-in. drain line (PLAD-2640). On the left inner wall are stainless-steel lab-type fittings, two for chemical solutions (one from each makeup tank), one for water/steam, and one for plant air. A valve for each extends through the front left side of the hood.

The small sink is used for hands-on treatment of small items such as piping and small valves. Treatment solutions can be fed to the sink through the permanent fittings, via either chemical makeup tank VES-NCD-127, or VES-NCD-128. Smaller amounts of treatment solutions can be made up outside the tank and placed into the sink, or solutions can be made up in the sink itself. Items can be scrubbed, left to soak, or sparged with air or steam. Air emissions are controlled by a hood that vents to the vent air scrubber system.

Large Sink

The large sink (SH-NCD-933), also located in the low-level decon room (415), is similar to the small sink, except for size and location of utilities. The large sink is long enough for pipe sections, large valves, or other long items, or a combination. The unit contains two sash windows, divided by a 5 ½-in. wide support in the center.

Steam and air are fed directly into the bottom of the tank in two ½-in. sparge pipes, 8 ft long. The air sparge pipe runs along the front of the sink bottom; the steam sparge line runs along the back of the sink bottom. The two chemical solution outlets are located on the right side near the bottom, as is the inlet for water. Items can be scrubbed, left to soak, or heated with a steam sparge line. The sink drains to VES-NCD-123 through 1 ½"-PLAD-2641. Air emissions are controlled by a hood that vents to the vent air scrubber system.

Small stainless-steel buckets/containers (≤10 gal) may be used within either the small or the large sink for treatment of smaller debris items.

Ultrasonic Cleaner

Ultrasonic cleaning involves the use of high-frequency mechanical vibrations in a liquid to produce a strong cleaning action at solid/liquid interfaces. A device called a transducer is used to convert electrical energy to mechanical vibration at the transducer's surface. These vibrations cause the liquid to circulate, and the alternating pressure waves produce bubbles. This process is known as cavitation.

These bubbles rapidly implode, producing a concentrated shock wave with a vigorous scrubbing action. This vigorous agitation enhances cleaning above that obtained by other mechanical liquid agitation methods.

The tank of ultrasonic cleaner UC-NCD-921 is made of heavy-duty stainless steel and fitted with an acoustic lid. UC-NCD-921 is located in the low-level decon room (415). Items are generally cleaned in a basket (with appropriate size mesh) to allow the cavitation to work on all sides of the item. Items can be directly cleaned in the stainless-steel tank if detergents are used; if caustic or acidic solutions are needed, a polypropylene inner tank can be lowered into the tank and bolted around the top edge. Solutions in the inner tank are heated through the polypropylene wall by hot water in the outer tank. The outer tank solution is heated only when it is recirculating. Because the recirculation pump will shut off before the inner tank's solution is as hot as the water in the outer tank, the water must be recirculated several times to raise the inner tank's temperature. A thermometer is used to measure temperature in the inner tank.

The outer tank can be fed water directly. Treatment solutions (from either makeup tank) are fed to the outer or inner tank through flexible hoses that can be connected to quick-release-type fittings on the left of the cleaner hood. A water connection is also available to feed water to the inner tank through a fill hose. The inner and outer tanks must be filled simultaneously, to avoid splitting or cracking of the inner tank. When the inner tank is used, gas bubbles forming under the bottom of the tank during the de-gassing heating process must be removed by pressing the bottom of the flexible tank with a suitable object such as the end of one of the fill hoses.

Cavitation must be performed with the tank filled to just below the overflow outlet, and the level in the inner and outer tanks must be within 6 in. of each other to protect the polypropylene tank from splitting. The power input to the transducers can be varied to adjust for maximum cleaning efficiency under a variety of conditions. The generator cabinet, located in the supply air plenum room, contains generators and a transformer. Most small materials, except wood, can be treated in the ultrasonic cleaner.

A hood assembly over the cleaner is connected to the vent air scrubber system to wash the air stream (when using nitric acid) before it is discharged to the calciner exhaust tunnel. The ultrasonic cleaner drains to VES-NCD-123 through 1 ½"-PLAD-2643.

Holdup and Collection Tanks

Liquid treatment solutions from the treatment systems addressed in this permit are discharged to and stored in the decon area holdup tank (VES-NCD-123) or the decon area collection tank (VES-NCD-129). Occasionally, solutions will be pH adjusted in these tanks to prepare the solutions for processing destinations. The holdup and collection tanks will be (and are currently) used not only for the collection of liquid hazardous waste from RCRA treatment activities, but also for collection of liquid waste solutions generated during decontamination of radioactive, nonhazardous items.

VES-NCD-123 is a horizontal, cylindrical tank on two saddle supports. It is located in the decon holdup tank cell, Room 219. VES-NCD-129 is a vertical, cylindrical tank mounted on four support legs. It is located in the decon collection tank and pump cell, Room 203. Both tanks are located on the third level in the middle of CPP-659. Associated tank equipment and piping are also located at this level. Ancillary equipment for sampling the liquid in these tanks is located on the second level in Room 320, the liquid sampling cell.

FDP Cell Slab Tank

The FDP cell slab tank (VES-FC-184) is located in building CPP-666. The tank was originally used as part of the FDP process to serve as a critically safe holding and sampling tank for liquids that were jetted from the FDP cell sump. The tank is a vertical, rectangular tank located on the -27’ level of the FDP Cell. The tank is constructed of Type 304L stainless steel. Wastes to be stored in the slab tank will consist of liquids generated during operational activities that collect in the FDP cell sump.

D-2a(1) Assessment of Existing Tank System’s Integrity [IDAPA 58.01.05.008 and 58.01.05.012; 40 CFR 264.191 and 270.16(a)]

Written assessments, reviewed and certified by an independent, qualified, registered professional engineer (PE), have been done on the structural integrity and suitability of each existing tank system (the sinks, ultrasonic cleaner, the holdup and collection tanks and the FDP cell slab tank) for handling waste. These written assessments are found in the appendices of this permit.

D-2a(2) External Corrosion Protection [IDAPA 58.01.05.008 and 58.01.05.012; 40 CFR 264.191(b)(3) and 270.16(e)]

Corrosion protection for the existing tank systems addressed in this permit is provided by materials of construction and corrosion allowances. Materials of construction were selected based on suitability for process service and compatibility with decontamination solutions. The appendices of this permit contain details on the physical properties and chemical resistance data for 300 Series stainless steel.

Sinks

Both the small and large sinks have Series 300 stainless-steel exterior faces on the units, Series 300 stainless-steel interiors, and 16-gauge stainless-steel sinks. The cabinets of both have an acid-resistant, baked enamel finish and stainless-steel bottom, and their treatment solution valves and hose connections are also constructed of stainless steel.

Ultrasonic Cleaner

The tank and cabinet of the UC-NCD-921 ultrasonic cleaner is of Series 300 stainless steel. The unit's hood is also constructed of stainless steel. Also, the unit has a removable polypropylene tank insert for use with caustic solutions.

Holdup and Collection Tanks

The holdup tank (VES-NCD-123) and the collection tank (VES-NCD-129) are both constructed of Series 300 stainless steel.

FDP Cell Slab Tank

The FDP cell slab tank (VES-FC-184) is constructed of Type 304L stainless steel.

D-2b. New Tank Systems

Two new tank systems (as defined at 40 CFR 260.10) are addressed in this permit: the HFLS, and the FDP sodium distillation system.

HFLS Tank System

The HFLS, located in the CPP-659 filter handling cell (309), is designed to treat spent HEPA filters by leaching the hazardous waste contaminants from the filters using a nitric acid solution. The time, temperature limits, and chemical concentrations for the HFLS were determined by pilot plant tests and optimization studies.

Once a filter has been brought into the filter handling cell, it is placed into a filter basket on the filter handling table. Then the filter medium is inspected for any damage or degradation. The filter medium may be breached, as directed by supervision, if the filter was taken out of service because of restricted air flow. If the filter media shows signs of degradation or damage, so as to allow the penetration of leaching liquid, it need not be breached. Breaching is accomplished by raising and lowering the filter breaching tool several times so that the filter medium is punctured across the face of the filter. The basket and filter are transferred into the leaching tank, VES-NCD-141 (see Drawing 444389 located in the drawings package found in the appendices of this permit). The leaching tank lid is placed on top of the leaching tank, and the leaching cycles begin. These operations are all performed with the use of the above-mentioned remote handling equipment.

A minimum of three leaching cycles and two rinse water cycles are performed on each filter. The leaching tank is filled with nitric acid solution from the decontamination makeup tank(s) until the filter is completely submerged. This level is indicated on the control panel by a signal from the appropriate point level indicator, and can be visually monitored also. The acid temperature is then raised by using a steam sparge and measuring the temperature with a thermocouple in the tank. The temperature is displayed on the control panel in the operating corridor. When the required temperature is reached, an air sparge is applied in order to agitate the leaching solution. The filter is leached for a minimum of 15 minutes, and the leaching solution is drained into a floor drain[1] through a drain basket. The drain basket is designed to prevent clogging of the drain by trapping any loose filter media that may have separated from the filter and filter basket during leaching.

Following the required leaching cycles, the rinse water cycles are applied. The rinse water cycles are equivalent to the leaching cycles, except that water, instead of acid, is used and the water is not heated.

[1] All tank components which provide drainage of leaching and/or rinsing solutions are piped directly to the floor drain via the drain basket. The floor drain is doubly contained.

After the final rinse water cycle, the filter basket is removed from the leaching tank and placed back onto the filter handling table. The filter handling table is designed with a grated top to allow the filters to drip dry and a drip pan underneath it to contain any drips during this transfer and dripping stage. The drip pan is sloped to drain into the floor drain via a drain basket.

After drip drying, the filter basket is transferred into the drying tank, VES-NCD-142 (see Drawing 444389, located in the drawings package found in the appendices of this permit). The drying tank is designed to receive heated air at the bottom of the tank, sending it through the filter and out a vent at the top of the tank as described in Section D-2(d).

When the filter has been dried, the filter basket is removed from the drying tank. The leached filter and basket are removed from the filter handling cell and prepared for packaging for disposal. (For a picture of the HFLS equipment, see the photograph package located in the appendices of this permit.)

HEPA filters to be treated can also be stored in Room 309 during treatment process shutdowns or during maintenance to the remote handling equipment.

The HFLS may also be used for radiological decontamination (pre-treament) of HEPA filters. These operations are performed as detailed above except that the number and length of the leaching and rinsing cycles may be reduced or shortened depending upon the decontamination requirements. Drying of the filters may or may not be performed, or steam may be used to pre-dry the filters by driving off most of the residual liquid.

Sodium Distillation System

The sodium distillation system (SDS) is a vacuum distillation system, maintained/operated under an inert atmosphere, that consists of a distillation vessel (VES-FC-101, see Drawing 571700) with a knife gate valve and furnace, a condenser heated and cooled by a thermal fluid system, a collection vessel (VES-FC-85A, see Drawing 786868), a filter (cold trap), and a vacuum pump. The sodium distillation process separates sodium contamination from the waste, and allows both exiting waste streams a disposition pathway.

Sodium contaminated waste to be treated in the sodium distillation system will be prepared for distillation in the ARS in the FDP cell. This consists primarily of verifying an open pathway for vapor extraction is present, removing visible combustible/incompatible materials and placing the waste into a bucket that is used to lower the waste into the distillation vessel, hold the waste during the distillation process, and raise the waste after distillation, into the FDP cell for packaging. The bucket, under an inert atmosphere may be stored in the FDP Cell pending distillation treatment.

The SDS was installed in Room SB-8 on the -31' level of CPP-666. The existing 22-inch diameter, 20' long, ¼-inch thick stainless steel delayed neutron interrogator tube which extends from the FDP cell 0' 0" level down into Room SB-8 will be used as a pass-through to lower the bucket of waste to the sodium distillation vessel. The top of the sodium distillation vessel is located within a contamination control enclosure to prevent the spread of radioactive contamination in the SB-8 room. Once the waste has been secured in the sodium distillation vessel, the lifting device used to lower the waste into the vessel from the FDP cell will be detached and removed from the vessel. The vessel is then sealed automatically using the electrically actuated knife gate valve on the top of the vessel, the vacuum pump is started, and a vacuum is drawn on the system. After a vacuum of 10 Torr is achieved, the furnace is turned on and heat is applied to the distillation vessel until the boiling point of sodium (~714 °F) is obtained and the sodium is boiled off the waste.

The sodium vapor will be drawn from the distillation vessel under vacuum, and then enters the condenser. The condenser is operated at a temperature below the boiling point of sodium and above its melting point (~208 °F). The condenser is heated and cooled by a vendor-supplied skid-mounted thermal fluid system using silicone fluid as the heat transfer medium. Silicone oil is non-reactive with sodium, and is non-toxic.

The sodium vapor condenses in the condenser and the liquid sodium flows into the collection vessel. The collection vessel contains the sodium under an inert atmosphere. The collection vessel is designed for removal from the system to allow for the storage of sodium prior to treatment/disposition. Another collection vessel is then connected to the distillation system for continued operation.

The remaining vapor stream continues to the filter, which is operated at room temperature, where any remaining condensable vapors are filtered out and collected. The filter elements are replaceable, and will be changed as necessary to support distillation operations.

The gas stream then travels through the vacuum pump and is discharged into the contamination control enclosure at the top of the distillation vessel. The enclosure vents the gas stream into the FDP cell where it is handled with the cell/building ventilation system.

Upon completion of the distillation cycle, the vessel is depressurized (venting into the FDP cell). The lifting device within the pass-through tube is lowered from the FDP Cell and reattached to the bucket, and then raised to the FDP cell.

The control station for the sodium distillation process will be located on the 0’ 0” level outside the FDP cell. Cameras will be used for monitoring the process equipment and for inspections if radiological concerns prevent entry to Room SB-8.

D-2b(1) Assessment of New Tank System’s Integrity [IDAPA 58.01.05.008 and 58.01.05.012; 40 CFR 264.192 and 270.16(a)]

An assessment of the HFLS tank system has been completed by a qualified, registered PE to determine that the foundation, structural support, seams, connections, and pressure controls for the tanks are adequately designed. The tank assessment is included in the appendices of this permit. Table D-3 summarizes the design parameters of these tanks.

Table D-3. NWCF HFLS tank design parameters.

Parameter	VES-NCD-141	VES-NCD-142
Tank Design Pressure	0.5 psig internal 0.5 psig external	0.5 psig internal 0.5 psig external
Tank Operating Pressure	Atmospheric	Atmospheric
Tank Design Temperature	250ºF	500ºF
Seismic	UBC Zone IIB	UBC Zone IIB
Location	Indoor	Indoor

The HFLS tanks are designed in accordance with the following codes and standards:

American National Standards Institute (ANSI)

ANSI B16.5	Steel Pipe Flanges and Flanged Fittings
ANSI B16.9	Wrought Steel Buttwelding Fittings
ANSI B36.19	Stainless-Steel Pipe
ANSI B31.3	Chemical Plant and Petroleum Refinery Piping

American Society of Mechanical Engineers (ASME)

ASME	Boiler and Pressure Vessel Code Section II, Material Specifications
ASME	Boiler and Pressure Vessel Cold Section V, Nondestructive Examination
ASME	Boiler and Pressure Vessel Code Section VIII, Div. 1, Pressure Vessels, Appendix 13, Vessels of Noncircular Cross Section
ASME	Boiler and Pressure Vessel Code Section IX Welding and Brazing Qualifications

American Society for Nondestructive Testing (ASNT)

SNT-TC-1A	Personnel Qualification and Certification in Nondestructive Testing

American Society for Testing and Materials (ASTM)

ASTM A167	Stainless and Heat Resisting Chromium Nickel Steel Plate, Sheet, and Strip
ASTM A240	Heat Resisting Chromium and Chromium Nickel Stainless-Steel Plate, Sheet, and Strip for Pressure Vessels
ASTM A276	Stainless Bars and Shapes
ASTM A312	Seamless and Welded Austenitic Stainless-Steel Pipe
ASTM A403	Wrought Austenitic Stainless-Steel Fittings
ASTM A479	Stainless-Steel Bars and Shapes for Use in Boilers and Other Pressure Vessels

American Welding Society (AWS)

AWS A5.4	Corrosion Resisting Chromium and Chromium Nickel Steel Covered Welding Electrodes
AWS A5.9	Corrosion Resisting Chromium and Chromium Nickel Steel Bare and Composite Metal Cored and Stranded Welding Electrodes and Welding Rods

Uniform Building Code (UBC)

UBC-91	Uniform Building Code, Section 2330 Earthquake Regulations

The SDS tank system design has been completed by qualified, registered PEs to ensure that the foundation, structural support, seams, connections, and pressure controls for the tanks are adequately designed. This is evidenced by the PE stamp on the system drawings located in Appendix 2. A PE certification of construction and as-built drawings was submitted to the DEQ following installation of the SDS in Room SB-8. Table D-4 summarizes the design parameters of these tanks.

Table D-4. SDS Tank Design Parameters.

Parameter	VES-FC-101 (Distillation Vessel)	VES-FC-85A (Collection Vessel)
Tank Design Pressure	Full vacuum to 15 psig	Full vacuum to 15 psig
Tank Operating Pressure	1 mTorr to 10 Torr	1 mTorr to 10 Torr
Tank Design Temperature	1250ºF	400 °F
Seismic	SDC-2	SDC-2
Location	Indoor	Indoor

The sodium distillation system is designed in accordance with the following codes and standards.

American Society of Civil Engineers (ASCE)

ASCE 7-05 Minimum Design Loads for Buildings and Other Structures

American Society of Mechanical Engineers (ASME)

ASME B1.20.1 Pipe Threads, General Purpose (Inch)
ASME B16.5 Pipe Flanges and Flanged Fittings
ASME B16.9 Factory-Made Wrought Buttwelding Fittings
ASME B31.3 Process Piping
ASME BPVC II Part D Properties (Customary), Materials
ASME BPVC V Boiler and Pressure Vessel Code Section, V, Nondestructive Examination
ASME BPVC VIII Division 1 Rules for Construction of Pressure Vessels
ASME BPVC VIII Division 2 Rules for Construction of Pressure Vessels, Alternative Rules

American Society for Testing and Materials (ASTM)

ASTM A36 Standard Specification for Carbon Structural Steel
ASTM A182 Standard Specification for Forged or Rolled Alloy and Stainless Steel Pipe Flanges, Forged Fittings, and Valves and Parts for High-Temperature Service

ASTM A193	Standard Specification for Alloy-Steel and Stainless Steel Bolting for High Temperature or High Pressure Service and Other Special Purpose Applications
ASTM A240	Standard Specification for Chromium and Chromium Nickel Stainless-Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications
ASTM A269	Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service
ASTM A276	Standard Specification for Stainless Steel Bars and Shapes
ASTM A312	Standard Specification for Seamless, Welded, and Heavily Cold Worked Austenitic Stainless Steel Pipes
ASTM A403	Standard Specification for Wrought Austenitic Stainless Steel Piping Fittings
ASTM A479	Standard Specification for Stainless Steel Bars and Shapes for Use in Boilers and Other Pressure Vessels
ASTM A500	Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes
ASTM F3	Standard Specification for Nickel Strip for Electron Tubes
ASTM F593	Standard Specification for Stainless Steel Bolts, Hex Cap Screws and Studs

American Welding Society (AWS)

AWS A5.1	Specification for Carbon Steel Electrodes for Shielded Metal Arc Welding
AWS A5.28	Specification for Low-Alloy Steel Electrodes and Rods for Gas Shielded Arc Welding
AWS A5.9	Specification for Bare Stainless Steel Welding Electrodes and Rods

International Building Code (IBC)

IBC 2006	International Building Code

D-2b(2) External Corrosion Protection [IDAPA 58.01.05.008 and 58.01.05.012; 40 CFR 264.192(f) and 270.16(e)]

Corrosion protection for the HFLS is provided by materials of construction and corrosion allowances. Materials of construction for the HFLS tanks (VES-NCD-141 and -142) were selected based on their acid resistance, corrosion control, and chemical compatibility. VES-NCD-141 and -142, the ancillary equipment, and the secondary containment are constructed of 300 Series stainless steel. 300 Series stainless steel is known for its excellent corrosion resistance to nitric acid. The physical properties and chemical resistance data for 300 Series stainless steel is found in the appendices of this permit.

Corrosion protection for the SDS is provided by materials of construction and corrosion allowances. Materials of construction for the SDS tanks (VES-FC-101 and VES-FC-85A) were selected based on their corrosion control, operating temperatures, and chemical compatibility. The SDS is constructed primarily of 304H stainless steel, with some lower operating temperature components of 304/304L stainless steel.

D-2b(3) Description of Tank System Installation and Testing Plans and Procedures [IDAPA 58.01.05.008 and 58.01.05.012; 40 CFR 264.192(b)(e) and 270.16(f)]

A description of the tank system installation and testing plans and procedures is included as part of a PE assessment of the HFLS. This assessment is found in the appendices of this permit. This assessment certified that the HFLS has sufficient structural integrity and is acceptable for the treatment of hazardous waste.

A description of the tank system installation and testing plans and procedures will be included in the PE certification of construction and as-built drawings which will be provided to the DEQ following completion of construction and prior to hazardous waste operations.

D-2c. Dimensions and Capacity of Each Tank [IDAPA 58.01.05.012; 40 CFR 270.16(b)]

HEPA Filter Leaching System

The leaching tank and the drying tank are located within the filter handling cell (309). The leaching tank, VES-NCD-141, is a 300 Series stainless steel, rectangular-shaped tank with the following inside dimensions: 2 ft 11 in. by 2 ft 5 in. by 2 ft 2 in. (L x W x H). However, in order to facilitate draining the tank, the base is sloped on the bottom, adding an additional 4 in. to the height of the tank. The capacity of the leaching tank is approximately 120 gal.

The drying tank, VES-NCD-142, is a 300 Series stainless-steel, rectangular-shaped tank with the following inside dimensions: 2 ft 11 in. by 2 ft 5 in. by 1 ft 4 in. (L x W x H). The capacity of the drying tank is approximately 70 gal.

Sinks

The sink of SH-NCD-934 is 18 x 20 x 18 in. deep. The sink's capacity is about 28 gal. The overall dimensions of the unit (including hood) are 4 x 3 x 10 ft.

The sink of SH-NCD-933 is 119 x 24 x 19 in. deep. The sink's capacity is about 234gal. The overall dimensions of the unit (including hood) are 12 x 3 x 10 ft.

Ultrasonic Cleaner

The tank of ultrasonic cleaner UC-NCD-921 is 26 x 26 x 27 in. deep, and has a capacity of approximately 79 gal. The overall dimensions of the unit (excluding hood) are 49 x 36 x 44 in.

Holdup and Collection Tanks

The inside diameter of the holdup tank (VES-NCD-123) is 7.5 ft and its tangent-to-tangent length is 9 ft. Drawing 132797 shows the tank's dimensions. Its capacity is 3,800 gal.

The inside diameter of the collection tank (VES-NCD-129) is 4 ft and its tangent-to-tangent length is 5 ft 6 in. Drawing 132799 shows the tank's dimensions. Its capacity is 530 gal.

These drawings are located in the drawings package of the appendices of this permit.

FDP Cell Slab Storage Tank

The FDP cell slab tank (VES-FC-184) is located in building CPP-666. The tank is constructed of Type 304L stainless steel. The tank is a vertical, rectangular unit. It is 8 ft in length by 5 ft in width and has an operating capacity of 65 gallons. Drawing 350205 (located in the drawing package found in the appendices of this permit) shows the tanks dimensions.

Sodium Distillation System Tanks

The sodium distillation system is located in Room SB-8 in CPP-666. The sodium distillation vessel (VES-FC-101) is constructed of 304H stainless steel. The tank is a vertical cylinder which is 71.25

in. in height and inner diameter of 12 in. It has a capacity of 35 gallons. Drawing 571700 shows the tank dimensions.

The sodium collection vessel (VES-FC-85A) is constructed of 304 stainless steel. The tank is a horizontal cylinder which is 15 in. long and inner diameter of 10 in. It has a capacity of 5 gallons. Drawing 786868 shows the tank dimensions.

The sodium collection vessel is also used as a container once it contains sodium and has been disconnected from the SDS.

These drawings are located in the drawings package of the appendices of this permit.

D-2d. Description of Feed Systems, Safety Cutoffs, Bypass Systems, and Pressure Controls [IDAPA 58.01.05.012; 40 CFR 270.16(c)]

HEPA Filter Leaching System

Feed Systems. Decontamination technicians transfer the HEPA filters into and out of the filter handling cell by hand and/or by using a combination of cranes, manipulators, and filter handling tools. Additional influents to the HFLS include steam, water, air, and allowable decontamination solutions from the chemical makeup system. Solution volumes are controlled by; adding predetermined volumes of liquids, level indicators on the tanks, and by visual observation. Decontamination technicians transfer the solutions by pump and manually operated valves.

Safety Cutoffs. An air heater is used to heat the air to the drying tank. The air heater is designed to shut off when the air exceeds maximum temperature, indicating insufficient air flow or heater malfunction. Personnel can detect this system upset at the heater control panel during their system inspections. Other devices used to alert decontamination technicians of process operations are; low liquid level alarms, high liquid level alarms, and temperature indicators.

Bypass Systems. There are no bypass systems associated with the HFLS. The process stops when the system is shut down.

Pressure Controls. The leaching and drying tanks are each provided with a 2-in. vacuum line that removes hazardous fumes and vapors. These lines discharge into the decontamination cell main exhaust ductwork. The exhaust is then routed through two separate banks of HEPA filters and controlled by two independent blowers and control dampers. In addition, the two tanks are equipped with loose-fitting covers that allow excess gases to be released into the decontamination cell. These gases are then exhausted from the cell into the decontamination room main exhaust ductwork (see Appendix D-2 of this attachment).

Sinks and Ultrasonic Cleaner

Debris items to be treated will be placed into these units manually or by means of cranes, hoists, or other equipment. There are no safety cutoffs or bypass systems. Both sinks and the ultrasonic cleaner have hoods through which air is vented to the scrubber system. The sinks and ultrasonic cleaner are also supplied with water, air, steam, and allowable decon chemicals from the decontamination solution makeup and feed system.

Holdup and Collection Tanks

Feed Systems. The holdup tank (VES-NCD-123) and collection tank (VES-NCD-129) receive liquid mixed waste from the debris treatment processes addressed in this permit. Sources of mixed waste for VES-NCD-123 are as follows: the vent air scrubber system, floor drains throughout the Decon Area, the sinks, the ultrasonic cleaner, the steam spray booth, and VES-NCD-129 (overflow). According to valves selected, either VES-NCD-123 or -129 can receive waste from the remote decon cell, the filter handling cell, or the decon cubicles. In addition to mixed waste, both tanks will continue to receive radioactive, nonhazardous waste from decontamination processes in the Decon Area. VES-NCD-123 also receives drainage from the steam spray booth, dry chemical mezzanine storage area (Room 502), solution from the overflow outlets on the makeup tank drains (Room 415), the makeup solution transfer pumps and transfer lines, and overflow from VES-NCD-129.

If pH adjustment is necessary in either VES-NCD-123 or -129, the treatment agent will be added through appropriate drain lines leading to the tank.

Safety Cutoffs. Level instrumentation on each tank measures the differential pressure between two pneumatic probes in the tank. There are high-level alarm set points for both VES-NCD-123 and -129.

Bypass Systems. VES-NCD-129 has an overflow outlet, which drains solution to

VES-NCD-123. Both VES-NCD-129 and VES-NCD-123 are fitted with high-level detection equipment and associated alarms. Receipt of an unexpected high-level alarm will prompt an investigation into the cause. If capacity is exceeded, VES-NCD-123 will overflow to the off-gas system. Liquids entering the off-gas system will alter the vacuum pressure within the system. An alarm will be activated when vacuum monitoring equipment within this system detects upset conditions. If the vacuum pressure in the off-gas system is completely disrupted, any vapors or fumes will remain contained within the ducting. Liquids will not cause appreciable deterioration of the system, due to the stainless steel construction of the ducting and the short duration of contact between liquids and the piping. If an overflow continues, it will eventually drain to the quench tank (VES-NCC-108), which also has a high-level alarm.

Either an investigation, caused by a high-level alarm in VES-NCD-129 or VES-NCD-123, indicating an overflow condition, or additional alarms received from the off-gas system and/or VES-NCC-108 will trigger a manual shutdown of all transfers to these tanks.

Pressure Controls. Both VES-NCD-123 and -129 are vented to the vent air scrubber system, and have density, level, and pressure instrumentation.

FDP Cell Slab Tank

Feed System. The FDP cell slab tank will receive liquid waste generated during operational activities that collect in the FDP cell sump via stem jet (JET-FC-584/585). Transfer of waste into the slab tank requires operator action to initiate the transfer as there is no automatic collection of waste in the tank.

Safety Cutoff/Bypass System. Tank level is monitored during transfer on the DCS in the FAST control room. Liquid volume in the sump/cell floor will be calculated prior to transfer to the slab tank to ensure sufficient capacity is available.

Pressure Control. The tank is vented to the FDP cell and its design and operating pressure is 100 psig.

Sodium Distillation System Tanks

Feed System. The SDS will receive sodium contaminated waste through the connecting tube from the FDP cell. Transfer of waste into the distillation vessel requires operator action to initiate the transfer as there is no automatic collection of waste in the tank. The SDS is operated as a batch process. The sodium vapor from the distillation vessel passes through a condenser which converts the sodium to liquid which is captured in the sodium collection vessel. The collection vessel assembly is used as a container for disposition of the sodium after it is disconnected from the system and replaced with a new vessel for continued operations.

Safety Cutoff/Bypass System. Remote operation is accomplished by using an actuated knife gate to open and close the distillation vessel and seal it. Limit switches indicate the position of the valve. Cameras are used in the loading and unloading of the waste and monitoring the general condition for the system. Pressure and temperature gauges (shown on P&IDs 571501, 571502, and 571503) are used to monitor the distillation process progress. The collection vessel has a continuous level limit switch which shuts down distillation when the sodium level reaches a preset limit to ensure that the sodium in the collection vessel will not overfill the collection vessel. The system is controlled by a programmable logic controller through the operator station and display located on the 0’ 0” level. The SDS is maintained/operated under an inert atmosphere to prevent the ignition/reaction of the sodium in the waste stream. The system as designed is intrinsically safe. Inert gas is provided to purge the system of oxygen before any operation and to pressurize the system as needed. If power is lost or the emergency stop is activated, the inert gas supply valve and the vent valve fail to the position that immediately stops the distillation process and purges the distillation vessel with inert gas.

Pressure Control. The SDS is vented to the FDP cell. The process has a 15 psig relief valve and the inert gas supply has a 15 psig relief valve. These valves prevent an over pressurization of the SDS.

Operating Parameters. The following operating parameters will be used during distillation operations:

- Operating temperature of the distillation unit is 500 °F to 1200 °F;
- Operating temperature of the condenser (primary and secondary sides) is 220 °F to 800 °F;
- Temperature of the silicon thermal fluid will be maintained between 70 and 350 °F;
- Operating pressure of the SDS is 1 mTorr to 10 Torr;

The following support equipment, at a minimum, will be checked for readiness as part of distillation operations:

- Distillation vessel electric furnace
- Thermal fluid system
- Inert gas system
- Monitoring and Controls system
- Vacuum system

D-2e. Diagrams of Piping, Instrumentation, and Process Flow [IDAPA 58.01.05.012; 40 CFR 270.16(d)]

The following drawings show mechanical flow in the Decon Area: 133443, 133444, 133446, 133447, and 133448. These drawings are included in the drawing package found in the appendices of this permit. Other drawings included in the drawing package found in the appendices of this permit are noted below.

HEPA Filter Leaching System

Drawings 444389 and 444390 show piping, instrumentation, and process flow for the HFLS.

Sinks

Drawing 133444 shows details about piping and process flow for the sinks.

Ultrasonic Cleaner

Drawing 133444 shows details about piping and process flow for the ultrasonic cleaner.

Holdup and Collection Tanks

The following drawings (found in the drawings package of the appendices of this permit) show piping, instrumentation, and process flow for the holdup tank (VES-NCD-123) and the collection tank (VES-NCD-129): 132797, 132799, 133447, and 133448. Exhibit D-13 is a simplified piping diagram for the treatment equipment/areas addressed in this permit, including tank systems, that drain to VES-NCD-123 and -129.

FDP Cell Slab Tank

Drawings 058061 and 350205 (found in the drawings package of the appendices of this permit) show piping, instrumentation and process flow for the FDP cell slab tank (VES-FC-184).

Sodium Distillation System

Drawings 571501, 571502, and 571503 (found in the drawings package of the appendices of this permit) show piping, instrumentation for the SDS. Drawing 571505 shows process flow information for the SDS.

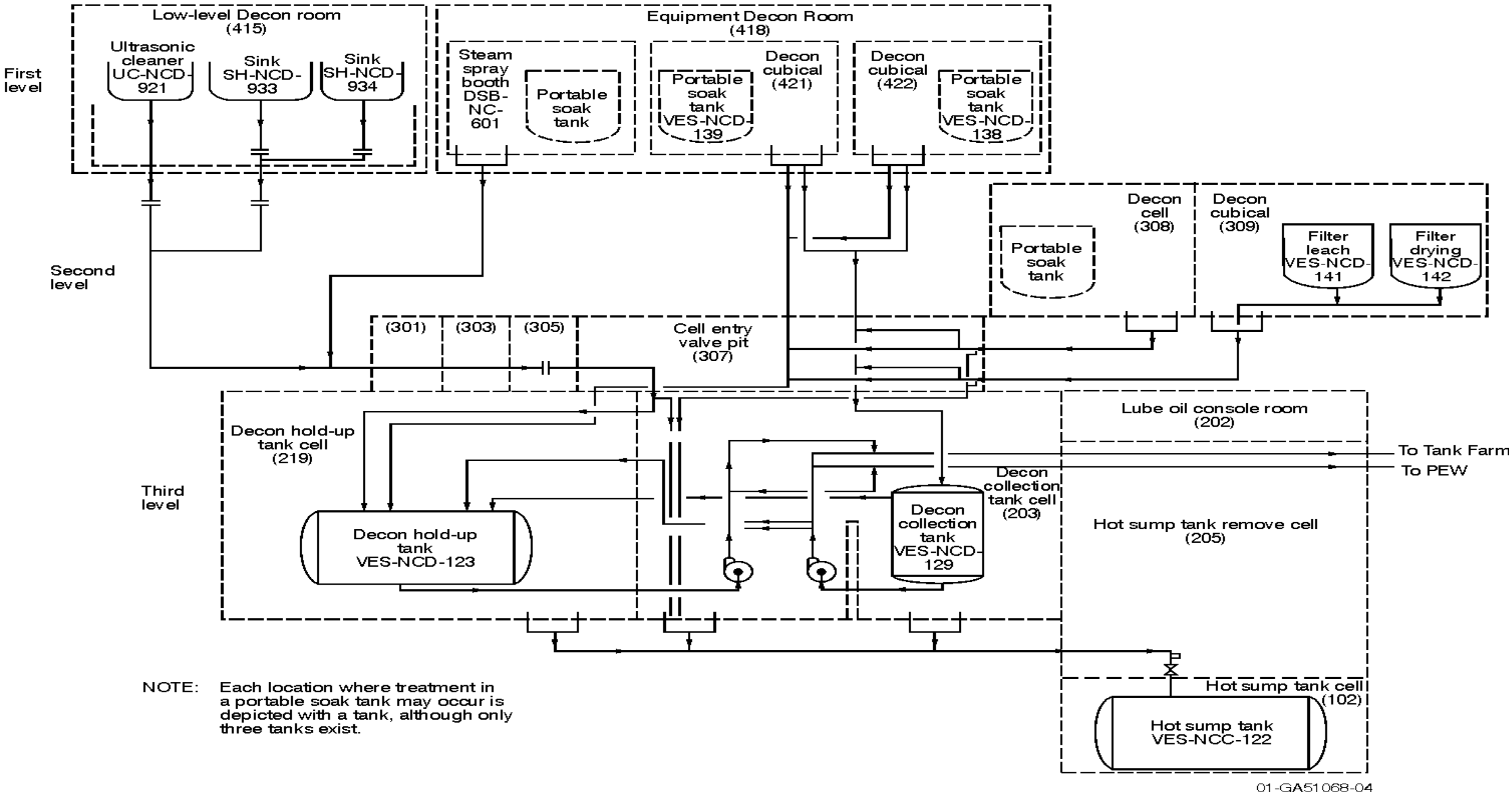


Exhibit D-13. Simplified diagram for equipment/areas draining to the holdup and collection tanks.

D-2f. Containment and Detection of Releases

D-2f(1) Plans and Description of the Design, Construction, and Operation of the Secondary Containment System [IDAPA 58.01.05.012 and 58.01.05.008; 40 CFR 270.16(g) and 264.193]

D-2f(1)(a) Tank Age Determination [IDAPA 58.01.05.008; 40 CFR 264.193(a)]

HEPA Filter Leaching System

The HFLS tank system was installed in May 1995.

Sinks

Sinks SH-NCD-933 and -934 were placed in service in 1982.

Ultrasonic Cleaner

Ultrasonic cleaner UC-NCD-921 was placed in service in 1982.

Holdup and Collection Tanks

The holdup and collection tanks were placed in service in 1982.

FDP Cell Slab Tank

The slab tank (VES-FC-184) was installed in the FDP cell in 1986.

Sodium Distillation System

The SDS was installed in CPP-666 Room SB-8 in 2014.

D-2f(1)(b) Requirements for Secondary Containment and Leak Detection [IDAPA 58.01.05.012 and 58.01.05.008; 40 CFR 270.16(g) and 264.193]

The tanks of the tank systems addressed in this permit are located in cells or other rooms that are secondarily contained with stainless-steel-lined floors. These floors are sloped toward trenches/gutters and/or drains. The drains from the HFLS, sinks, and ultrasonic cleaner are routed to the holdup tank (VES-NCD-123) or the collection tank (VES-NCD-129). The drains from the rooms in which VES-NCD-123 and -129 are located are routed to the nonfluoride hot sump tank (VES-NCC-122).

The secondary containment systems for the tank systems are designed, installed, and operated to prevent any migration of waste or accumulated liquid to the environment. Materials of construction in these secondary containment systems are compatible with the wastes to be treated in the tank systems. The secondary containment systems have sufficient strength and thickness to prevent failure caused by pressure gradients, physical contact with the wastes, and stress of daily operations.

The secondary containment systems for these tank systems are designed and operated to drain, collect, and remove liquids resulting from leaks or spills. The systems have visual or instrumented leak detection systems designed and operated to detect failure of the primary containment.

Since the requirements of IDAPA 58.01.05.008 (40 CFR § 264.196) apply to spills or leaks that constitute a threat to human health or the environment, the following activities will be performed in response to the detection of system discharges in order to determine whether the requirements cited above will be implemented.

- Evaluate the system to determine if an integrity issue exists (this may not involve entering the radiological area). In making this determination, facility personnel will consider whether a discharge has migrated or could potentially migrate and whether it constitutes or could constitute a threat to human health or the environment. Any system discharge that is indicative of an integrity issue will trigger a response under 40 CFR § 264.196. Examples of system discharges that might indicate an integrity issue include pipe breaks, through-wall failures of tank or component boundaries, and system breeches resulting from incorrect maintenance (e.g., pipe or component not reinstalled). A system discharge that is not indicative of an integrity issue will not trigger a response under 40 CFR § 264.196. Examples include discharges caused by opening a pipe system and discharging residual liquids, pump and valve package discharges, mechanical joint and fitting discharges, discharges resulting from transients or maintenance activities that cause pressure surges, discharges from openings in systems where normal operations are at vacuum, and planned decontamination activities.

- Integrity assessments will be conducted in accordance with written and approved procedures.
- Results of integrity assessments will be documented in the facility operating record.
- For discharges into secondary containment, the liquids will be transferred to compliant storage areas within 24 hours or at the earliest practicable time.

Upon detection of spilled or leaked materials, the following actions are taken:

- Within 24 hours, remove as much of the waste as is necessary to prevent further releases of hazardous waste to the environment and to allow inspection and repair of the treatment system, in accordance with IDAPA 58.01.05.008 [40 CFR § 264]
- Prevent migration of and remove visible contamination from soil or surface water, in accordance with IDAPA 58.01.05.008 [40 CFR § 264]
- If the collected material is an HWMA/RCRA-regulated material, manage it in accordance with all applicable requirements of IDAPA 58.01.05.005 through 58.01.05.008 [40 CFR Parts 261 through 264].

The off-gas piping at INTEC, while subject to HWMA/RCRA regulations as ancillary equipment to the regulated unit, does not require secondary containment because it is not intended to manage free liquids. However, any liquid condensate from such a gas/vapor stream may be subject to RCRA requirements (December 11, 1989, 54 FR 50968).

The offgas systems at the INTEC are designed, constructed, and managed in a manner that protects human health and the environment. Through a series of control devices (e.g., mist eliminators, condensers, superheaters, piping insulation, and heat traces) the offgas systems are designed to remove condensate from the offgas stream, thereby minimizing the potential for failure of downstream offgas equipment and releases to the environment. While the offgas systems are designed to remove condensate from the offgas streams, the systems are designed to handle liquids, should they form. The offgas lines are constructed of

Series 300 stainless steel or Inconel. Each of these alloys provides excellent corrosion and temperature resistance. Additionally, the offgas piping is sloped to drain to low spots located throughout the offgas system. Each low spot where hazardous waste may accumulate is equipped with a drain line that drains to an HWMA/RCRA-regulated tank system, and each drain line is secondarily contained. Prior to discharge to the INTEC Main Stack (CPP-708), each offgas stream is passed through a series of HEPA filters to minimize the potential release of airborne radioactive contamination.

The secondary containment systems are placed on a foundation or base that is capable of providing support, resisting pressure gradients above and below the system, and preventing failure due to settlement, compression, or uplift.

The matrix in found in Appendix D-1 of this attachment defines the boundaries of primary and secondary containment for each treatment unit under various drain scenarios possible in CPP-659 and CPP-666. See Section D-2f(1)(d) for a description of secondary containment and leak detection for equipment ancillary to these tank systems.

HEPA Filter Leaching System

The filter handling cell has approximately 320 ft^2 (16 by 20 ft) of floor space and is about 19 ft high. The walls and ceiling are of 3-ft-thick reinforced concrete. The walls are lined with 300 Series stainless-steel sheet, and the floor is covered with 300 Series stainless-steel plates. These stainless-steel liners serve as secondary containment.

The cell floor is sloped toward a trench located on the east side of the cell, running the length of the east wall from north to south. The trench is sloped southerly, toward a cell drain. All tank components that provide drainage of leaching or rinsing solutions are piped directly to the floor drain. A spare drain is also situated in the trench. The drains are routed to the holdup tank (VES-NCD-123) or the collection tank (VES-NCD-129).

An oil-filled, ion-shielding window provides viewing of the interior of the cell from the operating corridor. The physical arrangement of the HFLS within the filter handling cell is shown in Drawing 444390 (located in the drawings package of the appendices of this permit). The tanks and ancillary equipment are positioned so that they are visible from the filter handling cell shielding window and are accessible. This window is used to perform daily inspections for leak detection when the system is in use (see Section F).

Because the valve on the drain line from the filter handling cell is kept open during HFLS treatment, any leaks or spills from the HFLS tanks would flow to VES-NCD-123 or -129. Unexpected increases in the liquid level in VES-NCD-123 or -129 could indicate leaks from the HFLS tanks. During filter leaching activities, the level in the leach tank is observed by visual inspection. The receiving tanks VES-NCD-123 and -129 have level instruments with alarms that monitor the rate of increase based on operational activities. Unexpected sudden raises in liquid levels are investigated to determine if primary containment has failed or operational activities will account for the increase. After the assessment has been conducted, appropriate corrective action is taken. These procedures and equipment ensure detection of accumulated liquid in the secondary containment system or failure of the primary structure within 24 hours.

Sinks

Sinks SH-NCD-933 and -934 are located along the east wall of the low level decon room (Room 415) within a curbed area (see drawing 092723, located in the drawings package of the appendices of this permit). This area has approximately 178.8 ft^2 (see the appendices of this permit) of floor space. The area is completely floored with 1/16-in. Series 300 stainless steel, and a 6-in. stainless-steel-lined curb and wall encircles the floor. The walls above the curb are concrete or metal siding with nonporous epoxy paint. Both sinks are piped directly to drain lines in order to drain used solutions. The curbed and isolated area within Room 415 used for treatment in sinks is neither sloped nor is the area equipped with a floor drain. Outside the curbed and isolated area, the floor for Room 415 is sloped and equipped with a floor drain to VES-NCD-123 or -129. The sinks and their drain lines will be visually inspected for leaks or spills during treatment activities. Any leaks or spills would be identified visually and removed manually.

Ultrasonic Cleaner

Ultrasonic cleaner UC-NCD-921 is located along the east wall of the low-level decon room, (Room 415) within a curbed area (see Drawing 092723 found in the drawings package of the appendices of this permit). This area has approximately 178.8 ft^2 (see the appendices of this permit) of floor space. The area is completely floored with 1/16-in. Series 300 stainless steel, and a 6-in. stainless-steel-lined curb and wall encircles the floor. The walls above the curb are concrete or metal siding with nonporous epoxy paint.

Used treatment solutions drain directly from UC-NCD-921's stainless-steel tank through 1 ½-in. drain line PLAD-2643 to VES-NCD-123. Solutions in the inner polypropylene tank must be pumped out with a portable pump and solutions fed to PLAD-2643 through a connection on the line where it enters the floor. The curbed area within Room 415 used for treatment in sinks is neither sloped nor is the area equipped with a floor drain. The ultrasonic cleaner and its drain line will be visually inspected for leaks or spills during treatment activities. Any leaks or spills would be identified visually and removed manually.

Holdup and Collection Tanks

Holdup Tank. The holdup tank (VES-NCD-123) is located in the decon holdup tank cell (Room 219). The floor and lower 6 in. of the walls are covered with 10-gauge, Series 300 stainless steel. This liner serves as secondary containment. The cell has a floor drain and 18-in. thick concrete cell walls. The low point of the floor is 2 in. below the high point. The cell floor is sloped to a gutter along the south wall. The gutter slopes to a floor drain near the southwest corner of the cell.

The holdup tank cell's floor drain is piped through 3"-PLAD-4215 to the nonfluoride hot sump tank (VES-NCC-122). On this pipe is a valve, PL-122-5, that is normally closed, above VES-NC-122 (see Exhibit D-12). Also on this pipe is a liquid level sensor (LE-219). If approximately 10 gal of liquid accumulates in this pipe above PL-122-5, LE-219 will be actuated, which in turn sets off a Distributed Control System (DCS) alarm (L-NC-219C) in the NWCF control room. Receipt of an alarm requires operators to (1) inform supervision, (2) open Valve PL-122-5 to drain the pipe to VES-NCC-122, and (3) determine the source of the liquid. An alarm could be an indication that the holdup tank or that the floor of the steam spray booth is leaking. This leak detection system will ensure that leaked or spilled wastes are detected within 24 hours. Accumulated liquids in 3"-PLAD-4215 will be drained to VES-NCC-122 within 24 hours of detection.

Tank VES-NCC-122 is addressed in NWCF RCRA documents, and is not discussed further in this permit.

Personnel access to the decon holdup tank cell is gained via a doorway in the north wall which leads to the manipulator parking area (Room 218) and then to the level three corridor. Because of ALARA exposure concerns, visual inspections are limited to infrequent occasions during equipment maintenance and repair.

Collection Tank. The collection tank (VES-NCD-129) is located in the decon collection tank cell (Room 203). The floor and lower 6 in. of the 18-in. thick, densely reinforced, concrete walls in this cell are lined with 10-gauge, Series 300 stainless steel. This liner serves as secondary containment. The walls above the stainless-steel wainscot are coated with three coats of epoxy coating. The floor is sloped to a gutter along the north side of the cell. The low point of the floor is 2 in. below the high point. The gutter slopes to a drain at the northwest corner of the cell. The floor drain is piped through 3"-PLAD-4215 to VES-NCC-122. This pipe is equipped with a normally closed valve and level sensor in order to detect leaks, as described above for the holdup tank. An alarm could be an indication that the collection tank is leaking. This leak detection system will ensure that leaked or spilled wastes are detected within 24 hours. Accumulated liquids in 3"-PLAD-4215 will be drained to VES-NCC-122 within 24 hours of detection.

Tank access in the decon collection tank cell is gained through the blocked-in opening in the east wall. This wall adjoins the hot sump tank removal and access cell. Because of ALARA exposure concerns, visual inspections are limited to infrequent occasions during equipment maintenance and repair.

FDP Cell Slab Tank

The FDP Cell at the -27’ level has approximately 500 ft^2 (10 by 50 ft) of floor space. The FDP cell sump and cell floor were designed to collect and liquids resulting from leaks or spills from process and cell equipment. The cell floor at the -27' level is constructed of 3-ft thick concrete lined with 304L Series stainless steel. The floor slopes toward the northwest corner of the cell, where liquids would be collected in a sump which has an internal diameter of 5 in. and a depth of 18 in.

The sump is routed to the FDP Cell Slab Tank. The sump is equipped with a high level alarm which is monitored by the DCS in the FAST control room.

Sodium Distillation System

CPP-666 Room SB-8 is reinforced concrete lined with a 12 gauge stainless steel secondary containment. The dimensions of the secondary containment are about 144 ft^2 (16 x 9 ft) of floor space with a 4-in. high stainless steel wainscot and a 0.75” threshold into the doorway. The volume capacity is 65.5 gallons. The secondary containment is inspected via direct visual observation or via camera.

D-2f(1)(c) Requirements for External Liner, Vault, Double-walled Tank or Equivalent Device [IDAPA 58.01.05.008 and 58.01.05.012; 40 CFR 264.193(d) and 270.16(g)]

All of the tanks addressed in this permit are located within CPP-659 with the exception of the FDP cell slab tank (VES-FC-184) and SDS (VES-FC-101 and -85A), which are located in CPP-666. The roof area of CPP-659 and CPP-666 has been designed and constructed to provide adequate protection from precipitation. Typically, the roof consists of a solid deck (either concrete or sheet metal) overlain by two layers of solid insulating material. Covering the insulating material is a layer of gravel to provide protection against the elements.

In CPP-659 and CPP-666, belowgrade walls and floors and abovegrade floors where hazardous and/ or mixed waste storage and debris storage and treatment will occur are constructed of steel-reinforced concrete. The abovegrade structure is constructed of a combination of a structural steel post and beam frame and steel-reinforced concrete. The abovegrade wall material is either steel-reinforced concrete, or exterior steel sheathing over 6 in. of insulation with steel sheathing on the interior of the wall. Therefore, the secondary containment systems of the tanks addressed in this permit will not encounter any run-on or infiltration of precipitation.

The secondary containment systems for the tanks addressed in this permit surround their tanks completely. In CPP-659, all the tanks drain to either the holdup tank (VES-NCD-123) or the collection tank (VES-NCD-129), which are both located in stainless-steel-lined cells. In CPP-666, the slab tank drains to the FDP cell sump and the FDP cell floor which is stainless-steel lined. The SDS is located within the secondary containment in Room SB-8. These systems prevent the migration of wastes to the environment.

The floors and liners for each tank system (HFLS, sinks, ultrasonic cleaner, holdup and collection tanks, and FDP cell slab tank) have been certified free of cracks or gaps, as documented in leak test reports.

HEPA Filter Leaching System

The secondary containment system for the HFLS, including VES-NCD-141 and -142, consists of a stainless-steel-lined floor, stainless-steel-lined walls, and the decon holdup or collection tank, depending on valve position. The lining is constructed of Series 300 stainless steel.

The holdup tank VES-NCD-123 (~3800 gallons) and the collection tank VES-NCD-129 (~530 gallons) each provide secondary containment to contain greater than 100% capacity of the largest tank, VES-NCD-141 (120 gal), within its boundary.

Sinks

The area within the low-level decon room, in which the sinks are located, is separated from the rest of the room by a stainless-steel wall that forms part of the containment. The rest of the containment is provided by a stainless-steel floor liner and a 6-in. curb on the outer wall.

Calculations showing that the external liner system in the low-level decon room is capable of containing 100% of the capacity of the largest tank within its boundary (sink SH-NCD-933) the appendices of this permit.

Ultrasonic Cleaner

The area within the low-level decon room, in which ultrasonic cleaner UC-NCD-921 is located, is separated from the rest of the room by a stainless-steel wall that forms part of the containment. The rest of the containment is provided by a stainless-steel floor liner and a 6-in. curb on the outer wall.

Calculations showing that the external liner system in the low-level decon room and VES-NCC-123 or VES-NCD-129 are capable of containing 100% of the capacity of the largest tank within its boundary (sink SH-NCD-933) are provided in the appendices of this permit.

Holdup and Collection Tanks

Holdup Tank. The holdup tank (VES-NCD-123) is located within the holdup tank cell (Room 219). The secondary containment system consists of a 10-gauge, Series 300 stainless-steel external liner. This cell is 14 ft 4 in. by 13 ft 9 in. and has a 6-in.-high stainless-steel wainscot. A sloped, 1-ft-deep gutter runs along the south wall. Calculations showing that the liner system in Room 219 (and adjacent areas) is capable of containing 100% of the capacity of the largest tank within its boundary (VES-NCD-123) are provided in the appendices of this permit.

Collection Tank. The collection tank (VES-NCD-129) is located in the collection tank cell (Room 203). This cell is 10 ft by 7 ft 10 in. and has a 6-in.-high stainless-steel wainscot. The secondary containment system consists of a 10-gauge, Series 300 stainless-steel external liner. A sloped, 1-ft-deep gutter runs along the north wall to a drain. Calculations showing that the liner system in Room 203 (and the adjacent pump cell) is capable of containing 100% of the largest tank within its boundary (VES-NCD-129) are provided in the appendices of this permit.

FDP Cell Slab Tank

The slab tank (VES-FC-184) is located in the -27’ level of the FDP cell. This cell is approximately 10 ft by 50 ft and has stainless-steel lined floors. The secondary containment system consists of a liner that is 3/16 inch stainless-steel 304L plates. The cell floor is sloped and drains to the floor cell sump. Calculations showing that the stainless steel floor liner of the FDP cell is capable of containing 100% of the volume of the slab tank are provided in the appendices of this permit.

Sodium Distillation System

The SDS in Room SB-8 is located in a reinforced concrete room lined with a 12 gauge stainless steel secondary containment. The dimensions of the secondary containment are about 144 ft^2 (16 x 9 ft) of floor space with a 4-in. high stainless steel wainscot and a 0.75” threshold into the doorway. The volume of the secondary containment, 65.5 gallons, exceeds 100% of the largest tank volume (distillation vessel) 35 gallons. The secondary containment is inspected via direct visual observation or via camera.

D-2f(1)(d) Secondary Containment and Leak Detection Requirements for Ancillary Equipment [IDAPA 58.01.05.008; 40 CFR 264.193(f)]

Most of the ancillary equipment for the tank systems addressed in this permit are contained within the same cells/rooms as the tanks. All these cells/rooms are secondarily contained, as detailed in Section D-2f(1)(b). Waste lines outside of these cells/rooms for these tank systems are doubly encased in stainless-steel pipe.

HFLS, Sinks, and Ultrasonic Cleaner

The out-of-cell/room piping that drains the HFLS, the sinks, and the ultrasonic cleaner is doubly encased until it reaches the holdup tank cell. Here, the outer encasement of piping (pipe secondary containment) is diverted to the cell gutter, while the primary piping continues on to the holdup tank and the collection tank. As explained in Section D-2f(1)(b), the holdup tank cell gutter drains through 3"-PLAD-4215 to hot sump tank VES-NCC-122. 3"-PLAD-4215 has a normally closed valve (PL-122-5) and a level sensor (LE-219), above VES-NCC-122, to detect leaks. Activation of LE-219 could indicate leakage of the primary drain piping from the HFLS, sinks, or ultrasonic cleaner into the outer encasement of piping.

The information presented in Section D-2f(1)(b) is applicable to the tank ancillary equipment located within the processing cells/areas.

Holdup and Collection Tanks

Pumps for transferring liquids from the holdup and collection tanks to waste processing destinations are located in the pump cell, Room 203. Pump P-NCD-223 serves the holdup tank (VES-NCD-123); Pump P-NCD-229 serves the collection tank (VES-NCD-129). The pump cell is a 5 x 10-ft area separated from the collection tank cell by a shielding wall. The secondary containment system in the pump cell consists of a 10-gauge, Series 300 stainless-steel external liner. A sloped gutter runs along the north wall to a drain. The drain is piped into the same line that drains VES-NCD-123 and -129 (3"-PLAD-4215). As explained in Section D-2f(1)(b), this line has a level sensor. Activation of the sensor could indicate a leak from the pump cell.

Doubly encased piping from VES-NCD-123 and -129 exits CPP-659 en route to processing destinations (the PEWE and the TFF).

FDP Cell Slab Tank

The ancillary equipment for the slab tank is contained within the same cell as the tank. The cell is secondarily contained, as detailed in Section D-2f(1)(b). Waste lines outside of the cell for this tank system are doubly encased in stainless-steel pipe and are currently out-of-service and capped.

Sodium Distillation System

All the ancillary equipment for the SDS is contained within Room SB-8. The room has secondary containment as detailed in D-2f(1)(c). The only waste line that is outside of the room is the vertical tube connecting the SDS with the FDP Cell for solid waste insertion and removal from the distillation vessel, and this line is wholly contained within CPP-666.

D-2f(2) Requirements for Tank Systems Until Secondary Containment Is Implemented [IDAPA 58.01.05.008; 40 CFR 264.193(I)]

Every tank system addressed in this permit has secondary containment and does not have nonenterable underground tanks; therefore, this section is not applicable.

D-2g. Controls and Practices to Prevent Spills and Overflows [IDAPA 58.01.05.012 and 58.01.05.008; 40 CFR 270.16(I) and 264.194(b)]

Personnel monitor the treatment processes for the tank systems addressed in this permit. System instrumentation and alarms are monitored to ensure that no errors have been made or process changes have occurred. Administrative controls are implemented to ensure that the processes are performed safely. Transfers of treatment solutions and treatment residuals are governed by written procedures.

To prevent hazardous waste spills and overflows, decontamination technicians and waste operators visually inspect or monitor instrumentation for tanks, piping, valves, and secondary containment devices on a daily basis when these tank systems are in use. For more information regarding inspections and monitoring, refer to Attachment 4 of this permit.

HEPA Filter Leaching System

The HFLS is designed with a remote control panel for control and overfill protection. The HFLS remote control panel is located in the operating corridor next to the filter handling cell shielding window. The control panel consists of instruments and alarms to detect system upsets or operator error. Personnel record tank levels and compare them to previous readings to determine if any spills or leaks have occurred. If a monitor reading is found to be outside of its operating range, the operator checks the operability of the instruments, the status of the process, and any liquid in the secondary containment. The leaching tank also is designed with an overflow line that transfers any solution overflow to the drain line. See the photograph package for a picture of the HFLS control panel.

Sinks

As required by procedure, the liquid level in the sink being operated is periodically checked and adjusted if needed.

Ultrasonic Cleaner

As required by procedure, the liquid level in the ultrasonic cleaner is periodically checked and adjusted if needed. In addition, the top of the tank has overflow outlets to prevent overflowing of the stainless-steel tank.

Holdup and Collection Tanks

Before any solutions are generated by the debris treatment processes, personnel verify that the selected waste tank (VES-NCD-123 or -129) has adequate volume to hold the generated liquid. Personnel also check for ongoing activities that could cause the liquid level in VES-NCD-123 or -129 to increase. Tank liquid level recorders and alarms on Control Panel CP-NCD-989 in the low-level decon room provide the liquid levels in these tanks and a warning of high level with alarms. High-level alarm set points for VES-NCD-123 and VES-NCD-129 allow sufficient reserve head capacity for unexpected additions and secondary containment needs. At a minimum, a volume equal to 100% capacity of the largest tank within the boundary (538 gal) will be maintained as reserve capacity.

Activities are coordinated to allow control of levels in VES-NCD-123 or -129. All activities are controlled by approved procedures. Liquids generated by these activities are tracked using balance sheets. The volume of liquid that is used in the process is balanced against the volume that is sent to VES-NCD-123 or -129. Any discrepancies are identified, reconciled, and recorded on the balance sheet and in the operating log.

VES-NCD-129 has an overflow outlet, which drains solution to VES-NCD-123. Both VES-NCD-129 and VES-NCD-123 are fitted with high-level detection equipment and associated alarms. Receipt of an unexpected high-level alarm will prompt an investigation into the cause. If capacity is exceeded, VES-

NCD-123 will overflow to the off-gas system. Liquids entering the off-gas system will alter the vacuum pressure within the system. An alarm will be activated when vacuum monitoring equipment within this system detects upset conditions. If the vacuum pressure in the off-gas system is completely disrupted, any vapors or fumes will remain contained within the ducting. Liquids will not cause appreciable deterioration of the system, due to the stainless steel construction of the ducting and the short duration of contact between liquids and the piping. If an overflow continues, it will eventually drain to the quench tank (VES-NCC-108), which also has a high-level alarm.

Either an investigation, caused by a high-level alarm in VES-NCD-129 or VES-NCD-123, indicating an overflow condition or additional alarms received from the off-gas system and/or VES-NCC-108 will trigger a manual shutdown of all transfers to these tanks. See Section D-2f(1)(b) for a description of the leak detection and removal system for this drain pipe.

The control systems for the holdup and collection tanks are illustrated in Drawings 133447 and 133448 (located in the drawings package of the appendices of this permit).

FDP Cell Slab Tank

The slab tank is designed with a liquid level sensor for control and overfill protection. The liquid level sensor is monitored by the DCS located in the FAST control room. The level sensor instrument alarms when a system upset is detected. Personnel record the tank level and compare it to previous readings to determine if any spills or leaks have occurred. If a monitor reading is found to be outside of its operating range, the operator checks the operability of the instruments, the status of the process, and the liquid level in the secondary containment.

Sodium Distillation System

The SDS is a batch process for separation of sodium from waste. No overfill controls are required for the sodium distillation vessel, as the waste is observed via camera as it is loaded into the distillation bucket and lowered into the vessel. The sodium collection vessel is equipped with a continuous level switch designed to shut down distillation when the level of sodium in the collection vessel reaches a pre-set level. This prevents overfill of the collection vessel. The operator also monitors temperature and pressure readings throughout the process to ensure proper operation.

The SDS is maintained/operated under an inert atmosphere to prevent the ignition or reaction of the sodium within the waste stream to be treated in accordance with IDAPA 58.01.05.008 [40 CFR 264.198(a)(2)].

D-3. Waste Piles

D-3a. List of Wastes [IDAPA 58.01.05.012; 40 CFR 270.18(a)]

Pending closure of Building CPP-659, the equipment described in the approved HWMA/RCRA partial closure of the New Waste Calcincing Facility (Calciner System) will be considered debris stored in waste piles. The debris includes: calciner feed tank (VES-NCC-104), calciner vessel (VES-NCC-105), high efficiency cyclone (VES-NCC-107), quench tower (VES-NCC-109), adsorbers (VES-NCC-112, VES-NCC-113, and VES-NCC-114), knockout drum (VES-NCC-143-1-2 and VES-NCC-143-2-2), off-gas compressors (BLO-NCC-243-1-2 and BLO-NCC-243-2-2), intercoolers (HE-NCC-343-1 and HE-NCC-343-2), and ancillary equipment. Pending treatment, spent HEPA filters and other debris may be stored in piles. The following rooms in CPP-659 are allowed to store waste piles:

Adsorber Cell	Room 206
Off-Gas Cleanup Cell	Room 207
Calciner Cell	Room 214
Blend and Hold Cell	Room 215
Filter Cell/Valve Cubicle	Room 216
Decon Cell	Room 308
Filter Handling Cell	Room 309
Off-Gas Blower Cell	Room 322
Crane Maintenance and Transfer Area	Room 323
Transfer Area	Room 326
Shielded Storage Area	Room 416
Steam Spray Booth	Room 418

See Exhibits D-1, D-2, and D-3 for locations of these rooms. The characteristics of these spent HEPA filters are described in Attachment 2, Section C of this permit.

D-3b. Exemption from Liner and Groundwater Monitoring Requirements [IDAPA 58.01.05.012; 40 CFR 270.18(b)]

D-3b(1) Enclosed Piles [IDAPA 58.01.05.012 and 58.01.05.008; 40 CFR 270.18(b) and 264.251(b)]

A permit exemption was previously granted, per 40 CFR 264.251(b) from the requirements in 40 CFR 264 Subpart L, except as outlined in 40 CFR 264.256, 264.257, and 264.258(a). The waiver that was presented as the basis for this exemption is provided in the Attachment 9 of this permit.

D-8. Miscellaneous Units [IDAPA 58.01.05.012 and 58.01.05.008; 40 CFR 270.23 and 264.601]

The miscellaneous treatment units addressed in this permit are: the two decon cubicles, the steam spray booth, and the decon cell, and other miscellaneous treatment processes (i.e., sizing, compaction, repackaging, sodium deactivation, and absorbent addition) conducted in CPP-659 and other miscellaneous treatment processes [i.e., sorting/segregating/repackaging, compaction, sizing, sodium deactivation, sodium distillation (Room SB-8) and absorbent addition] conducted in CPP-666 FDP Cell.

D-8a. Description of Miscellaneous Units [IDAPA 58.01.05.012; 40 CFR 270.23(a)(1) and (2)]

Decon Cubicles

Within the decon cubicles, chemical extraction (e.g., scrubbing with water-based chemicals) or physical extraction (e.g., steam, high-pressure hot water, CO_2 blasting) treatments will be performed on mixed waste debris. Additionally, the decon cubicles may be used for other miscellaneous treatment processes (i.e., sizing, compaction, and repackaging). Located in adjacent Rooms 421 and 422, the decon cubicles provide isolated areas for hands-on treatment of items with high potential for contamination spread within the Decon Area. The cubicles can also be used for treatment of debris in portable soak tanks [see Sections D-1a(1), D-1a(2), and D-1a(3)]. The roof hatch of each cubicle can be removed to lower larger items or cleaning equipment, such as a soak tank, into the cubicles; smaller items can be brought in by hand through the personnel access doors. The initial rinsing of smaller items, which may be necessary before they can be transferred to other areas for further debris treatment work, will often take place in the decon cubicles.

Each cubicle is about 12 x 16 ft. The walls are of high-density concrete with epoxy coating. The floors are lined with stainless steel. See Drawing 132464, included in the drawing package found in the appendices of this, for details on the decon cubicles.

The cell entry acts as an airlock for the two cubicles. Differential pressure indicators are located in the entry area for each cubicle. When a hatch is removed, a manual damper can be adjusted to increase cubicle air flow. Procedures are in place for maintaining proper air flow during hatch removal and for other decon cubicle operations. During hatch removals, constant air monitors or portable air sampling equipment may be used. If there is an upset in the ventilation system, air samples will be taken. Upon exiting the cubicle entry, personnel self-monitor for radioactivity.

Fittings in the cubicles provide access to water, air, treatment solution from either makeup tank (VES-NCD-127 or -128), and steam. Control valves for these utilities are located in each cubicle and in the entry corridor. Whenever an operator/decon technician is working in the cubicle, a second technician must be stationed in the cubicle entry. The operator/technician can observe the interior of the cubicle through a window in the cubicle door. A 5 x 2-ft work table, with a ring stand for a bucket, is attached to the wall opposite the door. Steam, water, and air are also available in the entry corridor for cleaning the area.

When debris treatment of a given waste stream has been completed, the walls, floor, drain trough, and the removable metal filter in the cubicle air duct are rinsed with water. The floor is sloped to the cubicle trough. The trough is sloped to a permanently plugged floor drain as part of the CPP-659 Embedded Lines Upgrade Project. Therefore, the rinsate will be collected in compatible containers and then transferred to the INTEC liquid waste management system at an appropriate input point.

Steam Spray Booth

The steam spray booth will be a confinement area for treatment of mixed waste debris by chemical extraction (e.g., scrubbing with water-based chemicals) or physical extraction (e.g., steam, high-pressure hot water, CO_2 blasting). Also within the booth, mixed waste debris will be treated by means of spalling/scarification in an integrated vacuum/scabbling system. A portable soak tank may occasionally be moved into the booth for debris treatment [see Sections D-1a(1), D-1a(2), and D-1a(3)]. The booth may be used for other miscellaneous treatment processes (i.e., sizing, repackaging, absorbent addition, and compaction of debris). The booth will also be used for staging of contaminated equipment prior to transfer to the decon cubicles or the decon cell. Additionally, the steam spray booth will be used, as necessary, for the storage of containers and waste piles. The steam spray booth measures 31.3 x 18.5 x 15.0 ft high (excluding the glove box).

The steam spray booth is a multipurpose, multimedia spray/blast booth. It has steam spray capabilities plus high-pressure hot water capability and an attached liquid abrasive spray glove box. The interior of the glove box is accessible through a door from inside the steam spray booth, through glove ports from the exterior, and through a pass through port/airlock on the south end of the glove box. The glove box process cabinet measures 4 x 4 x 8 ft long.

The walls of the steam spray booth are constructed from 18-gauge stainless-steel wall panels. The holes cut into the walls of the steam spray booth for the liquid abrasive spray glove box are reinforced with structural stainless-steel frames. See Section D-8b(2) for details on the containment system's materials of construction.

The liquid abrasive spray glove box is a stainless-steel sheet structure. The process cabinet consists of a Series 300 stainless-steel shell mounted on a stainless-steel framework.
Glove box equipment is constructed of corrosion resistant material.

The glove box provides the following treatment capabilities:

- Liquid abrasive spray blasting
- Pressurized hot water washing
- CO_2 blasting.

The steam spray booth was placed in service in 1988. The liquid abrasive spray glove box was placed into service in 1997.

The operating principle of liquid abrasive spray blasting is the bombardment of components or equipment with a high-volume recirculated flow of solid particles in water. The solid medium abrasive (for example, aluminum oxide, plastic beads, or glass beads) does the treatment work, but a cushion of water always exists between the component surface and the media particles. This prevents impregnation, surface damage, and excessive breakdown of the medium while removing the fixed contamination in the oxide layer.

The glove box's high-pressure hot water generator consists of a skid-mounted unit with a triplex pump. High pressure water will be pumped through an electrically operated heat exchanger. This water will be directed to a hand-held spray gun positioned within the glove box and booth.

The CO_2 blasting system treats debris by impinging solid CO_2 (dry ice) particles at high velocity onto the surface to be cleaned. The CO_2 removal mechanism operates by an "impact flushing" cleaning action. Upon impact, the particle penetrates to the underlying surface. As it strikes the surface, the particle breaks apart and creates a high-velocity flow of dry ice particles that blasts out from the point of impact in a fluid-like flow that lifts the coating or contaminant from underneath. This action removes the coating without damaging the substrate. By adjusting the particle parameters (size, hardness, velocity, and quantity), it is possible to clean a wide spectrum of surfaces.

The CO_2 particles are conveyed by air flow to the point of application, where they are accelerated to high velocity, using high-pressure air through a nozzle directed onto the surface to be treated. When the CO_2 particles are delivered to the blast nozzle, high-pressure air is injected in order to ensure adequate particle velocity for the blast cleaning process.

The integrated vacuum/scabbling equipment is portable, but is used mainly within the steam spray booth. The scabbling head is moved out of the booth during steam spray or high-pressure hot water treatments after it has been surveyed and deconned. The scabbling head is decontaminated to remove radiological contaminants by being wiped down or rinsed as necessary and then bagged with the hose. The scabbling vacuum system is operated from outside the booth. The integrated vacuum/scabbling equipment is stored within the decon area when it is not being used. The vacuum/scabbling equipment is constructed of stainless steel. The system is equipped with a pneumatically operated scabbler and needle gun. The scabbler and needle gun are both manually operated and have shrouds and vacuum hoses that collect the debris as it is being removed. The scabbler looks similar to a system that is used to wax floors and is designed to scabble concrete. The needle gun is a hand-held unit designed to remove contaminants from outside edges and inside corners of porous and nonporous materials. The needle gun has adjustable shrouds that conform to all surface types. Both the needle gun and the scabbler leave the surface that is being cleaned with a smooth and even profile. Both units have the capability of removing up to approximately 1/16 in. per pass on concrete surfaces. These units will also remove paint and oxide layers from porous and nonporous materials.

The dust and debris created by the scabbling equipment are captured by the shrouds covering the tool surface and then transported through a vacuum hose by a VAC PAC HEPA filtered vacuum and waste packaging system. The portable VAC PAC system has two stages of filters. The first stage of filters is located in the plenum; these are self-cleaning prefilters, cleaned by reverse-flow pulses of high-pressure air. The dust that is collected on the first stage prefilters is knocked off using the reverse-flow pulse. The resulting material is collected in a stainless-steel collection drum for disposal. The second stage of filters is located at the top of the VAC PAC system; these are HEPA filters. The debris and dust are transported to the VAC PAC system and deposited into standard 55- or 23-gal stainless-steel drums. The VAC PAC system has also been fitted with a drum ring, which will allow for the operator to place plastic bags inside the drums if the area to be treated is small. The VAC PAC system is about 4 x 4.3 x 6 ft (L x W x H).

The vacuum/scabbling system allows the operator to fill, seal, remove, and replace full drums/bags with empty drums or plastic bags under vacuum conditions, which eliminates the possibility of spreading contaminants during changing of waste drums/bags. The vacuum/scabbling system has a high-level indicator that is lowered into the drum/bag and automatically alarms at preset limits. The residuals from the spalling/scarification processes will be evaluated per the parameters and rationale identified in Section C, Tables C-1 and C-2. The material will then either be stored in permitted storage pending appropriate disposition or be packaged and sent to an appropriate facility for further treatment, as required.

Debris to be treated will be placed into the steam spray booth (including the liquid abrasive spray glove box) manually, or by means of cranes, hoists, forklifts, carts, or other equipment (or combinations thereof). All loading of waste into the glove box will be done manually.

Decon Cell

Within the decon cell, chemical extraction (e.g., treatment with water-based chemicals) or physical extraction (e.g., steam, high-pressure hot water, CO_2 blasting) treatments will be performed on mixed waste debris. The cell may also be used for treatment of debris in portable soak tanks [see Sections D-1a(1), D-1a(2), and D-1a(3)]. The roof hatches of the cell can be removed to lower larger items or cleaning equipment, such as a soak tank, into the cell; smaller items can be brought in by hand through the personnel access doors. Additionally, the decon cell may be used for other miscellaneous treatment processes (i.e., sizing, compaction, repackaging, and absorbent addition).

The decon cell is approximately 24 x 16 ft. The walls are of 3 ft thick, high-density concrete. The cell is entirely lined stainless steel, including the bottoms of the roof hatches.

The cell entry acts as an airlock for the cell. Differential pressure indicators are located in the entry area for the cell. When a hatch is removed, a manual damper can be adjusted to increase cell air flow. Procedures are in place for maintaining proper air flow during hatch removal and for other decon operations.

Fittings inside the cell provide access to water, air, treatment solutions from either makeup tank (VES-NCD-127 or -128), and steam. Control valves for these utilities are located outside the cell. The operator/technician can observe the interior of the cell through a window.

When debris treatment of a given waste stream has been completed, the appropriate areas of the walls and the floor drain trough in the cell are rinsed with water. The floor is sloped to the cell trough. The trough is sloped to a floor drain. The rinsate is drained to either VES-NCD-123 or -129.

If debris treatment is performed in a container, such as a portable soak tank, which is drained directly to the cell drain through a flex hose, then only the cell drain is rinsed.

In CPP-659, room 308, ignitable or reactive wastes may be treated via repackaging or sodium deactivation. Currently this facility is involved in a characterization and verification activity for existing, legacy, waste in order to ensure that the waste is appropriately packaged and acceptable for transport to the Waste Isolation Pilot Plant (WIPP) for disposal. This effort consists of some or all of the following steps: removing multiple smaller waste cans from canisters, spreading the contents on the sorting tables to identify/remove WIPP prohibited items (such as liquids, ignitables, etc.), and repackaging of the contents into standard-sized containers that can be processed through the necessary physical and radiological characterization equipment to demonstrate compliance with the waste acceptance criteria for WIPP.

Other Miscellaneous Treatment Processes

Other miscellaneous treatment processes (T04) include sizing, compaction, repackaging of debris waste, sodium deactivation (Room 308), macroencapsulation (Room 428), and absorbent addition to non-debris waste. These treatment methods are permitted in CPP-659/-1659. In CPP-666 FDP Cell, other miscellaneous treatment processes (T04) include sorting, segregating, repackaging, compaction, sodium deactivation, sodium distillation (in Room SB-8), and sizing of debris waste and absorbent addition to non-debris waste. These treatment methods are performed individually and in conjunction with each other to treat the waste in the most effective manner possible. The 'Other Treatment' processes are summarized below.

Sizing/Compaction/Repackaging Treatment Processes in CPP-659

The treatment objective of sizing, compaction, and repackaging is to physically reduce the size of the waste so that the waste is acceptable for subsequent waste management activities and final off-Site disposition. Sizing, compaction, and repackaging mixed waste debris may be conducted in the CPP-659 Rooms 216, 306, 308, 309, 323, 418, 421, 422, and 428.

One example of debris waste that may be treated via sizing, compaction and repackaging at CPP-659 is HEPA filters. An example of how these treatment processes will work with HEPA filters is as follows:

- HEPA filter media will be removed from the HEPA filter housing/frame. The filter media may be removed from the housing by employing various techniques such as conventional sawing, use of a punch, etc., ensuring that the appropriate tool/method is used for the job at hand.

- Once the media has been removed from its housing, it will be sampled, as necessary. Sampling will be completed to establish acceptable knowledge to meet the waste acceptance criteria for disposal of the filters.

- After sampling has been completed, the filter media (and possibly the housing) will be compacted into either a 30 or 55-gallon drum. An example of a compaction method that may be used is placing a heavy object such as a concrete block/cylinder on top of the waste to compress it within a 30 or a 55-gallon waste drum. Other compaction tools/methods may be used to ensure that compaction is appropriately achieved. Up to 10 HEPA filters may be compacted/packaged into a 55-gallon waste drum, fewer into a 30-gallon drum.

- These waste drums may then be stored (S01) in the Crane Maintenance Area (CPP-659, Room 428) or other permitted storage areas, as necessary.

In CPP-659, room 308, ignitable or reactive wastes may be treated via sorting/segregating/ repackaging, compaction, sizing, and sodium deactivation. Waste characterization, verification, and treatment are conducted in CPP-659 Cell 308 to ensure that waste is appropriately packaged and acceptable for transport to the Waste Isolation Pilot Plant (WIPP) or other off-site facility for disposal. This effort consists of some or all of the following steps: removing multiple smaller waste cans from canisters, spreading the contents on the sorting tables to identify/remove/treat WIPP prohibited items (such as liquids, ignitables, reactives, etc.), and repackaging of the contents into standard-sized containers that can be processed through the necessary physical and radiological characterization equipment to demonstrate compliance with the waste acceptance criteria for WIPP or other off-site facility.

Ignitable or reactive waste treatment in CPP-659 Cell 308 is performed by deactivation of sodium. Sodium deactivation in Cell 308 is conducted in miscellaneous treatment units. A majority of the treatment is conducted within Argon Repackaging Stations (ARS). The ARS has secondary containment sufficient to contain the treatment process solutions and waste. The ARS is maintained with an oxygen deficient environment. During treatment in the ARS, the oxygen levels are initially established at or below 3.3% oxygen as measured at the lower sensor in the ARS. It is noted that operational activities during treatment (cutting, manipulator movement, etc.) will displace argon and temporarily allow the oxygen level to rise above 3.3%. This condition is planned for and expected.

Ignitable/reactive waste treatment methods are:

(1) Repackaging/sizing/compaction/absorbent addition of ignitable or reactive waste is performed in the ARS (except as noted below).
(2) Sizing of special case components outside the ARS: All containers will be opened in the ARS and inspected for visible sodium in an inert atmosphere. If required due to difficult configurations or angles of cuts, the waste component may be transferred to the sizing table and sized as necessary in preparation for distillation, further deactivation in the ARS or repackaging into drums to be removed from the cell. The debris will be returned to the ARS after sizing for any additional activities. Mitigating actions to be taken include: an application of inert gas in the cutting zone, use of a catch pan for collection of fines, exclusion of combustibles and liquids from the table area, fire watch, and proximity of fire extinguishing media.
(3) Air treatment of fines: Ignitable or reactive fine material (fines) is mixed with Met-L-X in the ARS then exposed to the air and raked/mixed during air exposure. Treatment is complete when there is no reaction for 30 minutes in air.

(4) Air treatment of debris: If no evidence of sodium contamination is present on debris removed from an ignitable/reactive container, it will be removed from the ARS and exposed to air. The debris will be raked or stirred periodically to ensure complete air exposure. Treatment is complete when there is no reaction for 30 minutes in air.

(5) Water treatment of sodium and sodium containing or contaminated debris: Water treatment is conducted in the oxygen deficient environment in the ARS. Water treatment may include spritzing/misting of the sodium to completion of the reaction or immersing the debris in water. During immersion treatment, the reaction is considered complete 10 minutes after the reaction has slowed to discrete non-connecting bubbles. For both water treatment techniques, water treatment is followed by 30 minutes of air exposure with no observed reaction to verify the treatment is complete.

(6) Air treatment of NaK: NaK is reacted by exposure to the limited oxygen content in the oxygen deficient environment of the ARS to control the reaction. NaK is spread in a pan into thin layers and manipulated allowing for the exposed surfaces to react. To complete the NaK reaction in the ARS, the NaK pan is lightly misted with water. Following misting, the pan is removed for 30 minutes of air exposure with no observed reaction to verify the treatment is complete.

Because sodium reacts in water and air, controls are established to minimize the risk of fire. These controls include the use of the oxygen deficient environment in the ARS, use of inert gas when sizing special case components on the sizing table and having fire extinguishing media staged in the CPP-659 Cell 308 for use (Met-L-X, sodium carbonate, or other inert material). Thermal events are expected during treatment of ignitable and reactive waste. A controlled area around the treatment unit will be established during sizing, air treatment, and water treatment as part of the work control process. Thermal reactions within this controlled area that do not damage the operational integrity of the ARS and/or secondary containment are a planned event. Activities that may be performed to maintain a controlled thermal reaction are, stop activities that may be contributing to the thermal reaction, maximize the argon purge, monitor the event, and/or apply Met-L-X. Thermal reactions within these parameters are considered to be a part of the treatment process, and as such do not require activation of the contingency plan or reporting process.

If the thermal reaction results in a fire outside of the controlled area, or results in damaging the operational integrity of the ARS and/or secondary containment, then the RCRA Contingency Plan will be activated and a verbal notification will be provided to the DEQ, and a 15-day follow-up report will be completed.

Water will be managed as a secondary waste after completion of each batch of immersion/misting treatment. The pH of the water is expected to increase in direct correlation to the amount of sodium that is reacted. The water will be declared to be corrosive (EPA Hazardous Waste Number D002) as a conservative measure. The water will undergo elementary neutralization or be absorbed with an approved absorbent per this permit.

Macroencapsulation

Macroencapsulation using commercially available technologies will be conducted within CPP-659 Room 428 to meet the treatment standards for debris and radioactive lead solids. The technologies to be used are the same as those being used at CPP-1617 and are described in Attachment 1a.

Absorption

The treatment objective of absorption is to select a suitable absorbent material to absorb any free liquid waste in order to meet the off-Site TSD facility waste acceptance criteria. Absorbent addition may be conducted in CPP-659, Rooms 308, 309, and 418. 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. Absorbent materials are also checked for compatibility with waste types and are stored accordingly in the appropriate storage unit. 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 container.

- The absorbent and waste may be mixed according to the method and duration specified in the operating instructions, if required.

- 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.

Initial testing of absorbents has been conducted to determine an appropriate absorbent material for the types of wastes that may be treated at the NWCF. The criteria for evaluation included stability, pH, sorbent capacity, sorbency rate, curing time, composition response to temperature extremes similar to those experienced during shipping. The results of this evaluation indicate that Aquaset, a water activated, granular solidification agent composed of clays modified by a proprietary process from Fluid Tech Inc., meets the requirements for the treatment of liquids via absorption. Based upon the testing of the performance of absorbents, it has been determined that Aquaset may be used for the absorption of liquids. Additional testing indicated that Petroset II and IIG, also manufactured by Fluid Tech Inc., meet the requirements for the treatment of organic liquids via absorption.

A second supplier of absorbents, Nochar, supplies Petro Bond N990, Acid Bond A660, and Nochar N965. Petro Bond has been tested and found to be effective at absorbing oils and organic liquid at a waste:absorbent ratio of approximately 1:1. Acid Bond has been tested and found to be effective at absorbing acidic and basic liquids. Acid Bond is mixed at a waste:absorbent ratio of 8:1 when the waste is neutral to slightly basic, 4:1 when the waste is basic, and approximately 1:2 when the waste is acidic. Actual waste:absorbent ratios are determined using operating instructions. Additionally, Petro Bond and Acid Bond maybe combined to absorb liquids with both aqueous and organic components. Nochar N965 has been tested and found to be effective at absorbing oils, acids, bases, and aqueous liquid waste in one step. Nochar N965 is mixed at a 0.25:1 waste:absorbent ratio. The results of treatability testing indicate that Nochar's Petro Bond, Acid Bond, and N965 meet the requirements for the treatment of liquids via absorption. Based upon the testing and performance of absorbents, it has been determined that Petro Bond N990, Acid Bond A660, and Nochar N965 may be used for the absorption of liquids.

Sorting/Segregating/Repackaging, Compaction, Sodium Deactivation, Sodium Distillation (in Room SB-8), Absorbent Addition, and Sizing Treatment Processes in CPP-666 FDP Cell

The treatment objective of sorting, segregating, sizing, compaction, and repackaging is to physically reduce the size of the waste so that the waste is acceptable for subsequent waste management activities and final off-Site disposition. Sorting, segregating, sizing, compaction, and repackaging mixed waste debris may be conducted in the CPP-666 FDP Cell.

In the FDP Cell, remote-handled mixed waste debris processing would include disassembling the HFEF-5 cans, sorting and segregating the waste, reducing the size of the container and its contents by using either sizing or compaction, as necessary, and repackaging the waste in order to meet the waste acceptance criteria of the final designated land disposal site (i.e., Waste Isolation Pilot Plant). See Exhibit D-14 for a photo of a drum tipper and repackaging table used at CPP-666 in the FDP Cell.

Waste characterization, verification, and treatment are conducted in FDP Cell to ensure that waste is appropriately packaged and acceptable for transport to the Waste Isolation Pilot Plant (WIPP) or other off-site facility for disposal. This effort consists of some or all of the following steps: removing multiple smaller waste cans from canisters, spreading the contents on the sorting tables to identify/remove/treat WIPP prohibited items (such as liquids, ignitables, reactives, etc.), and repackaging of the contents into standard-sized containers that can be processed through the necessary physical and radiological characterization equipment to demonstrate compliance with the waste acceptance criteria for WIPP or other off-site facility.

Ignitable or reactive waste treatment in FDP Cell includes sodium deactivation or sodium distillation (Room SB-8 previously described in this attachment). Sodium deactivation in the FDP Cell is conducted in miscellaneous treatment units. A majority of the treatment is conducted within Argon Repackaging Stations (ARS). The ARS has secondary containment sufficient to contain the treatment process solutions and waste. The ARS is maintained with an oxygen deficient environment. During treatment in the ARS, the oxygen levels are initially established at or below 3.3% oxygen as measured at the lower sensor in the ARS. It is noted that operational activities during treatment (cutting, manipulator movement, etc.) will displace argon and temporarily allow the oxygen level to rise above 3.3%. This condition is planned for and expected.

Ignitable/reactive waste treatment methods are:

(1) Repackaging/sizing/compaction/absorbent addition of ignitable or reactive waste is performed in the ARS (except as noted below).

(2) Sizing of special case components outside the ARS: All containers will be opened in the ARS and inspected for visible sodium in an inert atmosphere. If required due to difficult configurations or angles of cuts, the waste component may be transferred to the sizing table and sized as necessary in preparation for distillation, further deactivation in the ARS or repackaging into drums to be removed from the cell. The debris will be returned to the ARS after sizing for any additional activities. Mitigating actions to be taken include: an application of inert gas in the cutting zone, use of a catch pan for collection of fines, exclusion of combustibles and liquids from the table area, fire watch, and proximity of fire extinguishing media.

(3) Air treatment of fines: Ignitable or reactive fine material (fines) is mixed with Met-L-X in the ARS then exposed to the air and raked/mixed during air exposure. Treatment is complete when there is no reaction for 30 minutes in air.

(4) Air treatment of debris: If no evidence of sodium contamination is present on debris removed from an ignitable/reactive container, it will be removed from the ARS and exposed to air. The debris will be raked or stirred periodically to ensure complete air exposure. Treatment is complete when there is no reaction for 30 minutes in air.

(5) Water treatment of sodium and sodium containing or contaminated debris: Water treatment is conducted in the oxygen deficient environment in the ARS. Water treatment may include spritzing/misting of the sodium to completion of the reaction or immersing the debris in water. During immersion treatment, the reaction is considered complete 10 minutes after the reaction has slowed to discrete non-connecting bubbles. For both water treatment techniques, water treatment is followed by 30 minutes of air exposure with no observed reaction to verify the treatment is complete.

(6) Air treatment of NaK: NaK is reacted by exposure to the limited oxygen content in the oxygen deficient environment of the ARS to control the reaction. NaK is spread in a pan into thin layers and manipulated allowing for the exposed surfaces to react. To complete the NaK reaction in the ARS, the NaK pan is lightly misted with water. Following misting, the pan is removed for 30 minutes of air exposure with no observed reaction to verify the treatment is complete.

Because sodium reacts in water and air, controls are established to minimize the risk of fire. These controls include the use of the oxygen deficient environment in the ARS, use of inert gas when sizing special case components on the sizing table and having fire extinguishing media staged in the FDP Cell for use (Met-L-X, sodium carbonate, or other inert material). Thermal events are expected during treatment of ignitable and reactive waste. A controlled area around the treatment unit will be established during sizing, air treatment, and water treatment as part of the work control process. Thermal reactions within this controlled area that do not damage the operational integrity of the ARS and/or secondary containment are a planned event. Activities that may be performed to maintain a controlled thermal reaction are, stop activities that may be contributing to the thermal reaction, maximize the argon purge, monitor the event, and/or apply Met-L-X. Thermal reactions within these parameters are considered to be a part of the treatment process, and as such do not require activation of the contingency plan or reporting process.

If the thermal reaction results in a fire outside of the controlled area, or results in damaging the operational integrity of the ARS and/or secondary containment, then the RCRA Contingency Plan will be activated and a verbal notification will be provided to the DEQ, and a 15-day follow-up report will be completed.

Water will be managed as a secondary waste after completion of each batch of immersion/misting treatment. The pH of the water is expected to increase in direct correlation to the amount of sodium that is reacted. The water will be declared to be corrosive (EPA Hazardous Waste Number D002) as a conservative measure. The water will undergo elementary neutralization or be absorbed with an approved absorbent per this permit.

Exhibit D-14. Drum Tipper and Repackaging Table used in the FDP Cell

Absorption in the FDP Cell

The treatment objective of absorption is to select a suitable absorbent material to absorb any free liquid waste in order to meet the off-Site TSD facility waste acceptance criteria. Absorbent addition may be conducted in the FDP Cell at the 0'0" level. 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. Absorbent materials are also checked for compatibility with waste types and are stored accordingly in the appropriate storage unit. 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 container.

- The absorbent and waste may be mixed according to the method and duration specified in the operating instructions, if required.

- 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.

Initial testing of absorbents has been conducted to determine an appropriate absorbent material for the types of wastes that may be treated in the FDP Cell. The criteria for evaluation included stability, pH, sorbent capacity, sorbency rate, curing time, composition response to temperature extremes similar to those experienced during shipping. The results of this evaluation indicate that Aquaset, a water activated, granular solidification agent composed of clays modified by a proprietary process from Fluid Tech Inc., meets the requirements for the treatment of liquids via absorption. Based upon the testing of the performance of absorbents, it has been determined that Aquaset may be used for the absorption of liquids.

Additional testing indicated that Petroset II and IIG, also manufactured by Fluid Tech Inc., meet the requirements for the treatment of organic liquids via absorption.

A second supplier of absorbents, Nochar, supplies Petro Bond N990, Acid Bond A660, and Nochar N965. Petro Bond has been tested and found to be effective at absorbing oils and organic liquid at a waste:absorbent ratio of approximately 1:1. Acid Bond has been tested and found to be effective at absorbing acidic and basic liquids. Acid Bond is mixed at a waste:absorbent ratio of 8:1 when the waste is neutral to slightly basic, 4:1 when the waste is basic, and approximately 1:2 when the waste is acidic. Actual waste:absorbent ratios are determined using operating instructions. Additionally, Petro Bond and Acid Bond may be combined to absorb liquids with both aqueous and organic components. Nochar N965 has been tested and found to be effective at absorbing oils, acids, bases, and aqueous liquid waste in one step. Nochar N965 is mixed at a 0.25:1 waste:absorbent ratio. The results of treatability testing indicate that Nochar's Petro Bond, Acid Bond, and N965 meet the requirements for the treatment of liquids via absorption. Based upon the testing and performance of absorbents, it has been determined that Petro Bond N990, Acid Bond A660, and Nochar N965 may be used for the absorption of liquids.

D-8b. Environmental Performance Standards for Miscellaneous Units [IDAPA 58.01.05.008 and 58.01.05.012; 40 CFR 264.601 and 270.23(c)]

Various types of mixed waste debris will be treated in the FDP Cell (and Room SB-8) in CPP-666 and the decon cubicles, the decon cell, the steam spray booth, and other miscellaneous treatment processes located in CPP-659. The decon cubicles, decon cell, booth, and the other miscellaneous treatment processes located in CPP-659 and CPP-666 are located, designed, and operated in a manner to preclude the release of hazardous waste or hazardous constituents that may have adverse effects on human health or the environment. The cubicles are configured with numerous barriers (concrete walls and ceilings, concrete floors lined with stainless steel, epoxy paint layers, drain piping routed to collection tanks, and a ventilation system for confinement of hazardous materials) to prevent releases to the environment. The decon cell is configured with numerous barriers (concrete walls, ceilings, and floors lined with stainless steel, drain piping routed to collection tanks, and a ventilation system for confinement of hazardous materials) to prevent releases to the environment. The steam spray booth is configured with similar barriers, except that it is constructed of stainless steel and its floor and drain system are secondarily contained. The FDP Cell is configured with numerous barriers (concrete walls, ceilings, and floors and walls lined with stainless steel, and a ventilation system for confinement of hazardous materials) to prevent releases to the environment.

Administrative/engineering controls for the cubicles, the decon cell, the steam spray booth, and the other miscellaneous treatment processes located in CPP-659 and CPP-666 FDP provide additional assurance that hazardous materials are not released to the environment.

No viable pathway exists for migration of hazardous waste or hazardous constituents from the mixed waste treated in the cubicles, the decon cell, the steam spray booth, or the other miscellaneous treatment processes located in CPP-659 or in CPP-666 FDP to soil, ground water, and/or surface water.

A potential pathway for release of waste constituents is through the exhaust air of the FDP Cell, decon cubicles, decon cell, and steam spray booth. Any release would be limited to the period during which debris is being actively treated. The minimization of release of hazardous constituents through the exhaust air system that potentially could have adverse effects on human health or the environment is accomplished by the following:

(1) The initial waste constituents in the debris waste are in de minimis or trace quantities. Attachment 2, Section C-2f of this permit states the basis upon which hazards associated with the debris and debris treatment have been determined.

(2) The treatment processes, primarily chemical liquid extraction, further contain the de minimis or trace constituents from release through the exhaust system to the environment. Treatment will contain the waste constituents in the liquid extraction solutions and, thus, only minute amounts of waste constituents can potentially escape the process. (This is limited to CPP-659 treatment.)

(3) As a second stage of entrapment, any escaping waste constituents would then have to pass through two banks of HEPA filters. Although not specifically designed to trap organic constituents, HEPA filters would trap any particulate that may contain hazardous constituents.

D-8b(1) Miscellaneous Unit Wastes [IDAPA 58.01.05.008; 40 CFR 264.601(a)(1), 264.601(b)(1), and 264.601(c)(1)]

The wastes to be treated in the decon cubicles, decon cell, steam spray booth and the other miscellaneous treatment processes located in CPP-659 and in CPP-666 FDP (and Room SB-8) may be non-hazardous/hazardous/mixed waste and debris that are intended for disposal. Additionally, the Remote Decon Cell (Room 308), the Filter Handling Cell (Room 309), and the FDP Cell may be used for absorbent addition treatment. The chemical characteristics of the wastes are described in Attachment 2, Section C of this permit.

The floors of the decon cubicles are lined with stainless steel, and the walls are concrete with epoxy coating. The floor, walls and ceiling of the decon cell are also lined with stainless steel. These materials are compatible with the wastes to be treated and the treatment solutions to be used. In the decon cubicles, the floor drains to tanks VES-NCD-123 and -129 have been permanently plugged as part of the Embedded Lines Upgrade Project. Therefore, liquid wastes in these cubicles will be collected in compatible containers and then transferred to the INTEC liquid waste management system at an appropriate input point. Solutions in the decon cell are drained to either the collection tank (VES-NCD-129) or to the holdup tank (VES-NCD-123). The cells in which VES-NCD-123 and -129 are located are secondarily contained, as described in Attachment 1, Section D-2f(1)(b) of this permit.

For a discussion of the potential of the waste to react or evaporate to form gaseous, aerosol, or particulate products that enter the atmosphere, see Attachment 2, Section C-2f of this permit.

A negative pressure is maintained in the decon cubicles. The cell air is discharged to either the calciner exhaust tunnel or through the vent air scrubber system to the calciner exhaust tunnel. The cell air is washed in the vent air scrubber system, to remove acid fumes, whenever boiling acid is used in the decon cubicles. Normal exit for the ventilation air is through the exhaust tunnel to the calciner exhaust plenum. The ventilation air normally passes through a prefilter and two stages of HEPA filters and out the calciner exhaust stack. The heating, ventilation, and air conditioning (HVAC) system does not have a carbon absorption system to remove organics from the air; however, any organics associated with the debris materials to be treated in the decon cubicles will be a result of the contained in rule and as such will be in de minimis or nondetectable concentrations.

A negative pressure is maintained in the steam spray booth and discharges directly to the calciner exhaust tunnel. Normal exit for the ventilation air is through a prefilter and two stages of HEPA filters and out one of two NWCF building stacks. The HVAC system does not have a carbon absorption system to remove organics from the air; however, any organics associated with the debris materials to be treated in the steam spray booth will be a result of the contained in rule, and as such, will be in de minimis or nondetectable concentrations.

The floor of the FDP Cell is lined with stainless steel. The walls of the FDP Cell are lined with stainless steel to approximately 15 feet above the 0’0” level. These materials are compatible with the wastes to be treated.

A negative pressure is maintained in the FDP Cell. Normal exit for the ventilation air is through through two stages of HEPA filters and out the FAST stack. The HVAC system does not have a carbon absorption system to remove organics from the air; however, any organics associated with the debris materials to be treated in the FDP Cell will be a result of the contained in rule, and as such, will be in de minimis or nondetectable concentrations.

D-8b(2) Containment System [IDAPA 58.01.05.008 and 58.01.05.012; 40 CFR 264.601(b)(2) and 270.23(a)(2)]

Decon Cubicles

The decon cubicles are designed to prevent the spread of contamination during treatment activities. The floors of the cubicles are lined with stainless steel, and the walls are concrete with epoxy coating. In each cubicle the floor is sloped toward a drain gutter along the north wall. In each cubicle the gutter has two drain lines which have been plugged as part of the CPP-659 Embedded Lines Upgrade Project. During treatment in the cubicles, liquid waste will be collected in compatible containers and then transferred to the INTEC liquid waste management system at an appropriate input point. For details on the draining of portable soak tanks after treatment in the decon cubicles, see Attachment 1, Sections D-1a(1), D-1a(2), and D-1a(3) of this permit.

The drain piping between the decon cubicles and VES-NCD-123 and -129, which runs through the second level corridor (303) and the cell entry valve pit (307), is not doubly encased and has been permanently plugged in the decon cubicles as part of the CPP-659 Embedded Lines Upgrade Project. Any spills in the decon cubicles would occur during operational activities within the cubicles and would be contained and cleaned up immediately.

For details on inspections related to leak detection for the decon cubicles, see Attachment 4, Section F-2b(8) of this permit.

Decon Cell

The decon cell is designed to prevent the spread of contamination during treatment activities. The floor, ceiling and walls are lined with stainless steel. The floor is sloped toward a drain gutter along the west wall. The cell gutter drain line can be valved to either VES-NCD-129 or to VES-NCD-123. Treatment can be done in portable soak tanks, allowing the treatment solution to be heated if necessary. During these types of treatment activities, the valve on the drain line leading to the selected tank is kept open, allowing solutions to drain to the selected tank. During other treatment activities in the cell, the valves on the drain lines are closed and treatment solution is heated with steam in the gutter. The heated treatment solution from the gutter is then jetted onto items (waste and materials for reuse) being treated in the cell. Upon completion of the treatment, one of the valves is opened and the solution is drained to the appropriated tank.

The drain piping from the decon/filter handling cells runs under the cell entry (room 307) through an encased line to the valve pit to either the waste collection cell (room 219) to VES-NCD-123 or to the hold up tank cell (room 203) to VES-NCD-129. Any leaks from the drain piping in the valve pit or pipe encasements would drain to the hold up tank cell drain and would be detected by means of level sensor LE-219 [see Section D-2f(1)(b)].

For details on the drain piping between the decon cell and VES-NCD-123 and -129, see Drawing 133446 (located in the drawings package of the appendices of this permit). For details on inspections related to leak detection for the decon cell, see Section F-2b(8) of this permit. For details on the secondary containment of tanks VES-NCD-123 and -129, see Section D-2f(1)(b).

Steam Spray Booth

The steam spray booth, including the liquid abrasive spray glove box, is located in the truck bay area of the equipment decon room, Room 418. This room has about 4,161 ft^2 (57 x 73 ft) of floor space. The floor of the equipment decon room is covered with 1/16-in. Series 300 stainless steel, except for the truck bay, which has a 1/4-in. stainless-steel floor. The walls are either concrete or steel girders with metal siding covered with a nonporous epoxy coating.

The steam spray booth measures 31.3 x 18.5 x 15.0 ft high (excluding the glove box). The booth has a 3/16-in. stainless-steel primary containment floor and a 1/4-in. stainless-steel secondary containment (original) floor. Drain lines are located between the primary floor and the secondary floor. The drain lines are secondarily contained by the original floor and the steam spray booth trench. Drainage from any secondary containment in the CPP-1659 trench, equipment decon room, truck bay trench, or the steam spray booth is collected in the low point of the steam spray booth trench, from which it drains into a 6-in. secondary containment drain system leading to the gutter in the decon holdup tank cell (Room 219). A liquid level sensor, LE-219, detects liquid in the holdup tank cell gutter drain pipe (3"-PLAD-4215), which could be an indication of a leak into the steam spray booth's secondary containment system.

The drain for the liquid abrasive spray glove box is tied directly into the drain to VES-NCD-123 from the steam spray booth's primary containment floor. The drain pipe secondary containment is provided by the Room 418 stainless-steel floor between the glove box and the booth wall. The steam spray booth floor provides secondary containment until the pipe penetrates the booth's floor connection into the drain to VES-NCD-123. Piping under the steam spray booth floor has the secondary containment provided by the trench, 6-in. piping encasement, and LE-219 leak detection. For the glove box shell, any leaks are retained by the stainless-steel floor of Room 418 or the floor of the steam spray booth.

The matrix in Appendix D-1 of this attachment defines the boundaries of primary and secondary containment for each treatment unit under various drain scenarios possible in CPP-659.

CPP-666 FDP Cell and Room SB-8

The FDP Cell floor is reinforced concrete lined with stainless steel. Additionally, the cell floor provides secondary containment that is free of cracks or gaps and is impervious to liquids so as to contain any leaks or spills. CPP-666 Room SB-8 is reinforced concrete lined with a 12 gauge stainless steel secondary containment.

D-8b(3) Site Air Conditions [IDAPA 58.01.05.008 and 58.01.05.012; 40 CFR 264.601(c)(4) and (5), and 270.23(b)]

The climatology and meteorology at the INL *DOE Programmatic Spent Nuclear Fuel Management and INEEL Environmental Restoration and Waste Management Programs Final Environmental Impact Statement* (DOE/EIS – 0203F, Volume 1, Appendix B). A copy of this document has already been provided to DEQ.

D-8b(4) Prevention of Air Emissions [IDAPA 58.01.05.008 and 58.01.05.012; 40 CFR 264.601(c)(2) and 270.23(a)(2)]

The decon cubicles are served by the NWCF HVAC system. Air exits each decon cubicle through an exhaust outlet to the vent air scrubber system or directly to the calciner vent tunnel. The decon cell vent air is sent to the vent air scrubber system when boiling acid is used. In the steam spray booth, ventilation air from the booth goes directly to the calciner exhaust air tunnel. Each exhaust air plenum is equipped with prefilters and two banks of HEPA filters in series.

The prefilters and HEPA filters remove approximately 99% of all particles in the exhaust air. A radiation detector alarms if the radiation level from the particles collected on the filters increases above a preset limit. From the plenums, the filtered exhaust air is ducted through one of two stacks to the atmosphere.

Table D-5. Baseline annual average and maximum hourly emission rates of hazardous/toxic air pollutants at the INL.

Hazardous/Toxic Air	Annual Average(kg/yr)	Maximum Hourly (kg/hr)
Acetaldehyde	31	0.39
Ammonia	1,600	3.4
Arsenic	4.2	9.0×10^{-4}
Benzene	370	16
1,3-Butadiene	220	0.8
Carbon tetrachloride	28	0.08
Chloroform	1.9	5.5×10^{-3}
Chromium – trivalent	3.1	2.5×10^{-3}
Chromium – hexavalent	0.4	6.2×10^{-4}
Cyclopentane	350	0.58
Dichloromethane	620	0.29
Formaldehyde	960	8.9
Hydrazine	8.3	9.5×10^{-4}
Hydrochloric acid	1,500	0.34
Mercury	200	0.023
Naphthalene	16	2.2
Nickel	270	0.057
Nitric Acid	1,500	1.7
Phosphorous	56	0.024
Potassium hydroxide	990	0.24
Propionaldehyde	62	0.24
Styrene	4.7	0.74
Tetrachloroethylene	980	0.11
Toluene	580	56
Trichloroethylene	4.7	0.013
Trimethylbenzene	87	12

Sources:
DOE Programmatic Spent Nuclear Fuel Management and INEEL Environmental Restoration and Waste Management Programs Final Environmental Impact Statement, Volume 1, Appendix B, Table 4.7-1, p. 4.7-5. See that table for assumptions and sources of information.
2005 Supplemental Analysis of the INL Site Portion of the April 1995 Programmatic Spent Nuclear Fuel Management and Idaho National Engineering Laboratory Environmental Restoration and Waste Management Programs Final Environmental Impact Statement, June 2005 (DOE/EIS-0203-F-SA-02).

a. Hazardous/toxic air pollutants that are listed in State of Idaho regulations and are emitted in levels that exceed screening criteria.

D-8b(5) Operating Standards [IDAPA 58.01.05.008 and 58.01.05.012; 40 CFR 264.601(c)(3) and 270.23(a)(2)]

For information on the operating characteristics of the decon cubicles, the decon cell, and the steam spray booth, see Section D-8b of this permit. For a discussion of the likelihood of air emissions and the potential for the production of toxic or explosive gases, aerosols, or particulate, see Attachment 2, Section C-2f.

D-8b(6) Site Hydrogeologic Conditions [IDAPA 58.01.05.008 and 58.01.05.012; 40 CFR 264.601(a)(2), (3), and (4), 264.601(b)(3) and (5), and 270.23(b)]

The hydrology conditions at the INL are addressed in the *DOE Programmatic Spent Nuclear Fuel Management and INEEL Environmental Restoration and Waste Management Programs Final Environmental Impact Statement* (DOE/EIS – 0203F, Volume 1, Appendix B). A copy of this document has already been provided to DEQ.

D-8b(7) Site Precipitation [IDAPA 58.01.05.008; 40 CFR 264.601(b)(4)]

Site precipitation is addressed in the *DOE Programmatic Spent Nuclear Fuel Management and INEEL Environmental Restoration and Waste Management Programs Final Environmental Impact Statement* (DOE/EIS – 0203F, Volume 1, Appendix B). A copy of this document has already been provided to DEQ.

D-8b(8) Groundwater Usage [IDAPA 58.01.05.008; 40 CFR 264.601(a)(5)]

Groundwater usage at the INL is addressed the *DOE Programmatic Spent Nuclear Fuel Management and INEEL Environmental Restoration and Waste Management Programs Final Environmental Impact Statement* (DOE/EIS – 0203F, Volume 1, Appendix B). A copy of this document has already been provided to DEQ.

D-8b(9) Surface Waters and Surface Soils [IDAPA 58.01.05.008; 40 CFR 264.601(b)(6), (7), and (8)]

Surface water and surface soils at the INL are addressed in the *DOE Programmatic Spent Nuclear Fuel Management and INEEL Environmental Restoration and Waste Management Programs Final*

Environmental Impact Statement (DOE/EIS – 0203DF, Volume 1, Appendix B). A copy of this document has already been provided to DEQ.

D-8b(10) Area Land Use [IDAPA 58.01.05.008 and 58.01.05.012; 40 CFR 264.601(a)(6) and (b)(9), and 270.23(b)]

The area land uses is addresses in the *DOE Programmatic Spent Nuclear Fuel Management and INEEL Environmental Restoration and Waste Management Programs Final Environmental Impact Statement* (DOE/EIS – 0203F, Volume 1, Appendix B). A copy of this document has already been provided to DEQ.

D-8b(11) Migration of Waste Constituents [IDAPA 58.01.05.008; 40 CFR 264.601(a)(7)]

For reasons discussed in Sections D-8b, D-8b(1), D-8b(2), and D-8b(4), the potential is extremely small for deposition or migration of waste constituents into subsurface physical structures and into the root zone of food chain crops and other vegetation. This includes migration of waste in gaseous or vapor forms.

D-8b(12) Evaluation of Risk to Human Health and the Environment [IDAPA 58.01.05.008; 40 CFR 264.601(a)(8) and (9), 264.601(b)(10) and (11), and 264.601(c)(6) and (7)]

For information on the risk to human health and the environment of the decon cubicles, decon cell, and the steam spray booth, see Section D-8b.

Appendix D-1. Containment Matrix for CPP-659 and CPP-666 FDP Cell

Containment Matrix for CPP-659 and CPP-666

Treatment Unit / Tank	Location	Valve(s)	Valve Position	Primary Containment	Secondary Containment
Ultrasonic Cleaner UC-NCD-921	Low-Level Decon Room (Rm. 415)	PL-921-1[1]	CLOSED[2]	Stainless-steel sink	Stainless-steel-lined floor, stainless-steel-lined 6" curb, stainless-steel-lined wall, and the Decon Hold-up Tank (VES-NCD-123)
Sink SH-NCD-933	Low-Level Decon Room (Rm. 415)	PL-933-1[1]	CLOSED[2]	Stainless-steel sink	Stainless-steel-lined floor, stainless-steel-lined 6" curb, stainless-steel-lined wall, and the Decon Hold-up Tank (VES-NCD-123)
Sink SH-NCD-934	Low-Level Decon Room (Rm. 415)	PL-934-1[1]	CLOSED[2]	Stainless-steel sink	Stainless-steel-lined floor, stainless-steel-lined 6" curb, stainless-steel-lined wall, and the Decon Hold-up Tank (VES-NCD-123)
Steam Spray Booth	Equipment Decon Room (Rm. 418)	None	N/A	Stainless-steel-lined floor, stainless-steel-lined wall, and the Decon Holdup Tank (VES-NCD-123)	Stainless-steel-lined floor and stainless-steel-lined 6" curb in the Decon Holdup Tank Cell (Rm. 219)
Decon Cubicle (Rm. 421)	Equipment Decon Room (Rm. 418)	PL-3[3] PL-5[3]	CLOSED CLOSED	Compatible container used as appropriate for facility operations	Stainless-steel-lined floor, concrete walls covered with an epoxy coating
Decon Cubicle (Rm. 421)	Equipment Decon Room (Rm. 418)	PL-3[3] PL-5[3]	CLOSED CLOSED	Compatible container used as appropriate for facility operations	Stainless-steel-lined floor, concrete walls covered with an epoxy coating
Decon Cubicle (Rm. 422)	Equipment Decon Room (Rm. 418)	PL-7[3] PL-9[3]	CLOSED CLOSED	Compatible container used as appropriate for facility operations	Stainless-steel-lined floor, concrete walls covered with an epoxy coating
Decon Cubicle (Rm. 422)	Equipment Decon Room (Rm. 418)	PL-7[3] PL-9[3]	CLOSED CLOSED	Compatible container used as appropriate for facility operations	Stainless-steel-lined floor, concrete walls covered with an epoxy coating
Decon Cell	(Rm. 308)	PL-11[3] PL-13[3]	CLOSED CLOSED	Stainless-steel Floor and Gutter Drain	(VES-NCD-123) (VES-NCD-129)

Treatment Unit / Tank	Location	Valve(s)	Valve Position	Primary Containment	Secondary Containment
Portable Soak Tanks: TK-NCD-137 VES-NCD-138 TK-NCD-139	in Steam Spray Booth	None	N/A	Stainless-steel soak tank	Stainless-steel-lined floor, stainless-steel-lined wall, and the Decon Holdup Tank (VES-NCD-123)
Portable Soak Tanks: TK-NCD-137 VES-NCD-138 TK-NCD-139	in Decon Cubicle (Rm. 421 or 422)	see Decon Cubicle references above[4]	see Decon Cubicle references above[4]	Stainless-steel soak tank	Same as primary containment for Decon Cubicle references above[4]
Portable Soak Tanks: TK-NCD-137 VES-NCD-138 TK-NCD-139	In Decon Cell (Rm. 308)	PL-11[3] PL-13[3]	OPEN CLOSED	Stainless-steel soak tank	Stainless-steel-lined floor, stainless-steel-lined wall, and the Decon Holdup Tank (VES-NCD-123)
Portable Soak Tanks: TK-NCD-137 VES-NCD-138 TK-NCD-139	In Decon Cell (Rm. 308)	PL-11[3] PL-13[3]	CLOSED OPEN	Stainless-steel soak tank	Stainless-steel-lined floor, stainless-steel-lined wall, and the Decon Collection Tank (VES-NCD-129)
HFLS Leaching Tank VES-NCD-141	Filter Handling Cell (Rm. 309)	PL-141-1[5] PL-15[3] PL-17[3]	CLOSED[2] OPEN CLOSED	Stainless-steel tank	Stainless-steel-lined floor, stainless-steel-lined wall, and the Decon Holdup Tank (VES-NCD-123)
HFLS Leaching Tank VES-NCD-141	Filter Handling Cell (Rm. 309)	PL-141-1[5] PL-15[3] PL-17[3]	CLOSED[2] CLOSED OPEN	Stainless-steel tank	Stainless-steel-lined floor, stainless-steel-lined wall, and the Decon Collection Tank (VES-NCD-129)
HFLS Drying Tank VES-NCD-142	Filter Handling Cell (Rm. 309)	PL-15[3] PL-17[3]	OPEN CLOSED	Stainless-steel tank	Stainless-steel-lined floor, stainless-steel-lined wall, and the Decon Holdup Tank (VES-NCD-123)
Absorbent Addition	In Decon Cell (Rm. 308)	PL-11[3] PL-13[3]	OPEN CLOSED	Waste Container	Stainless-steel-lined floor, stainless-steel-lined wall, and the Decon Holdup Tank (VES-NCD-123)
Absorbent Addition	In Decon Cell (Rm. 308)	PL-11[3] PL-13[3]	CLOSED OPEN	Waste Container	Stainless-steel-lined floor, stainless-steel-lined wall, and the Decon Collection Tank (VES-NCD-129)

Treatment Unit / Tank	Location	Valve(s)	Valve Position	Primary Containment	Secondary Containment
Absorbent Addition	Filter Handling Cell (Rm. 309)	PL-15[3] PL-17[3]	OPEN CLOSED	Waste Container	Stainless-steel-lined floor, stainless-steel-lined wall, and the Decon Holdup Tank (VES-NCD-123)
Absorbent Addition	Filter Handling Cell (Rm. 309)	PL-15[3] PL-17[3]	CLOSED OPEN	Waste Container	Stainless-steel-lined floor, stainless-steel-lined wall, and the Decon Collection Tank (VES-NCD-129)
HFLS Drying Tank VES-NCD-142	Filter Handling Cell (Rm. 309)	PL-15[3] PL-17[3]	CLOSED OPEN	Stainless-steel tank	Stainless-steel-lined floor, stainless-steel-lined wall, and the Decon Collection Tank (VES-NCD-129)
Decon Holdup Tank VES-NCD-123	Decon Holdup Tank Cell (Rm. 219)	None	N/A	Stainless-steel tank	Stainless-steel-lined floor and stainless-steel-lined 6" curb in the Decon Holdup Tank Cell (Rm. 219)
Decon Collection Tank VES-NCD-129	Decon Collection Tank Cell (Rm. 203)	None	N/A	Stainless-steel tank	Stainless-steel-lined floor and stainless-steel-lined 6" curb in the Decon Collection Tank Cell (Rm. 203)
CPP-666 Container Storage and Other Miscellaneous Treatment Areas	CPP-666 FDP Cell 0' level -13' level	None	N/A	Approved containers	FDP Sump and stainless steel lined cell floor at the -27' level
Absorbent Addition	CPP-666 FDP Cell 0'0" level	None	N/A	Repackaging tables	FDP Sump and stainless steel lined cell floor at the -27' level
CPP-666 Slab Tank Storage Unit (VES-FC-184)	CPP-666 FDP Cell -27' level	None	N/A	Tank VES-FC-184	FDP Sump and stainless steel lined cell floor at the -27' level
CPP-666 Sodium Distillation System	CPP-666 Room SB-8 -31' level	None	N/A	Stainless steel tanks	Room SB-8 stainless steel lined room floor

[1] See Drawing Number 133444 in the drawings package found in appendices of this permit.

[2] Valve is always closed during debris treatment.

[3] See Drawing Number 133446 in the drawings package found in the appendices of this permit.

[4] The valve configurations possible are the same as noted for the Decon Cubicles (Rooms 421 and 422). The secondary containment for the portable soak tank is the same as the primary containment for a decon cubicle with the same valve alignment.

[5] See Drawing Number 444389 in the drawings package found in the appendices of this permit.

Appendix D-2. CPP-659 Vent Scrubber and HVAC Systems

Vent Scrubber and HVAC Systems

Vent Air Scrubber System

Selected debris treatment equipment and cells are vented to the vent air scrubber system. The vented air frequently contains acid vapors. The scrubber system washes the air stream before it is discharged to the calciner exhaust tunnel.

Heating, Ventilation, and Air Conditioning (HVAC) Systems

Two heating, ventilation, and air conditioning (HVAC) systems supply rooms and areas used for storage or treatment of mixed waste in the decon area: the calciner system and the decon area system.

The HVAC systems maintain confinement of radioactive materials through a multiple-zone philosophy. Pressure differentials are maintained between the various building confinement zones and between the building and the outside atmosphere to assure that airflow is from zones of lesser contamination potential to zones of greater contamination potential. Normal exit for the ventilation air is through a prefilter and two stages of HEPA filters and out of two NWCF building stacks.

To help control the spread of contamination, supply air is ducted to the top of each cell and exhausted from the bottom. Each cell supply duct is equipped with a HEPA filter to protect the ducting from contaminants in the unlikely event of cell pressurization. Each cell outlet is equipped with steel mesh covers to prevent large particles from being drawn into the exhaust ducting and plenums.

Two exhaust blowers, BLO-NCD-287-1 and -2, draw the used air from the various decon areas through the main decon exhaust duct and decon exhaust plenums. Each of the exhaust air plenums is equipped with prefiltration and two banks of HEPA filters in series.

The second exhaust system functions the same as the first, except the blowers are BLO-NCM-285-1, -2, and -3.

The prefilters and HEPA filters remove particles greater than .3 mm in diameter in the exhaust air, leaving a nonradioactive air stream. A radiation detector alarms if the radiation level from the particles collected on the filters increases above a preset limit. From the plenums, the filtered exhaust air is ducted through one of the two stacks to the atmosphere.

Appendix D-3. Makeup of Debris Treatment Solutions

Makeup of Debris Treatment Solutions

Debris treatment solutions normally consist of water, to which specified amounts of acids, alkalis, detergents, or some combination of these are added. The solution may be heated to increase the efficiency of the cleaning action or to aid in mixing. The major equipment items in the makeup process are as follows:

- Decon solution makeup tanks (VES-NCD-127 and -128)
- Chemical scale
- Decon tank agitators
- Chemical addition funnels.

Makeup Tanks

The two makeup tanks are identical. VES-NCD-127 is normally dedicated to nitric acid solutions. VES-NCD-128 is used for other solution makeups as necessary. Each tank has a 530- gal capacity, a 48-in. inner diameter, and is 6 ft 9 in. high. The tanks are located in the northwest corner of the low-level decon room (415). This area of the room, including the decon solution transfer pumps, is surrounded by a 4-in. stainless steel curb to contain spills. The area under the tanks and pumps is lined with stainless steel and drains to a gutter along the east side of the area; the gutter drains to the decon area holdup tank, VES-NCD-123.

Each makeup tank is vertically mounted above the floor on four support legs and has a hinged access lid for visual inspection. The tanks are surrounded on three sides by a 3-ft-high stainless-steel mesh platform for access to valves and instrumentation. Each tank has 2 in. of insulation on the sides and bottom.

Inputs to each tank include the following:

- Dry chemicals
- Nitric acid
- Water
- Steam or air sparge
- Steam heat.

Dry chemicals are added to each tank through its chemical addition funnel. The funnels stand approximately 2 ft above the mezzanine (Room 502) floor. Each funnel opening is 18-in. diameter and is fitted with a hinged lid. A dry chemical chute extends from the base of each through the floor to the top of the makeup tanks. Chemicals to be added to water in the tanks are measured/weighed prior to addition.

The amount and order of addition of chemicals is specified on makeup sheets as directed by supervision. VES-NCD-127 will normally contain 6M nitric acid. Stock nitric acid, at 13M, is mixed with water already in the tank to reach the specified concentration. Nitric acid is transferred from VES-NCC-117 or -118 in the calciner decon solution makeup room. It is also possible to transfer nitric acid from CPP-601 to the decon solution makeup tanks.

Solutions are mixed by using either a single-prop agitator bolted to the top of each tank or by sparging. The agitators consist of an electric motor turning a prop on a shaft extending into the bottom half of the tank. Hand switches on the local control panel activate the agitators. A sparge ring, located on the tangent line at the bottom of the tank, can be supplied with steam, air, or both to aid in mixing solutions. Sparging with steam will heat the solution as well as dilute it. Solutions--before, during, or after mixing--can also be heated using steam coils in the bottom half of each tank. The prepared treatment solution exits the tank through a line at the bottom of the tank to the decon transfer pumps.

Samples of the solution can be manually taken. The tanks are protected with overflow lines about 6 in. below the top of the tank. Instrumentation for each tank is located on local Control Panel CP-NCD-989. Each tank can be monitored for liquid level, specific gravity, and temperature.

Treatment Solution Transfer

Each tank has a parallel but separate system of piping to transfer made-up solution to the debris treatment equipment and cells throughout the decon area. The separate lines allow different treatment solutions to be used in sequence without a makeup waiting period, if several different solutions are necessary.

Motive force for transfers is provided by two pumps (P-NCD-227 for VES-NCD-127, and P-NCD-228 for VES-NCD-128) located immediately to the east of the tanks and within the curbed area surrounding the tanks. These are vertical centrifugal pumps capable of 300 gpm at a normal operating pressure of 80 to 90 psig. All wetted parts of the pumps and the solution makeup and transfer system are constructed of stainless steel.

The pumps can be operated either from the local control board or from the platform around the makeup tanks. Two operators are necessary for transferring treatment solution: one at the pump control and one at the solution destination. Pressure gauges for each pump are located near the pump on the discharge line.

Each pump has two lines that drain into the gutter. A system for water and/or air flushing transfer lines ensure that treatment solutions are not mixed. The pumps and transfer lines drain to the holdup tank (VES-NCD-123). The volume of treatment solution transferred to each tank or line is recorded on a makeup transfer data sheet. See Drawing 133443 (located in the drawings package of the appendices of this permit) for a mechanical flow diagram focusing on the makeup tanks.

Small-Volume Treatment Solution Makeup

Debris treatment solutions can be made up outside of the regular makeup tanks (VES-NCD-127 and -128 if a smaller volume is needed or if these tanks are in use. There are three general ways of doing this.

- Treatment solutions can be made up directly in any soak tank for use in that tank

- Small amounts of solution (1 to 10 gal) can be made up in stainless steel buckets or other appropriate containers

- Treatment solutions can also be made up in place in the small sink, large sink, ultrasonic cleaner, and soak tanks.

The decision on where to make up treatment solutions will be made by the technician or by supervision when determining the treatment procedures. Decisions will be based on the current use of the makeup tanks, the volume of solution needed, and any special conditions that might apply to the situation.

HWMA/RCRA PART B PERMIT

FOR THE

IDAHO NATIONAL LABORATORY

Volume 18 – Idaho Nuclear Technology and Engineering Center

ATTACHMENT 1a

Radioactive Mixed Waste Staging Facility (CPP-1617)

Section B

Facility Description

Revision Date: March 10, 2015

CONTENTS

EXHIBITS

SECTION B. FACILITY DESCRIPTION

B-1. Facility Description [IDAPA 58.01.05.008; 40 CFR 270.14(b)(1)]

This section of the Resource Conservation and Recovery Act (RCRA) Part B Permit was prepared for a unit located within the boundaries of the Idaho Nuclear Technology and Engineering Center (INTEC) in the southwest quadrant of the Idaho National Laboratory (INL) (see Exhibit B-1, in Attachment 1). The unit is the Radioactive Mixed Waste Staging Facility (RMWSF, CPP-1617), see Exhibit B-2, in Attachment 1. The unit carries the RCRA process code of S01 (container storage) subject to the requirements set forth in 40 CFR 264. Additionally the RMWSF carries the RCRA process code of T04 (other treatment) for macroencapsulation of hazardous or mixed waste debris and radioactive lead solids. Macroencapsulation at the RMWSF is also subject to the requirements set forth in 40 CFR 264. Macroencapsulation at the RMWSF may consist of both a commercial macroencapsulation process and or a custom macroencapsulation process to meet the treatment standards for debris per 40 CFR 268.45 (MACRO) and the treatment standards for radioactive lead solids per 40 CFR 268.42 (MACRO). The specific macroencapsulation process used will depend upon the size, weight, and radiation hazard presented by the waste.

The physical conditions around the INTEC are typical for the INL site. The site is characterized as a high desert ecosystem at an elevation of approximately 5,000 feet above mean sea level. The area is relatively flat and receives little rainfall. Due to the lack of rainfall and the poor quality of the surficial soils, the site has little agricultural value. Wind patterns are generally in a northeast/southwest axis, with some seasonal variability. Detailed site data may be obtained from the INL Part B Permit Application, Volume 3.

RMWSF. The RMWSF includes Building CPP-1617 and the fenced facility area. CPP-1617 is a 40 ft × 20 ft metal building with a concrete floor. The entire building may be utilized to store, receive, sample, and/or sort hazardous and mixed wastes and treat debris waste and radioactive lead solids using a commercial macroencapsulation process. When waste is stored, sorted, or treated via macroencapsulation, an area is designated within the building to accommodate the amount and size of wastes to be stored, sorted, or macroencapsulated. This area will vary as needs arise. Additionally, macroencapsulation may occur outside the CPP-1617 building, but still within the fenced facility area of the RMWSF. The exact location for macroencapsulation within the RMWSF and fenced facility area may vary depending upon operational needs/constraints.

The RMWSF fenced facility area contains various storage containers including 8 ft × 20 ft × 8 ft high metal cargo containers. Some of the cargo containers, as necessary, may be placed upon elevated support (e.g., timbers) to elevate them above the asphalt or gravel to ensure that all doors may be opened for weekly waste inspections or waste transport. Some of the metal cargo containers are insulated, equipped with electric baseboard heaters, and have drip pans for storage of containers with free liquids that are capable of freezing. Cargo containers equipped with explosion-proof heaters will be used for the storage of ignitable waste capable of freezing. Unheated metal cargo containers store wastes without free liquids and liquid wastes not requiring heat (e.g., oils and other non-aqueous organic liquids). The cargo containers may contain hazardous or mixed wastes. The number of cargo containers located within the fenced facility area varies according to the volume and type of waste requiring storage at the RMWSF.

The walls are to be constructed using 16 gauge or thicker aluminum or steel which may be corrugated or flat sheet design. Seams in the wall construction must be welded. Patches on the walls must be of the same material as the wall material. The roof must be constructed using a one-piece sheet steel or aluminum design, 16 gauge or thicker. The floor is elevated to prevent water intrusion through the seam between the floor and the sidewall. Two sets of forklift pockets are provided

The cargo container is capable of stacking another cargo container weighting up to 25,000 pounds on top of it.

An atypical cargo container may be insulated, have a plywood floor, wall vents, and electric baseboard heating or explosion-proof heating.

The RMWSF can also receive different sized strong tight boxes. The containers and boxes may contain hazardous or mixed wastes. The number of containers and boxes located within the fenced facility area vary according to the volume of waste requiring storage at the RMWSF.

Additionally, the RMWSF may receive interim storage containers (ISCs). These ISCs are for the storage of remote handled (RH) transuranic (TRU) waste. Containers of temperature dependent (capable of freezing) aqueous waste stored at RMWSF are provided with drip pans and are stored in heated metal cargo containers or in Building CPP-1617. The exception to this is for those containers for which verification and characterization have been completed and the liquid volume in the container has been determined to be less than 5% of the container volume. These containers will be placed in drip pans but may be stored in unheated cargo containers or may remain in interim storage containers (ISC) without drip pans. The ISCs are lidded weatherproof concrete boxes that may vary in size depending on their inner containers. The ISCs may or may not be equipped with a container insert assembly depending upon the size of the container stored within the ISC. The ISCs may be double stacked and approximately 150 ISCs may be stored at the RMWSF.

The majority of the RMWSF is paved with asphalt within a 227 ft × 280 ft area surrounded by an approximately eight-foot high chain link fence as demonstrated by Exhibit B-1a and the photographs found in Appendix I of the Permit Reapplication. Access to the area is gained through three gates which are locked. Signs that can be read at a minimum distance of 25 ft from any approach to the facility and state at a minimum "DANGER Unauthorized Personnel Keep Out" are located on the gates and fences surrounding the RMWSF.

The total storage capacity for all wastes at the RMWSF is 2,244,156 gallons with an estimated annual throughput of 12,000 tons. Exhibit B-1a demonstrates one example of the storage configuration.

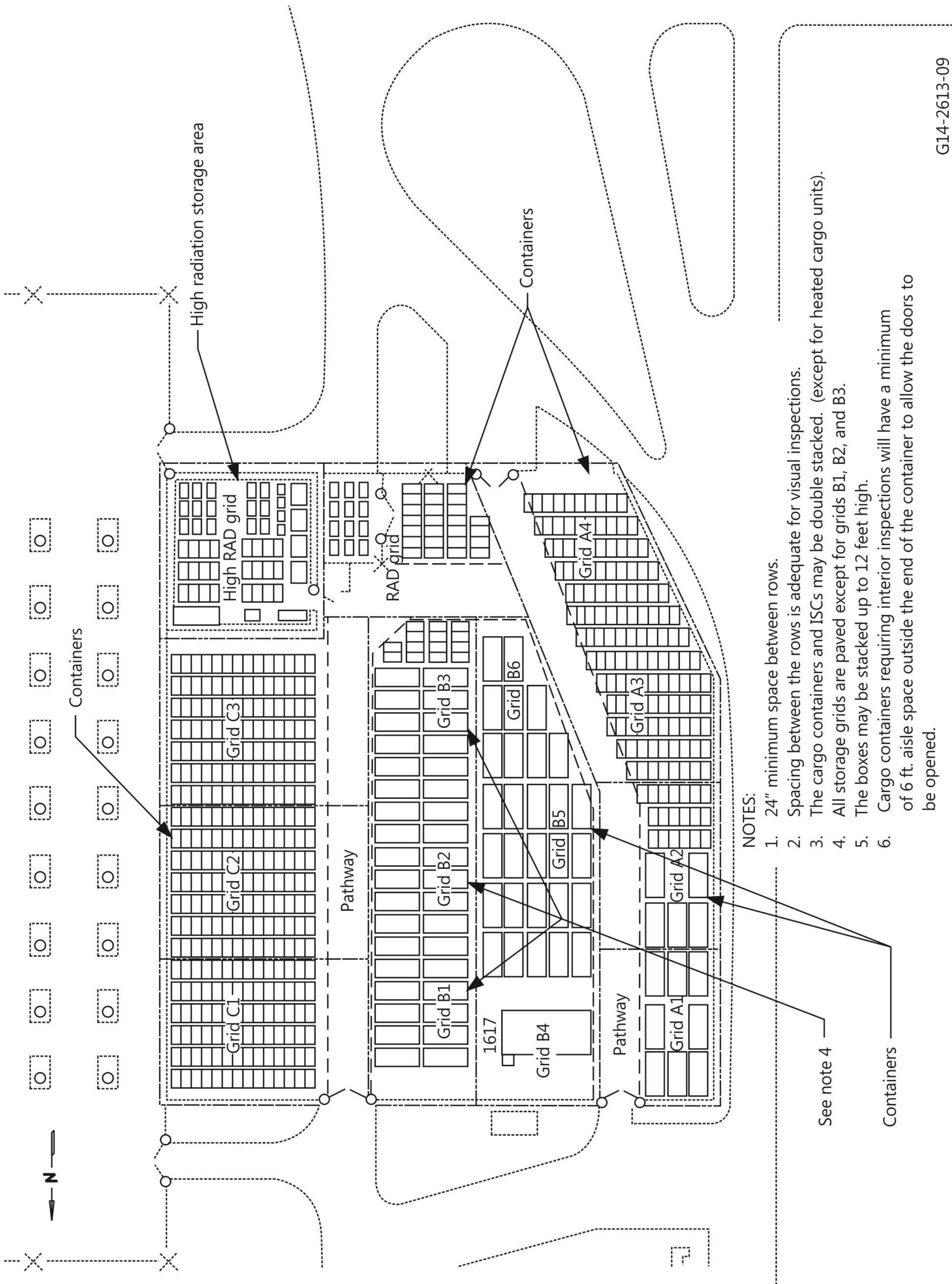


Exhibit B-1a. Example of RMWSF Waste Configuration

B-2. Description of Operations [IDAPA 58.01.05.008; 40 CFR 270.14(b)(1)]

RMWSF

The RMWSF container storage unit manages a variety of wastes generated from INTEC and INL activities. The types of containers typically received for storage in this area includes drums, metal boxes and wooden boxes. Plastic bags containing wastes without free liquids are stored inside boxes and cargo containers at this area. All waste containers received at the RMWSF are clearly labeled with the words "Hazardous Waste" or "Mixed Hazardous Waste."

A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste. Consolidation of containerized waste is allowed and routinely performed at the facility. All containers received at this facility are inspected, and the accompanying documentation is examined by facility personnel.

Additionally, the RMWSF is permitted for other treatment (T04), specifically macroencapsulation of hazardous and mixed debris wastes. Macroencapsulation at the RMWSF may consist of a commercial macroencapsulation process and or a custom macroencapsulation process to meet the treatment standards for debris per 40 CFR 268.45 (MACRO) and the treatment standards for lead solids per 40 CFR 268.42 (MACRO). The specific macroencapsulation process used will depend upon the size, weight, and radiation hazard presented by the waste.

Prior to macroencapsulation, the use of the proposed macroencapsulation technology process will be reviewed by the proposed off-Site disposal facility for acceptability. The commercial macroencapsulation process will be performed using a commercially available macroencapsulation unit. This unit will provide isolation from potentially leaching media by use of a jacket of high density polyethylene. The custom macroencapsulation process will be performed in boxes by creating a jacket of inert inorganic material that completely surrounds the waste which will provide isolation from potentially leaching media. Typically the inert organic material to be used will be commercially available cement grout.

HWMA/RCRA PART B PERMIT

FOR THE

IDAHO NATIONAL LABORATORY

Volume 18 – Idaho Nuclear Technology and Engineering Center

ATTACHMENT 1a

Radioactive Mixed Waste Staging Facility (CPP-1617)

Section D

Process Description

Revision Date: February 12, 2016

CONTENTS

FIGURES

TABLES

D. PROCESS INFORMATION

This section provides process information for the Radioactive Mixed Waste Staging Facility (RMWSF) waste storage unit at the Idaho National Laboratory (INL). This unit is located at the Idaho Nuclear Technology and Engineering Center (INTEC) at the INL and carries the process code of S01 (container storage). The unit is associated with Building CPP-1617 and fenced facility area. Additionally the RMWSF carries the RCRA process code of T04 (other treatment) for macroencapsulation of hazardous or mixed waste debris and radioactive lead solids. Macroencapsulation at the RMWSF is also subject to the requirements set forth in 40 CFR 264. Macroencapsulation at the RMWSF may consist of a commercial macroencapsulation process and or a custom macroencapsulation process to meet the treatment standards for debris per 40 CFR 268.45 and the treatment standards for lead solids per 40 CFR 268.42 . The specific macroencapsulation process used will depend upon the size, weight, and radiation hazard presented by the waste.

The RMWSF provides facilities for the management of radioactive only (RO) wastes, mixed wastes (MW) and Comprehensive Environmental Response Compensation and Liability Act (CERCLA) waste. Some RO and MW stored at the RMWSF are also regulated by the Toxic Substances Control Act (TSCA). The storage of co-located CERCLA wastes will be managed within the permit conditions, but disposition will be controlled through the CERCLA process.

D-1. Containers

Wastes are received at the RMWSF in drums, wooden boxes, metal bins, other Department of Transportation (DOT) approved/United Nations (UN) specification shipping containers, or other nonstandard waste packaging. Any nonstandard waste packaging requires INL facility manager approval prior to the nonstandard waste package being stored at the RMWSF. All nonstandard waste packaging approval will be documented in the RMWSF operating record.

Container Treatment (T04) - Macroencapsulation)

Macroencapsulation Using Commercial and Custom Units

The treatment objective of macroencapsulation is to meet the treatment standards for debris as specified in 40 CFR 268.45 and radioactive lead solids as specified in 40 CFR 268.42. Depending upon the size and weight of the waste and the radiation hazard presented by that waste either a commercially available macroencapsulation unit or a custom macroencapsulation process will be used.

Commercially available macroencapsulation units such as the Ultratech International macro-packs are planned for smaller, lighter weight, and lower radiation dose wastes. Another example of a commercially available unit that may be used at CPP-1617 is a macrobag/liner system from PacTec known as the High Modulus Polymeric Packaging System or HMPPS. This system uses a polymeric organic liner/jacket (see figure 3) for secure macroencapsulation of radioactive lead solids and hazardous debris in soft sided bags of various sizes. Heavier, bulkier, or higher radiation dose wastes are anticipated to be macroencapsulated in cement grout based custom macroencapsulation unit(s).

Prior to macroencapsulation, the characterization of the waste as hazardous debris subject to the 40 CFR 268.45 treatment standard or as radioactive lead solids subject to the 40 CFR 268.42 treatment standard will be documented. Debris waste or radioactive lead solid waste with HWN other than D001, D002, or D003 that is acceptable for storage at the RMWSF will be accepted for macroencapsulation at RMWSF. Prior to macroencapsulation, the use of the proposed macroencapsulation technology process/package will be reviewed with the proposed disposal facility for acceptability. Void space will be minimized prior to completing the macroencapsulation process as necessary in order to meet the off-Site disposal facility waste acceptance criteria.

The following are the general steps for the macroencapsulation processes:

The waste is confirmed to be subject to the macroencapsulation treatment standard. The volume, mass, and radioactive nature of the waste to be treated is evaluated. Either commercially available macroencapsulation or custom macroencapsulation is specified. The macroencapsulation technology to be used is verified as acceptable by the proposed disposal facility.

Commercially available macroencapsulation units will be purchased such as those from Ultratech International or a macrobag/liner system from PacTec which are used as the example for the purpose of describing commercially available macroencapsulation technologies. Commercially available macroencapsulation units are available in various sizes.

The Ultratech International macroencapsulation units provide isolation from potentially leaching media by use of a jacket of high density polyethylene. The waste to be treated is placed inside the macroencapsulation unit, the remaining void space is filled, as necessary, to meet the applicable off-Site disposal facility waste acceptance criteria, and a lid of high density polyethylene is electrically welded to the unit in accordance with manufacturer recommendations effectively sealing the waste within. The electrical welding process is automated and controlled by the macroencapsulation control unit provided by the vendor. After the lid is welded in place, the weld seam is inspected for continuity and lack of deformities that would allow potential leaching media to contact the waste. Any cracks or deficiencies in the seam are repaired. The waste does not come in contact with control equipment unless there has been a release of hazardous constituents. See Figure 1 and Figure 2 for examples of Ultratech International macroencapsulation units that may be used at the RMWSF.

Another example of a commercially available macroencapsulation unit that will be used at CPP-1617 is the macrobag/liner system (see Figures 3 - 6). The macrobag/liner system uses a polymeric organic liner/jacket system for secure macroencapsulation of hazardous debris and radioactive lead solids in soft sided bags of various sizes. The macrobag/liner system is made to resist contaminants and leachate. It consists of zippered inner liner with cardboard integrated into it for structural shape, a middle liner with a zipper seal, and a zippered outer shell. The macrobags are inspected prior to use for rips/tears as part of the operation prodecures. The container(s) of waste to be treated is placed in inside the macrobag/liner (Figure 5) and void space filler (e.g., vermiculite, foam pellets, etc.) is added to fill the package to 90% full or greater, as needed. The waste container(s) and inner liner are used to protect the middle liner from potential damage from the debris within the container(s). The inner bag is closed by pulling two opposing zippers together. The middle liner (Figure 6) is a polymeric material formulated to resist contaminants and leachate. The seal creates a permanent, impermeable barrier, between the waste debris and materials into which it may come into contact after disposal, thus encapsulating the debris. The shell is then closed using the patented closure method that incorporates two zipper pulls for added security. The outer shell acts as the DOT IP-1 or IP-2 packaging for shipping to TSDFs. Containers are managed in a 1 high 2 wide configuration.

Custom macroencapsulation units are typically steel boxes with cement grout liners that are prepared on-Site for macroencapsulation of waste. Isolation from potentially leaching media is provided by the cement grout. The walls and floor of the macroencapsulation package will be made of cement grout at least 3 inches thick poured around a central form that creates the void space for the waste placement. The waste to be treated is placed inside the void space inside the macroencapsulation package, the remaining void space is filled/grouted as necessary to meet the disposal facility waste acceptance criteria, and a minimum 3 inch sealing layer of cement grout is added. After allowing the cement grout to cure, the exposed surfaces are inspected for cracks that would allow potentially leaching material to contact the waste. Any deviations in the grout surface are repaired. Cement grout or similar materials that provide an inert barrier may be used. Any remaining void space within the box is then filled as necessary to meet the disposal facility waste acceptance criteria prior to placing the lid on the box that completes the macroencapsulation package. The waste does not come in contact with anything other than the waste package unless there has been a release of hazardous constituents. See Figure 7 for examples of custom macroencapsulation units that may be used at the RMWSF. (Note: unit specific parameters are specific to waste being treated and container selected.)

During commercial and custom treatment operations, the process equipment and containers will be inspected on a daily basis. The location of each treatment evolution will be documented in the facility operating record. The commercial macroencapsulation units will be operated and maintained in accordance with the manufacturers recommendations.

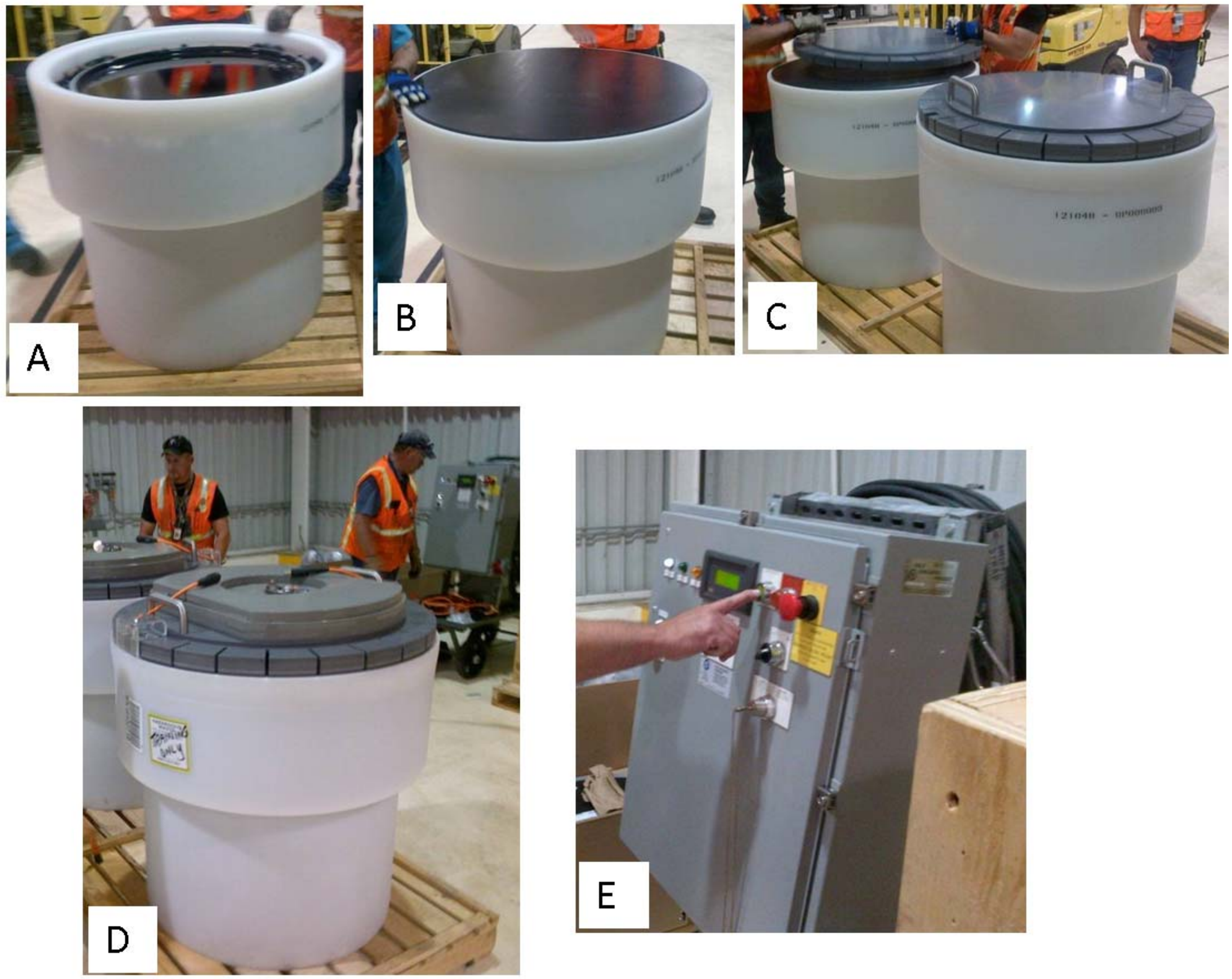


Figure 1. Example of Ultratech International macroencapsulation unit.
a)Waste is placed in purchased macroencapsulation unit
b)Lid is placed on top of waste
c)Weight distribution device is placed on top of lid to promote uniform sealing
d)Weight placed on top of weight distribution device and electrical connections made to control unit in background
e)Control unit is preprogrammed to accurately seal specified containers

Figure 1. Example of Ultratech International macroencapsulation unit that may be used at the RMWSF.

Ultratech 4’ x 4’ x 6’ box macroencapsulation unit being filled

Ultratech 55-gallon macroencapsulation unit being filled

Ultratech 63” diameter macroencapsulation unit sealed and ready for shipment

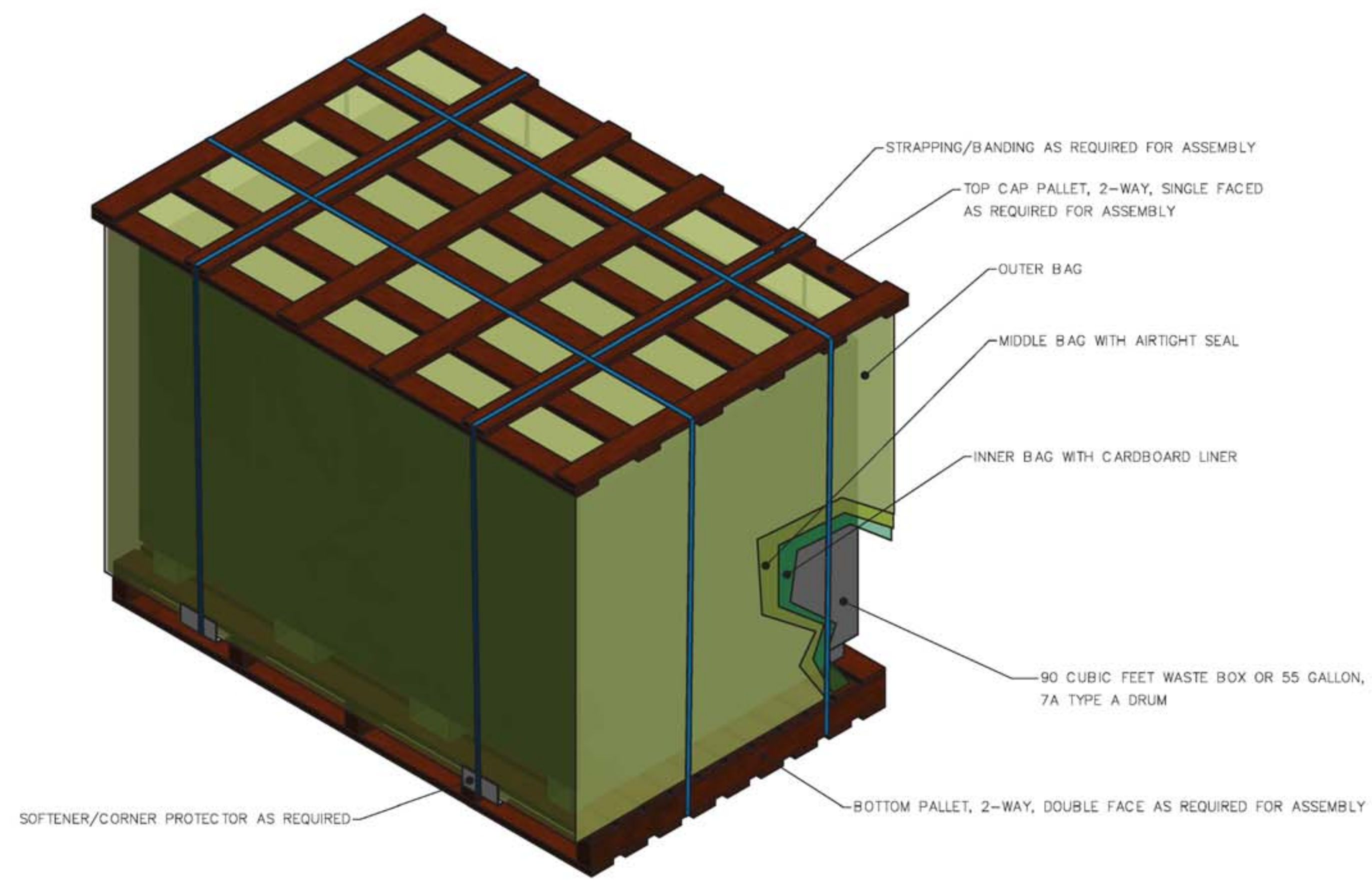
Ultratech 110-gallon macroencapsulation unit with drum inside

Figure 2. Additional examples of Ultratech International macroencapsulation units that may be used at the RMWSF.

PERFORMANCE CRITERIA

ALL MACROBAG ENCAPSULATION SYSTEMS SHALL CONFORM TO 40 CFR 268.45 FOR MACRO ENCAPSULATION, BE TESTED TO MEET U.S. DEPARTMENT OF TRANSPORTATION (DOT) REQUIREMENTS FOR USE AS INDUSTRIAL PACKAGING TYPE 2 (IP-2), AS IDENTIFIED WITHIN 49 CFR 173.411(b)(2) AND BE APPROVED BY NNSS (NEVADA NATIONAL SECURITY SITE).

		MACRO BAG SYSTEMS		
ENCAPSULATION SYSTEM NUMBER	MACROBAG SYSTEM DESCRIPTION (3-LAYERS)	AIR TIGHT SEAL CLOSURE TYPE	MACRO BAG SIZE (INCHES)	CONTENTS
1.	MACROBAG ENCAPSULATION SYSTEM CONSISTS OF AN OUTER BAG MADE FROM 12 OZ. NWPP W/3MIL CTD PE, A MIDDLE BAG MADE FROM 12 MIL REINFORCED PE LINER, AND AN INNER BAG MADE FROM 12 OZ. NWPP W/3 OZ. WPP AND CONTAINING A 700#, 3 WALL CARDBOARD INSERT, MEETS IP-2 REQUIREMENTS	PRESS FIT ZIP LOCK TYPE AIR/WATER PROOF CLOSURE OR EQUIVALENT	80 1/4 LENGTH x 54 1/4 WIDTH x 52 1/4 HEIGHT (-0/+2 EACH DIRECTION)	ONE C0090 CONTAINER
2.	MACROBAG ENCAPSULATION SYSTEM CONSISTS OF AN OUTER BAG MADE FROM 12 OZ. NWPP W/3 MIL CTD PE, A MIDDLE BAG MADE FROM PVC COATED NYLON, AND AN INNER BAG MADE FROM 12 OZ. NWPP W/3 OZ. WPP AND CONTAINING A 700#, 3 WALL CARDBOARD INSERT, MEETS IP-2 REQUIREMENTS	PVC WATERTIGHT ZIPPER OR EQUIVALENT	80 1/4 LENGTH x 54 1/4 WIDTH x 52 1/4 HEIGHT (-0/+2 EACH DIRECTION)	ONE C0090 CONTAINER
3.	MACROBAG ENCAPSULATION SYSTEM CONSISTS OF AN OUTER BAG MADE FROM 12 OZ. NWPP W/3MIL CTD PE, A MIDDLE BAG MADE FROM 12 MIL REINFORCED PE LINER, AND AN INNER BAG MADE FROM 12 OZ. NWPP W/3 OZ. WPP AND CONTAINING A 700#, 3 WALL CARDBOARD INSERT, MEETS IP-2 REQUIREMENTS	PRESS FIT ZIP LOCK TYPE AIR/WATER PROOF CLOSURE OR EQUIVALENT	51 LENGTH x 51 WIDTH x 38 HEIGHT (-0/+3 each direction)	FOUR 55-GALLON DRUMS
4.	MACROBAG ENCAPSULATION SYSTEM CONSISTS OF AN OUTER BAG MADE FROM 12 OZ. NWPP W/3 MIL CTD PE, A MIDDLE BAG MADE FROM PVC COATED NYLON, AND AN INNER BAG MADE FROM 12 OZ. NWPP W/3 OZ. WPP AND CONTAINING A 700#, 3 WALL CARDBOARD INSERT, MEETS IP-2 REQUIREMENTS	PVC WATERTIGHT ZIPPER OR EQUIVALENT	51 LENGTH x 51 WIDTH x 38 HEIGHT (-0/+3 EACH DIRECTION)	FOUR 55-GALLON DRUMS
5.	MACROBAG ENCAPSULATION SYSTEM CONSISTS OF AN OUTER BAG MADE FROM 12 OZ. NWPP W/3MIL CTD PE, A MIDDLE BAG MADE FROM 12 MIL REINFORCED PE LINER, AND AN INNER BAG MADE FROM12 OZ. NWPP W/3 OZ. WPP AND CONTAINING A 700#, 3 WALL CARDBOARD INSERT, MEETS IP-2 REQUIREMENTS	PRESS FIT ZIP LOCK TYPE AIR/WATER PROOF CLOSURE OR EQUIVALENT	30 OD x 40 HIGH (-0/+3)	ONE 55-GALLON DRUM
6.	MACROBAG ENCAPSULATION SYSTEM CONSISTS OF AN OUTER BAG MADE FROM 12 OZ. NWPP W/3 MIL CTD PE, A MIDDLE BAG MADE FROM PVC COATED NYLON, AND AN INNER BAG MADE FROM 12 OZ. NWPP W/3 OZ. WPP AND CONTAINING A 700#, 3 WALL CARDBOARD INSERT, MEETS IP-2 REQUIREMENTS	PVC WATERTIGHT ZIPPER OR EQUIVALENT	30 OD x 40 HIGH (-0/+3)	ONE 55-GALLON DRUM



TYPICAL MACROBAG ASSEMBLY NUMBERS 1–4
CYLINDRICAL ASSEMBLY NUMBERS 5–6

NWPP = NON-WOVEN POLYPROPYLENE
WPP = WOVEN POLYPROPYLENE
CTD = COATED
PE = POLYETHYLENE
PVC = POLYVINYL CHLORIDE
IP-2 = INDUSTRIAL PACKAGING TYPE 2

INSPECTION REQUIREMENTS: QC REQUIRED; Q DENOTES Q/C INSP. REQD.

DASH NO. | NEXT ASSY | APPLICATION

DIMENSIONING AND SYMBOLOGY PER ASME Y14.5-2009 AND STD-11. UNLESS OTHERWISE SPECIFIED: SURFACE ROUGHNESS 125; DIMENSIONS AND TOLERANCES ARE IN INCHES; TOLERANCES .X ±.1, DECIMALS .XX ±.03, .XXX ±.010; FRACTIONS ±1/8; ANGULAR ±2°. DO NOT SCALE DRAWING

SIGNATURES/DATES APPLY TO CURRENT RELEASE ONLY — SIGN AND DATE
DESIGN: R. CAMPBELL
DRAFTER: R. CAMPBELL
TECHNICAL CHECK: M. VAN SICKLE
ENG GROUP SUPERVISOR: R. EASTMAN P.E.
DESIGN LEAD/AUTHORITY: D. MORGAN
DRAFTING CHECK/EFFECTIVE DATE: K. KELLER
PROJECT NUMBER: 32335
DRF NUMBER: 347060

Idaho Cleanup Project

COMMERCIAL MACRO ENCAPSULATION FOR C0090 & 55 GALLON DRUMS

SIZE D | INDEX CODE NUMBER: AREA 520, TYPE 9999, CL 38, ORIG 136 | DWG- 794943 | REV
SCALE: NONE | FS | SHEET 1 OF 1

Figure 3. Example drawing of Commercial Macroencapsulation Bag

Figure 4. Example of the Macro Bag – looking at the outer shell.

Figure 5. Example of the Macro Bag – looking at the inside.

Figure 6. Example of the Macro Bag Seal

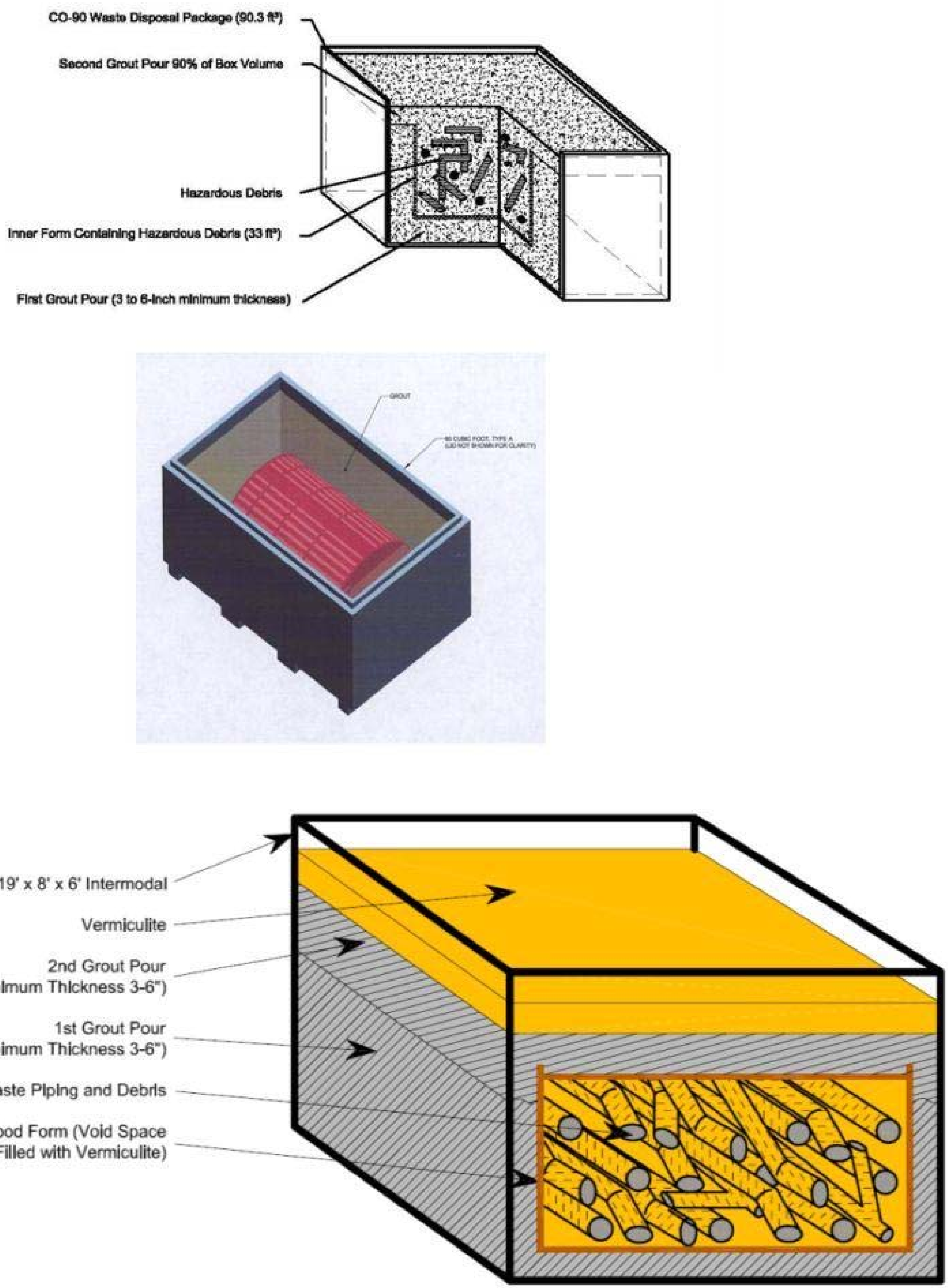


Figure 7. Examples of custom macroencapsulation units that may be used at the RMWSF.

D-1a. Containers with Free Liquids

Hazardous wastes that contain free liquids will be placed in approved containers and placed within the appropriate liquid waste storage areas of the RMWSF. These areas are provided with adequate secondary containment. Containers of temperature dependent (capable of freezing) aqueous waste stored at RMWSF are provided with drip pans and are stored in heated metal cargo containers or in Building CPP-1617. Ignitable waste capable of freezing will be stored in cargo containers provided with explosion-proof heaters. The drip pans will be compatible with the contents of the container and will have sufficient capacity to contain 10% of the volume of the containers or the volume of the largest container, whichever is greater.

The exception to this is for those containers for which verification and characterization have been completed, and the liquid volume in the container has been determined to be less than 5% of the container volume. These containers will be placed in drip pans but may be stored in unheated cargo containers, or may remain in interim storage containers (ISC) with elevating metal grids.

Additionally during the custom macroencapsuation treatment process, when waste containers are being repackaged into the macroencapsulation package, condensation may be encountered in bags that are not in direct contact with the waste (i.e., within the waste overpack bags). If condensation is encountered the condensate will be absorbed using an appropriate absorbent material (e.g., diatomaceous earth type absorbent) and the entire contents of the waste bag and the overpack bag will be subsequently placed in the macroencapsulation package for treatment (T04).

D-1a(1) Description of Containers [IDAPA 58.01.05.008; 40 CFR 264.171 and 264.172]

The number of each type of container will be variable and is dependent on the quantities and types of wastes received for storage at the RMWSF.

Construction Materials, Dimensions, and Usable Volumes. Liquid and RCRA hazardous and mixed wastes at the RMWSF are packaged in DOT approved/UN specification containers. Typically, the types of containers received and handled at the facility are approved under 49 CFR 172.101 for specific waste types. However, the RMWSF may receive other nonstandard waste packaging. Any nonstandard waste packaging requires INL facility manager approval prior to the nonstandard waste package being stored at the RMWSF. All nonstandard waste packaging approval will be documented in the RMWSF operating record. The types of containers used, their construction materials, dimensions, usable volumes, and other applicable specifications are provided in Table D-1.

Marking and Labels. Tagging, labeling, and marking requirements vary slightly, depending on the waste type. Per internal procedures, qualified facility personnel mark and label shipping containers per DOT/UN requirements prior to off-Site shipments.

All hazardous and mixed wastes are to be clearly identified and have a waste tracking bar code applied to the container or the container overpack. The bar code label is part of a waste inventory tracking system that has been implemented to track generated wastes.

Containers of hazardous or mixed wastes must have the following information on the outside of the container prior to off-Site shipment:

- The generator's name and address
- The date waste was generated
- The INL Waste Manifest Document Number
- The hazard class or classes, identification number, shipping labels (as listed in the Hazardous Materials Table in 49 CFR 172.101)
- Proper DOT shipping name
- The constituent(s) in the waste and/or waste characteristic(s) that make it hazardous
- The letters "RQ" if the waste constitutes a reportable quantity
- The words "This End Up" or with appropriate arrows, per DOT requirement, if applicable.

The generator should include on the label any other information deemed helpful to waste handling and final packaging operations. The information may indicate that the waste contains hazardous substances or that the waste requires special handling.

Table D-1. Typical Containers Used in Waste Storage and Shipping

Container Specification	Size	Comments
Strong Tight Container (STC)	Various	Must meet STC requirements
DOT 17C or UN1A2	1 to 110 Gallons	With liner *
DOT 17C or UN1A2	1 to 110 Gallons	w/o liner *
DOT 17E or 1A1	1 to 110 Gallons	N/A *
DOT 17H or 1A2	1 to 110 Gallons	w/o liner *
DOT 34 Poly or UN1H1 or UN1H2	1 to 110 Gallons	N/A *
DOT 34 or UN1H1 or UN1H2	1 to 110 Gallons	N/A *
DOT 5C or UN1A1	1 to 110 Gallons	Stainless steel
DOT 6D/2SL or UN6HA1	1 to 110 Gallons	Steel drum with liner. Composite drum
DOT 21C or 1G	1 to 110 Gallons	Fiber drum
Plywood Box (STC)	4' × 4' × 8'	INL wooden waste box with liner
Plywood Box (STC)	2' × 4' × 8'	INL wooden waste box with liner
Metal Bin (STC)	Various **	INL B-25 metal waste bin
Air/Sea Cargo container (STC)	8' × 8' × 20'	INL storage cargo containers
Concrete Liner	3.25' × 3.25' × 4'	Concrete over-pack for radiation shielding
Plywood Box	4' × 4' × 4'	INL wooden box with liner
Plywood Box	3' × 3' × 1'	INL wooden box for storage of lead
Interim Storage Container (ISC)	6’8’’ x 6’8’’ x 3’7” or ~4’ x ~4’ x ~8’	Lidded weatherproof concrete box with 4 vents and one drain that may be plugged. ISC may hold 4 drums (30- or 55-gallon). 55-Gallon drums may be overpacked in 83- or 85-gallon overpacks if floor grating is removed. ISCs are designed for storage of remote handled (RH) transuranic (TRU) waste drums or HFEF-5 cans.
Storage and Characterization Overpack Container	32” x 32” Up to one 55 gallon drum	Lidded, weatherproof drum for overpack/storage of RH TRU waste drums
HFEF-5 Can Assembly	Various including: ~12.75 in x ~73.5 in	
ANL-E drum	Various including: ~12.75 in x ~73.5 in	

Table D-1. Continued

Container Specification	Size	Comments
HFEF Liner	~16 in or ~24 in	
TX4 box or Solid Waste Box (SWB)	Various	Mild steel welded construction with a gasketed bolted closure. Comes in various sizes from 69-92 inches long, 46-52 inches wide, and 36-57 inches high
SLSF	~ 22.5 in x ~8 ft 9 in or ~22.5 in x ~13 ft	11 gauge stainless steel
Non standard waste containers for macroencapsulation treatment packages and subsequent waste storage that meet the container requirements of 40 CFR 264.171, .172, and 177.	Various	Approved on a case-by-case basis by appropriate personnel
Macrobag/liner systems	Various	Approved prior to treatment by the disposal facility, stored inside building/cargo container or covered to prevent exposure to sunlight, not stacked

* Type of waste will determine type of container and material of construction consistent with RCRA and DOT regulations.

** Various sizes 4' × 3' × 8', 4' × 4' × 6', and 4' × 4 '× 8'

D-1a(2) Container Management Practices [IDAPA 58.01.05.008; 40 CFR 264.173]

Record Keeping Provisions. Tracking the hazardous, mixed, and radioactive wastes generated at the INL is accomplished through a number of written records. Hazardous material tracking and chemical release records are also kept according to various INL procedures. A shipping log/tracking number is assigned to each hazardous material shipment. To facilitate identification, each drum or outermost storage/shipping container has a computerized bar code sticker applied. A log sheet is filled out for all wastes received at the RMWSF.

Responsibility for keeping all accountability, reporting, and records rests with the Waste Technical Specialist (WTS). The TSD Facility operator directs the day-to-day operations at the RMWSF and coordinates the shipment of wastes with the INL traffic organization.

The generator and qualified shipping agent is responsible for filling out all the required forms, ensuring all records are complete, and ensuring that all containers are correctly labeled, packaged, and prepared for shipment. All completed forms associated with the receipt of wastes and any associated operations go to records storage, to be kept in the facility's operating record. All shipping documents for hazardous, mixed, and radioactive wastes are retained for a period of three years.

When lab packs are shipped, additional requirements must be met. A lab pack inventory list must accompany each drum, and this list must include every chemical waste in the container. The container must be composed of materials that are compatible with the wastes in the lab packs.

Procedures for Transporting Waste to the RMWSF. When generators of hazardous or mixed wastes have wastes needing pickup, certain procedures are followed.

For hazardous and mixed wastes, the generator must notify the WTS to make arrangements for waste pickup.

Hazardous and mixed wastes are also accumulated in Satellite Accumulation Areas (SAAs) and less than 90 day areas. These are established areas where limited quantities of wastes are stored until sufficient quantity for shipment has accumulated. The operation of SAAs and less than 90 day areas is outlined in applicable INL procedures.

Wastes generated within the INL for transfer to the RMWSF are loaded into transport vehicles and secured as required by applicable procedures.

Ensure Waste Containers are not Opened. A container holding hazardous or mixed waste must always be closed during storage. Opening containers will only be performed to add/remove waste, sort, segregate, or to sample for verifying waste acceptance criteria. Containers of solid hazardous and/or mixed wastes may be consolidated into other approved containers for storage. Approved procedures and DOT/UN rules are used in conjunction with guidelines listed in 40 CFR 264, Appendix V, to determine compatibility or incompatibility of materials before consolidation is performed into approved containers for storage.

Protection From Rupture or Leakage. Waste containers containing aqueous free liquids are protected from exposure to the environment by keeping them within the heated storage areas of the RMWSF. The CPP-1617 building and heated cargo container is inspected at least once per day during cold weather for potential freeze problems using the freeze protection schedule. RCRA inspections are conducted on a weekly schedule. Containers in the facility may be placed on pallets or other structures to prevent direct contact with possible accumulated liquids. All containers are handled as little as possible and are stored so that the materials in the container are compatible. The operating of any equipment within the facility is performed by qualified personnel.

The exception to this is for those containers for which verification and characterization have been completed, and the liquid volume in the container has been determined to be less than 5% of the container volume. These containers will be placed in drip pans but may be stored in unheated cargo containers, or may remain in interim storage containers (ISC) with elevating metal grids.

Stacking Height, Maximum Number, and Maximum Volume of Containers Stored

The maximum capacity of the RMWSF is 2,244,156 gallons. The maximum volume for storage in RMWSF was based on double stacking 4 ft X 4 ft X 8 ft boxes and by double stacking cargo containers.

Heated cargo containers, cargo containers storing liquids, cargo containers that store containers requiring inspection, or macrobag containers will not be double stacked.

Containers and boxes (not including ISCs and cargo containers) will not be stacked to a height greater than 12 ft. Twelve feet was chosen as a limit due to safety considerations. Any combination of approved boxes may be stacked together (i.e., two 2 ft × 4 ft × 8 ft stacked on top of one 4 ft × 4 ft × 8 ft box) to allow for the same volume of waste storage. ISCs and cargo containers may be double stacked without causing increased safety concerns, therefore the 12 ft height restriction for stacking containers and boxes does not apply to ISCs and cargo containers.

Container Inspections and Waste Loading/Unloading. When the wastes arrive at the RMWSF, the waste containers must undergo a series of inspections by qualified personnel. Weekly RCRA-required inspections of these facilities are performed as discussed in Attachment 4 of this permit. After inspection of the waste shipment, the wastes are transferred into the appropriate waste management area.

Container Segregation. The waste containers are segregated according to the following criteria:

- Ignitability: Ignitable waste capable of freezing will go in cargo containers equipped with explosion-proof heaters.

- Compatibility: Incompatible wastes are segregated according to waste compatibility groups and kept separate from incompatible wastes and materials. The compatibility information contained in 40 CFR 264, Appendix V provides guidance for determining compatibility.

- Presence of free liquids: All containers with free liquids are placed in areas that have secondary containment. The exception to this is for those containers for which verification and characterization have been completed, and the liquid volume in the container has been determined to be less than 5% of the container volume. These containers will be placed in drip pans but may be stored in unheated cargo containers, or may remain in interim storage containers (ISC) with elevating metal grids.

Container Palletting. Most containers are stored on pallets or other structures at the RMWSF to prevent contact with any accumulated liquids and to facilitate handling. The materials in the containers must be compatible, and when containers are placed on the pallets, they are placed so that the labels are not obstructed.

Shipment to other Storage, Treatment, or Disposal Facilities. Since the RMWSF is a storage unit, wastes are stored there only until shipment can be arranged to the appropriate treatment, storage, or disposal (TSD) facility. Arrangements for shipping are made by INL WTS and Packing and Transportation personnel. Packages are prepared for shipment according to DOT/UN and INL procedures.

When routine off-Site INL hazardous waste shipment is scheduled, the wastes are manifested and shipped in accordance with all applicable EPA and DOT/UN regulations. All hazardous waste is shipped off-Site in DOT approved/UN specification packaging as listed in 49 CFR 172.101.

D-1a(3) Secondary Containment System Design and Operation [IDAPA 58.01.05.012 and 58.01.05.008; 40 CFR 270.15(a)(1), 264.175(a), and 264.175(d)]

D-1a(3)(a) Requirement for the Base or Liner to Contain Liquids [IDAPA 58.01.05.008; 40 CFR 264.175(b)(1)]

Liquids are stored at the RMWSF inside cargo containers and within Building CPP-1617.

Depending on the size of the container, drip pans are provided to contain any spills or leaks. The drip pans will be compatible with the contents of the container and will have sufficient capacity to contain 10% of the volume of the containers or the volume of the largest container, whichever is greater.

The exception to this is for those containers for which verification and characterization have been completed, and the liquid volume in the container has been determined to be less than 5% of the container volume. These containers will be placed in drip pans but may be stored in unheated cargo containers, or may remain in interim storage containers (ISC) with elevating metal grids.

D-1a(3)(b) Containment System Drainage [IDAPA 58.01.05.012 and 58.01.05.008; 40 CFR 270.15(a)(2) and 264.175(b)(2)]

Liquids stored at the RMWSF inside cargo containers and within Building CPP-1617, depending on the size of the container, are provided with drip pans to contain any spills or leaks. The drip pans that will be used will be compatible with the contents of the container and will have sufficient capacity to contain 10% of the volume of the containers or the volume of the largest container, whichever is greater. Liquids accumulated in the secondary containment will be removed within 24 hours of detection or in as timely a manner as is possible to prevent overflow of the containment or harm to human health and the environment.

D-1a(3)(c) Containment System Capacity [IDAPA 58.01.05.012 and 58.01.05.008; 40 CFR 270.15(a)(3) and 264.175(b)(3)]

At the RMWSF, aqueous hazardous or mixed wastes are placed on pallets or other structures to prevent containers from coming into contact with accumulated liquid. Depending on the size of the container, a drip pan is provided to contain any spills or leaks. The drip pans will be compatible with the contents of the container and will have sufficient capacity to contain 10% of the volume of the containers or the volume of the largest container, whichever is greater. Drum over-packs are available at the INL for use in temporary/emergency situations. Liquids accumulated in the secondary containment will be removed within 24 hours of detection or in as timely a manner as is possible to prevent overflow of the containment or harm to human health and the environment.

D-1a(3)(d) Control of Run-on [IDAPA 58.01.05.012 and 58.01.05.008; 40 CFR 270.15(a)(4) and 264.175(b)(4)]

The cargo containers located at the RMWSF rest on approximately 3- inch skids. Additionally, cargo containers may be placed upon elevated support (e.g., timbers), as necessary, to elevate them above the asphalt or gravel to ensure that all doors may be opened for weekly waste inspections or waste transport. Should the timbers settle more than two inches (2”) for the length of the timber, the timbers will be removed, the area regraded, and the cargo container and timbers be repositioned. The storage area is elevated, graded and is provided with drainage controls to provide drainage away from the cargo containers. The elevation of the RMWSF is 4,920 feet. The postulated maximum flood level for this area is 4,916 feet. The cargos are kept closed to prevent water accumulation during a storm. In the event that a spill or other incident results in liquid accumulation in the interior of the cargo containers, this would be detected in a timely manner through the regular inspections of the cargo containers. Removal of spills or liquids would be performed within 24 hours of after detection. Clean-up materials and remaining residues would be managed as hazardous waste, mixed waste, or non-regulated waste, as appropriate.

The boxes are designed with approximately 4- inch skids. These skids elevate the boxes to prevent contact with accumulated liquids. The storage area is elevated, graded and is provided with drainage controls to provide drainage away from the boxes.

The ISCs are designed to sit directly on the ground. Any waste drums stored within the ISCs will not come into contact with run-on liquids, as the ISCs are designed to be weatherproof. Additionally, the ISCs are kept closed to prevent water accumulation during a storm. Furthermore, the storage area is elevated, graded and provided with drainage controls to provide drainage away from the ISCs.

D-1a(3)(e) Removal of Liquids from Containment System [IDAPA 58.01.05.012 and 58.01.05.008; 40 CFR 270.15(a)(5) and 264.175(b)(5)]

Liquids collected in the containment systems will be removed within 24 hours of detection or in as timely a manner as is possible to prevent overflow of the containment or prevent harm to human health and the environment. It is expected that most spills and releases can be collected by using adsorbents. The area will also be cleaned with an appropriate cleaning solution. Wastes generated during such activities will be handled as hazardous wastes unless testing indicates otherwise. The inspection program at the RMWSF ensures that all components of the secondary containment system are inspected at a minimum of once a week.

D-1b. Containers without Free Liquids

Container storage at the RMWSF is used for solid or liquid hazardous, and mixed wastes. The containers that are used to store these wastes are DOT approved/UN specification containers or other nonstandard waste packaging. Any nonstandard waste packaging requires INL facility manager approval prior to the nonstardard waste package being stored at the RMWSF. All nonstandard waste packaging approval will be documented in the RMWSF operating record.

D-1b(1) Test for Free Liquids [IDAPA 58.01.05.012; 40 CFR 270.15(b)(1)]

The waste generator is responsible for indicating if a given waste contains free liquids. This determination is made by applying process knowledge or by performing the Paint Filter Liquids Test (EPA SW-846 Method 9095).

D-1b(2) Description of Containers [IDAPA 58.01.05.008; 40 CFR 264.171 and 264.172]

Specifications of the containers used at the RMWSF to store hazardous and mixed wastes (including metal bins, cargo containers, concrete boxes, and wooden boxes) are presented in Table D-1. When waste containers are received at the unit, they are inspected and any waste that is not packaged according to the waste acceptance criteria will not be accepted for storage.

D-1b(3) Container Management Practices [IDAPA 58.01.05.008; 40 CFR 264.173]

Hazardous and mixed wastes at the RMWSF are stored in DOT approved/UN specification containers or other nonstandard waste packaging. Any nonstandard waste packaging requires INL facility manager approval prior to the nonstandard waste package being stored at the RMWSF. All nonstandard waste packaging approval will be documented in the RMWSF operating record. Opening containers will only be performed to add/remove waste, sort, segregate, for sampling for verifying waste acceptance criteria, or consolidating waste in larger containers.

Sorting and Segregation. Containers of hazardous and mixed wastes are sorted and segregated at the RMWSF inside CPP-1617. The containers of waste are segregated using visual inspection, waste characterization information and the associated identification tag.

Aisle Space and Stacking Height of Containers. Containers are currently stored at the RMWSF with approximately 6 in. between containers in a row and a minimum aisle space of 24 in. Due to the nature of the RMWSF, unobstructed movement of emergency equipment to any area of facility operation is not needed. Emergency response actions could be initiated either outside the fenced boundary and directed at the area of concern, or in the case of a leak or spill, containers would be moved to allow for appropriate response actions. The 24-in. aisle spacing was established to support the inspection of containers. This inspection allows for the identification of an adverse condition such as a leak, or degradation of the containers containing hazardous and mixed waste containers. Recovery actions would require the movement of containers in order to appropriately manage the specific containers that were involved.

For the RMWSF cargo containers, a 1-ft aisle space will be maintained throughout the entire length of the cargo container to allow access for inspections. No containers shall touch the side of the cargo container and at least 1 in. shall be maintained between the containers and the wall of the cargo container. Containers with the longest dimension of 4 ft. or less are considered small containers, while containers with the longest dimension greater than 4 ft. are considered large containers.

Large containers positioned laterally (long axis perpendicular to the length of the cargo container) shall be separated with 6 in. between each container. Large containers positioned longitudinally (lengthwise) shall be separated with 2 in. between the ends of each container. Large containers may include B-25 bins, TX-4 boxes, 4 ft X 4 ft X 8 ft boxes. Small containers may include 55-gallon drums, 85 gallon overpack drums and, 4 ft X 2 ft X 4 ft boxes and shall be separated from other containers by at least 2 in. unless stored on pallets.

Also at the RMWSF, space will be maintained around the cargo containers to facilitate inspections. Additionally, cargo containers may be placed upon elevated support (e.g., timbers) to elevate them above the asphalt or gravel to ensure that all doors may be opened for weekly waste inspections or waste transport. Should the timbers settle more than two inches (2”) for the length of the timber, the timbers will be removed, the area regraded, and the cargo container and timbers be repositioned. Cargo containers requiring interior inspections will have a minimum of 6 ft aisle space outside the end of the container, to allow the doors to be opened to facilitate container movement. Liquid hazardous and mixed wastes are centered within the cargo containers to allow inspection and are placed on appropriate drip pans. Base board heaters have been added to cargo containers that contain aqueous liquid wastes capable of freezing in the cold weather months. Explosion-proof heaters will be added, as necessary, to cargo containers that will be used for the storage of ignitable wastes capable of freezing.

ISCs may be double stacked. Inspections of the outside of the ISCs will occur on a weekly basis, per the facility RCRA inspection schedule, looking for any degradation of the external portion of the ISC. Since the ISCs will only be used for the storage of non-liquid waste forms or wastes that contain less than 5% liquid volume, they will not be opened for inspection of the actual waste drums stored within.

As necessary, shielded overpack containers may be stored at the RWMSF. The shielded overpack containers will be stored on individual pallets. Inspections of the outside of the shielded overpack container will occur on a weekly basis, looking for any degradation of the external portion of the container. Since the shielded overpack containers will only be used for the storage of non-liquid waste forms, or wastes that contain less than 5% liquid volume, they will not be opened for inspection of the actual waste drums stored within.

Boxes may be stacked to a height of 12 ft and the ISCs and cargo containers may be double stacked, except the heated cargo containers, cargo containers storing liquids, or cargo containers that store containers requiring inspection.

Container Inspections. When the wastes arrive at the RMWSF, the waste containers must undergo a series of inspections by qualified facility personnel.

The method of inspection for the tops of the ISCs and cargo containers and boxes that are stacked may consist of the use of a mirror, camera, ladder/man-lift, etc., to verify the integrity of the tops of those containers. Visual inspections are performed between the rows of ISCs and between rows of cargo containers. These inspections are normally performed during daylight hours and if visibility is low, flashlights or other sources of illumination are used. If the visual inspection notes areas of staining or leakage, visual aids such as a mirror are used to better examine the specific area of concern and if this proves insufficient, the containers can be moved to allow for access to the area of concern. These inspections are completed on a weekly basis as discussed in Attachment 4 of this permit.

D-1b(4) Container Storage Area Drainage [IDAPA 58.01.05.012 and 58.01.05.008; 40 CFR 270.15(b)(2) and 264.175(c)]

The waste stored at the RMWSF is protected from precipitation by being placed within CPP-1617, metal cargo containers, ISCs, shielded overpack containers, drums, or wooden boxes located in the yard.

Aqueous hazardous or mixed wastes are placed on pallets or other structures and then on drip pans to prevent containers coming into contact with accumulated liquid. The drip pans are capable of containing 10% of the volume of the containers or the volume of the largest container, whichever is greater. All wastes are stored in CPP-1617, cargo containers, ISCs, shielded overpack containers or strong tight boxes. This prevents run-on of moisture into the containment. Liquids accumulated in the secondary containment will be removed within 24 hours of detection or in as timely a manner as is possible to prevent overflow of the containment or harm to human health and the environment.

The floors of the metal cargo containers are elevated above the base surface by design of the cargo container. This will prevent the floor of the cargo container from being placed into contact with any potential standing water. Additionally, cargo containers, as necessary, may be placed upon elevated support (e.g., timbers) to elevate them above the asphalt or gravel to ensure that all doors may be opened for weekly waste inspections or waste transport. Should the timbers settle more than two inches (2”) for the length of the timber, the timbers will be removed, the area regraded, and the cargo container and timbers be repositioned.

The ISC may or may not contain a metal grid that is elevated above the concrete base surface which will keep the waste drums elevated above the base of the ISC. The use of the grid will be dependent upon operational needs. For waste drums within ISCs that do not contain free liquids, use of the elevated grid is not required. For waste drums within the ISCs that contain liquids less than 5% of the container volume, the elevated grid will be used.

Surface run-off from the paved yard area flows into the unpaved yard area and the ditches adjacent to the surrounding streets (see Attachment 1, Exhibit B-4 for water flow paths). General information on the flood plain determination and prevention of run-on is located in Section B-3(b) of Volume 3 of the INL RCRA Part B Permit Application.

HWMA/RCRA PART B PERMIT

FOR THE

IDAHO NATIONAL LABORATORY

Volume 18 – Idaho Nuclear Technology and Engineering Center

ATTACHMENT 2

Debris Treatment Processes
Holdup and Collection Tanks
CPP-659/-1659 Storage
CPP-666 FDP Cell and FDP Area Container Storage and Slab Tank Storage
Other Miscellaneous Treatment Processes
Radioactive Mixed Waste Staging Facility (CPP-1617)

Section C

Waste Characteristics

Revision Date: February 12, 2016

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APPENDICES

C. WASTE CHARACTERISTICS

This section has been prepared for the following waste treatment, miscellaneous subpart X, and storage units at the Idaho National Laboratory (INL): (1) debris treatment processes, (2) holdup and collection tanks, (3) CPP-659/-1659 storage, (4) Other Miscellaneous Treatment Processes (5) Fluorinel Dissolution Process (FDP) Cell container storage, slab tank storage, and other miscellaneous treatment, and FDP Area (FDPA) container storage areas, tank storage and other miscellaneous treatment and (6) Radioactive Mixed Waste Staging Facility (RMWSF) container storage and other treatment (macroencapsulation). All these units are located at the Idaho Nuclear Technology and Engineering Center (INTEC) at the INL. The first four units are located at the New Waste Calcining Facility (NWCF), Building CPP-659/1659. The FDP Cell container storage unit, slab tank storage unit, and other miscellaneous treatment unit (sorting, segregating, repackaging, compaction, sizing, and absorbent addition), as well as the FDPA container storage areas are located within the Fluorinel Dissolution Process and Fuel Storage (FAST) facility, Building CPP-666. The remaining units are associated with the Radioactive Mixed Waste Storage Facility - Building CPP-1617 and fenced facility area. Hereinafter, the debris treatment processes, holdup and collection tanks, CPP-659/-1659 storage, other miscellaneous treatment processes, and FDP Cell container storage and other miscellaneous treatment (including macroencapsulation at the RMWSF and in CPP-659 Room 428) shall collectively be referred to as the debris treatment units (DTUs). The purpose of this section is to describe the process and rationale utilized by the contractor to determine the physical and chemical characteristics of the wastes managed at these units. This section describes hazardous wastes and only the hazardous components of mixed wastes regulated by the Resource Conservation and Recovery Act (RCRA), Idaho Administrative Procedures Act (IDAPA), and the Code of Federal Regulations (CFR).

C-1. Chemical and Physical Analysis [IDAPA 58.01.05.012 and58.01.05.008; 40 CFR 270.14(b)(2) and 264.13(a)]

The INTEC units described in this permit are used to manage a variety of wastes generated from INL activities. These units may also accept waste from off-Site generators for storage or treatment, provided the waste has been verified in accordance with the waste analysis plan (WAP) requirements of IDAPA 58.01.05.008 [40 CFR 264.13(c)]. The waste types that may be stored or treated in these units include the following:

- Hazardous waste defined and regulated as hazardous under IDAPA 58.01.05.005 (40 CFR 261, Subparts C and D).

- Mixed waste defined and regulated as hazardous under IDAPA 58.01.05.005 (40 CFR 261, Subparts C and D) and radioactive as defined and regulated under the Atomic Energy Act (AEA).

- Low-level radioactive waste defined by U.S. Department of Energy (DOE) Order 435.1 and controlled under the AEA.

- Industrial wastes that by regulatory interpretation are neither hazardous nor radioactive material, but which the DOE has determined require recycling or special handling before disposal. Included are surplus products requiring special storage pending final disposition.

Wastes to be managed are mixed waste debris[1] and other hazardous and mixed wastes. High-efficiency particulate air (HEPA) filters[2] are one specific type of debris designated in this permit. "Other debris" for purposes of this permit is debris that is not specifically HEPA filters.

The HEPA filters are generated from off-gas systems from various INL operations, including the NWCF, the Fluorinel Dissolution Process, the Special Power Excursion Reactor Test at the Critical Infrastructure Test Range Center (CITRC), and the Materials and Fuels Complex (MFC). In the future, debris from other INTEC and INL processes may be stored and treated.

Wastes undergo RCRA characterization in accordance with IDAPA 58.01.05.006 and 40 CFR 262.11. The characterization is based on process knowledge and/or analytical data. Characterization results are documented through interaction with Waste Generator Services (WGS) and are logged into the INL Waste Tracking System (IWTS) or equivalent system. Upon completion of this characterization, the results are compared to the approved Environmental Protection Agency (EPA) Hazardous Waste Numbers (HWNs) on the RCRA Part A for each unit.

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[1] Debris means solid material exceeding a 60 mm particle size that is intended for disposal and that is: A manufactured object; or plant or animal matter; or natural geologic material. However, the following materials are not debris: any material for which a specific treatment standard is provided in Subpart D, Part 268, namely lead acid batteries, cadmium batteries, and radioactive lead solids; process residuals such as smelter slag and residues from the treatment of waste, wastewater, sludges, or air emission residues; and intact containers of hazardous waste that are not ruptured and that retain at least 75% of their original volume. A mixture of debris that has not been treated to the standards provided by 268.45 and other material is subject to regulation as debris if the mixture is comprised primarily of debris, by volume, based on visual inspection.

[2] A typical HEPA filter is composed of a corrugated filter medium of a mixture of fire-resistant glass fibers and special acid-resistant material strengthened with from 3% to 5% of an organic "latex" binding agent. The corrugated filter medium is folded back and forth and sealed on the edges to the metal housing with high-temperature-resistant silicone. The filter medium is 18 to 22 millimeters thick. The typical filter housing is made of 14-gauge 300 Series stainless steel. Most filters have a plastic mesh on the top and a stainless-steel screen on the bottom, to ensure the filter medium remains intact.

EPA HWNs are applied through acceptable knowledge, which involves both process knowledge and/or chemical and physical testing of the waste. Listed F, P, and U hazardous waste numbers for the INTEC liquid waste system have been documented in *A Regulatory Analysis and Reassessment of U.S. Environmental Protection Agency Listed Hazardous Waste Numbers for Applicability to the INTEC Liquid Waste System*, INEEL/EXT-98-01213, Rev 1, February 1999. The listed EPA hazardous waste numbers and the associated waste constituents are applicable as a result of the contained in rule or per the derived from rule. Characteristic hazardous waste numbers may be applied to the waste by testing the waste according to the methods set forth in Subpart C of Title 40 CFR Part 261, or according to an equivalent method approved by the Director of the Idaho Department of Environmental Quality, or by applying process knowledge of the hazard characteristic of the waste in light of the materials or the processes used.

Leachate liquids to be managed as generated from debris treatment are contaminated with characteristic and listed hazardous wastes. Listed hazardous waste numbers for the leachate would be a result of the derived from rule from treatment of HEPA filters or other debris. Likewise, characteristic EPA hazardous waste numbers would be those associated with the HEPA filters or other debris.

The RCRA Part A for this permit summarizes the EPA HWNs that have been managed in the past and the EPA HWNs that may be managed in the future for the specific units identified in this permit. *The Idaho National Engineering and Environmental Laboratory Site Treatment Plan* (current edition) provides information relating to specific waste streams (HEPA filters and other debris) to be treated at the INL. Waste streams within the *Idaho National Engineering and Environmental Laboratory Site Treatment Plan* that will be treated are subject to and limited by the waste codes listed in the RCRA Part A Permit for this HWMA/RCRA Part B Permit.

The RCRA Part A Permit for the INTEC Liquid Waste Management System (ILWMS) lists 28 EPA HWNs and the Part A Permit for the DTUs lists 27 EPA HWNs. Of these HWNs, 5 are listed HWNs and 23 are characteristic HWNs. Of the five listed HWNs, four are listed (F001, F002, F005, and U134) HWNs, as determined by *A Regulatory Analysis and Reassessment of the EPA listed Hazardous Waste Numbers for Applicability to the INTEC Liquid Waste System,* INEEL/EXT-98-01213, Rev. 1, February 1999, and will be carried through to the final treatment form, unless delisted. The other HWN, F003, is listed solely due to ignitability; if F003 waste is discharged to the ILWMS, the waste will be rendered no longer ignitable and will not retain the F003 HWN. Initially the Part A Permit for the Volume 18 units was based upon the report identified above. However, as additional waste streams are identified for processing through these units, the Part A Permit for the Volume 18 units has been expanded for treatment of these wastes to allow for their final disposition. Waste acceptance will always be completed in accordance with the current Part A Permit.

The RMWSF has different EPA HWNs than those assigned on the Part A for the DTUs and ILWMS. The RMWSF storage unit has F, K, P, and U listed HWNs and characteristic HWNs. All waste is characterized prior to acceptance into the RMWSF. The storage unit, with few exceptions, manages Land Disposal Restrictions (LDR) wastes that exhibit the characteristics of corrosivity and toxicity, and contain one or more listed constituents.

The RMWSF macroencapsulation unit(s) (T04 – other treatment) have the same F, K, P, and U listed and characteristic HWNs as the RMWSF storage unit except that it excludes D001, D002, and D003 HWNs. The macroencapsulation unit(s) at both the RWMSF and CPP-659 Room 428 only treat LDR wastes that are classified as debris or radioactive lead solids. Macroencapsulation meets the LDR treatment standard for both debris and radioactive lead solids. The original HWNs are unchanged by macroencapsulation. The macroencapsulated waste will be sent to a permitted off-site facility for disposal.

C-la. Containerized Waste [IDAPA58.01.05.012; 40 CFR 270.15(b)(1)]

Wastes can be stored in containers in CPP-1659 and CPP-659 (Rooms 205, 206, 207, 214, 215, 216, 218, 306, 308, 309, 323, 326, 415, 416, 417, 418, 419, 421, 422, and 428) and the FDP cell and FDPA container storage units (CPP-666 Rooms 301, 114C, 115, 180, B-4, B-5, and SB-8). These rooms/cells have secondary containment systems for container storage or secondary containment will be provided by or for specific containers. Containerized wastes may also be stored at the RMWSF. In addition, large batteries and transformers, which are not containerized, may be received and stored at the RMWSF.

FDP Container Storage

The FDP cell is currently permitted as a RCRA container storage unit at the -13’ 0” level and the 0’0” level and in the Sodium Distillation System (SDS) collection vessel assembly (VES-FC-85A) at the -31’0” level in room SB-8. The FDP cell container storage unit may be used to store wastes containing free liquids. The SDS container storage unit (VES-FC-85A) will not be used to store wastes containing free liquids. The wastes to be stored in the container storage units will be evaluated by the generating facility to ensure that if they contain free liquids, they are managed appropriately. This evaluation may be based on use of the "Paint Filter Liquids Test" (SW-846, Method 9095), visual inspection, or process knowledge about the waste.

Acceptable knowledge, i.e., process knowledge and/or physical-chemical testing, per the waste acceptance criteria (WAC), will be used to characterize mixed waste and mixed waste debris to be stored in the FDP cell container storage unit and FDPA.

CPP-659/-1659 Storage

Hazardous and/or mixed waste and debris generated at the INL may be stored in containers in CPP-659/-1659. See Section D-1 for a summary of the rooms in which container storage will occur.

RMWSF Container Storage

The RMWSF is currently storing wastes generated from a variety of INL activities pending treatment or disposal, either on-Site or off-Site. Wastes containing free liquids may be stored in these areas. Adequate secondary containment is provided for all liquid-containing wastes. Acceptable knowledge, i.e., process knowledge and/or physical-chemical testing, per the waste acceptance criteria (WAC), will be used to characterize wastes stored in these areas.

C-1b. Waste in Tank Systems [IDAPA58.01.05.008; 40 CFR 264.191(b)(2) and 264.192(a)(2)]

HEPA Filter Leaching System (HFLS)

Wastes are treated in the HFLS in two tanks (VES-NCD-141 and VES-NCD-142) operated in series. These tanks are located in the filter handling cell, room 309, on the second level of the NWCF. As described in Section D of this permit, nitric acid solutions and water rinsing will be used to leach hazardous constituents from the HEPA filters in the first tank (VES-NCD-141). Then the treated HEPA filters will be placed in the second tank (VES-NCD-142) for air drying. As demonstrated in Section D, the tanks are constructed of materials that are compatible with the waste constituents and the nitric acid leaching solutions to be used in the tanks. The leachate from the HFLS treatment process drains to the holdup tank (VES-NCD-123) or collection tank (VES-NCD-129) located on the third level of CPP-659.

The primary waste type to be treated in the HFLS is mixed waste HEPA filters from INL generators. Radioactive, nonhazardous items may also be handled in the HFLS.

FDP Slab Tank Storage

The FDP cell is to be operated as a RCRA tank storage unit at the -27’ 6” level. The slab tank unit may be used to store liquid mixed wastes. The primary source of liquid to be stored in the tank would be liquids accumulated in the cell sump as a result of activities occurring within the cell. Adequate secondary containment will be provided for liquid wastes stored in the slab tank. The wastes will be evaluated by the generating facility to ensure that they meet the facility waste acceptance criteria.

Acceptable knowledge, i.e., process knowledge and/or physical-chemical testing, per the waste acceptance criteria (WAC), will be used to characterize mixed waste liquids that may be stored in the FDP cell slab tank.

FDP Area SDS Tank Storage (Room SB-8)

Room SB-8 will be operated as a RCRA tank storage unit at the -31’ level. The SDS tank storage unit may be used to store liquid mixed wastes. The primary source of liquid to be stored in the tanks would be from the distillation of waste debris contaminated with sodium. Adequate secondary containment will be provided for liquid wastes stored in the SDS. The wastes will be evaluated by the generating facility to ensure that they meet the facility waste acceptance criteria.

Acceptable knowledge, i.e., process knowledge and/or physical-chemical testing, per the waste acceptance criteria (WAC), will be used to characterize mixed waste liquids that may be stored in the SDS tanks.

Sinks[3]

Two sinks will be used for hands-on treatment of debris waste. The small sink (SH-NCD-934) will be used for treatment of small items [greater than 60 mm (2.36 inches)], such as hand tools, small valves, small piping sections, or other articles lending to this type of treatment. The large sink (SH-NCD-933) will be used for treatment of pipe sections or other long items [less than 3.6 meters (12 feet) in length]. The sinks are located in the low-level decon room (room 415) in CPP-659. (See Section D-2 for details on operations.) The debris treatment solutions are primarily water-based. The makeup chemicals added to the water will be, for example, nitric acid, alkaline rust removers, selected organic acids, mild oxidizing solutions, and surfactants, which are, likewise, compatible with debris waste chemicals.

Provision for the heating of cleaning solutions in the sinks has been provided. The sinks' construction materials will be compatible with the treatment solutions and the debris chemicals, whether or not the solutions are heated.

Ultrasonic Cleaner[3]

The cleaning ability of the ultrasonic cleaner is based on the use of high-frequency mechanical vibrations in a liquid to produce a strong cleaning action at the solid-liquid interface. (See Section D-2a for details of the ultrasonic cleaning process.) Chemical solutions used in the ultrasonic cleaner are expected to be primarily water based solutions of nitric acid, alkaline rust removers, selected organic acids, mild oxidizing solutions, and surfactants. These solutions have been determined to be compatible with the construction materials, components of the ultrasonic cleaner, and debris to be treated in the ultrasonic cleaner.

Holdup and Collection Tanks

Solutions from debris treatment are managed in the holdup and collection tanks. Chemicals used in the debris treatment processes are substantially composed of water with the addition of, for example,

[3] For all chemical extraction processes (sinks, ultrasonic cleaner, decon cubicles, and container treatment) completion of chemical extraction is based on verification that the debris meets clean surface debris standards. The contaminants must be soluble to at least 5% by weight in water solution or 5% by weight in emulsion. The debris surfaces must be in contact with the water solution for at least 15 minutes and other conditions as specified by "performance and/or design and operating standard" and "contaminant restrictions," as described in 40 CFR 268.45, Table 1. - Alternative Treatment Standards for Hazardous Debris.

nitric acid, alkaline rust removers, selected organic acids, mild oxidizing solutions, and surfactants. The holdup and collection tanks have been designed to be compatible with these types of chemicals. The chemical solutions used in the debris treatment processes are characterized in accordance with this waste analysis plan (WAP) before being released to the Process Equipment Waste Evaporator (PEWE), the NWCF processes, and/or Tank Farm (until cease use, per the Noncompliance Consent Order or other options determined by the Idaho High Level Waste and Facility Disposition Environmental Impact Statement) to meet the appropriate WAC.

C-lc. Waste In Piles [IDAPA58.01.05.008; 40 CFR 264.250(c)(1) and (4)]

Pending closure of Building CPP-659, the equipment as described in the approved HWMA/RCRA Partial Closure of the New Waste Calcining Facility (Calciner System) will be considered debris stored in waste piles in rooms 206, 207, 214, 215, and 322. While awaiting treatment, hazardous and mixed debris, such as spent HEPA filters, will be stored in piles in building CPP-659 (Rooms 216, 308, 309, 323, 326, 416, and 418). The hazardous and mixed debris stored in these waste pile storage areas will not contain free liquids unless separated or segregated from waste piles in those areas where waste pile storage and container storage are co-located. Section D-1b(1) of this permit describes the process by which HEPA filters are generated, and explains the basis for determining that the HEPA filters do not contain free liquids. The hazardous and/or mixed waste and debris is contained within an enclosed structure; and thus, is not subject to surface water run-on nor is it subject to winds or other means of wetting.

The construction and materials used in HEPA filters, as well as the contaminants associated with the HEPA filters, will not generate leachate through decomposition or other reactions. As configured within the building, the HEPA filters have no viable mechanism or pathway by which to generate leachates.

Based on the above standards and conditions, the INTEC meets the regulatory requirements under 40 CFR 264.250, and Subpart F, of 40 CFR 264.

C-1g. Waste in Miscellaneous Units [IDAPA 58.01.05.012; 40 CFR 270.23(d)]

Decon Cubicles[4]

Chemical extraction treatments will be performed on mixed waste debris in the decon cubicles. Treatment chemicals, primarily composed of water, will be e.g., nitric acid, alkaline rust removers, selected organic acids, mild oxidizing solutions, and surfactants placed into water solutions. Debris may be treated in soak tanks which have been moved into decon cubicles expressly for that purpose. Larger debris items, e.g., large motors, blowers, valves, pipe sections, small to intermediate size items, and any other debris lending to this type of treatment, will be handled in the decon cubicles.

Decon Cell[4]

Within the decon cell, chemical extraction (e.g., treatment with water-based chemicals) or physical extraction (e.g., steam, high-pressure hot water, CO_2 blasting) treatments will be performed on mixed waste debris. The decon cell provides isolated areas for remote treatment of items with high potential for contamination spread within the Decon Area. The cell can also be used for treatment of debris in portable soak tanks [see Sections D-1a(1), D-1a(2), and D-1a(3)]. The roof hatches of the cell can be removed to facilitate lowering larger items or cleaning equipment, such as a soak tank, into the cell; smaller items can be brought in by hand through the personnel access doors. Initial rinsing of very highly contaminated items is necessary for As Low As Reasonably Achievable (ALARA) and contamination control purposes before they can be transferred from the decon cell to other areas for further debris treatment work.

Steam Spray Booth

The steam spray booth will be a multipurpose, multimedia unit with steam spray capabilities, high-pressure hot water capability, and spalling/scarification capabilities. Chemical solutions used in the steam spray booth are expected to be primarily water-based solutions of nitric acid, alkaline rust removers,

[4] For all chemical extraction processes (sinks, ultrasonic cleaner, decon cubicles, and container treatment) completion of chemical extraction is based on verification that the debris meets clean surface debris standards. The contaminants must be soluble to at least 5% by weight in water solution or 5% by weight in emulsion. The debris surfaces must be in contact with the water solution for at least 15 minutes and other conditions as specified by "performance and/or design and operating standard" and "contaminant restrictions," as described in 40 CFR 268.45, Table 1. - Alternative Treatment Standards for Hazardous Debris.

selected organic acids, mild oxidizing solutions, and surfactants. These solutions have been determined to be compatible with the construction materials, components of the steam spray booth, and debris to be treated in the steam spray booth.

A liquid abrasive spray glove box attached to the booth will be used to treat mixed waste debris with high-pressure water, steam, or with solid carbon dioxide. The liquid abrasive techniques are applied by bombarding the surface of the debris with high-pressure water carrying a solid medium abrasive (e.g., aluminum oxide, plastic beads, glass beads, etc.). When using a solid medium abrasive a cushion of water prevents the contaminated debris surface from becoming impregnated with the abrasive. The abrasive materials are compatible with the debris, spray booth construction materials, and chemicals associated with the debris.

In addition to steam spray, chemical extraction, the steam spray booth also has the capability to treat debris surfaces with solid carbon dioxide (CO_2), i.e., dry ice. The dry ice particles impact the surface of the debris under pressure; and thus, remove hazardous components from the surface. The carbon dioxide will then sublime (going from a solid to CO_2 gas) and be vented to the exhaust system of the NWCF. The carbon dioxide adds no new chemicals to the hazardous component system and is essentially chemically benign in this process. No chemical incompatibility problems associated either with the steam spray booth construction materials or the debris to be treated are expected. The booth is located in the equipment decon room, room 418, of CPP-659. (See Section D-8 for details on operations.)

Another technique to be employed in the steam spray booth is spalling/scarification (See Section D-2 for details on operations). No added chemicals will be applied to this process. Treatment residuals will be characterized in accordance with Section C-2 of this permit to determine the final disposal option and facility to perform the treatment.

Container Treatment[5]

Three soak tanks (VES-NCD-138, TK-NCD-137, and TK-NCD-139) may be used for the soaking of small to large and odd sized items, such as valves or blower components, piping, etc., in treatment solutions for extended periods of time. This process is considered to be container treatment. The tanks are portable, and will be used in the decon cell (room 308), the decon cubicles (rooms 421 and 422), and the Steam Spray Booth (located in room 418).

The primary purpose of the soaking will be to chemically extract hazardous materials from the debris, using the chemical extraction methods in 40 CFR 268.45. The tanks are constructed of Series 300 stainless steel. Chemicals used in the soaking process are compatible with the Series 300 stainless steel. The debris treatment solutions are primarily water-based. The makeup chemicals added to the water will be, for example, nitric acid, alkaline rust removers, selected organic acids, mild oxidizing solutions, and surfactants, which are, likewise, compatible with debris waste chemicals.

RMWSF and CPP-659 Room 428 – Container Treatment (Macroencapsulation)

The RMWSF stores wastes generated from a variety of INL activities pending treatment or disposal, either on-Site or off-Site. Additionally, at the RMWSF and CPP-659 Room 428, hazardous and or mixed waste debris and radioactive lead solids will be treated using commercial macroencapsulation unit(s) and/or custom marcroencapsulation unit(s) depending upon the waste type/characteristics. Hazardous/mixed waste liquids or wastes exhibiting the ignitable, corrosive, or reactive characteristic will not be treated in the macroencapsulation unit(s). Acceptable knowledge, i.e., process knowledge and/or physical-chemical testing, per the waste acceptance criteria (WAC), will be used to characterize wastes prior to treatment in these units.

[5] For all chemical extraction processes (sinks, ultrasonic cleaner, decon cubicles, and container treatment) completion of chemical extraction is based on verification that the debris meets clean surface debris standards. The contaminants must be soluble to at least 5% by weight in water solution or 5% by weight in emulsion. The debris surfaces must be in contact with the water solution for at least 15 minutes and other conditions as specified by “performance and/or design and operating standard” and “contaminant restrictions,” as described in 40 CFR 268.45, Table 1. - Alternative Treatment Standards for Hazardous Debris.

FDP Cell Deactivation and FDP Area SDS

For debris wastes contaminated with Na or NaK (sodium contaminated debris, or sodium bonded fuel pins, etc.) that have ignitable and reactive hazards, deactivation of the sodium may be conducted in the FDP Cell through water immersion/misting within the ARS inert atmosphere or through exposure to air within the cell on the sorting table, or separation of the sodium contamination from the waste through sodium distillation (Room SB-8) in the SDS, as appropriate for the waste stream.

Hazardous/mixed debris exhibiting the ignitable and reactive characteristic (due to the presence of Na/NaK) will be treated in these unit(s). Acceptable knowledge, i.e., process knowledge and/or physical-chemical testing, per the waste acceptance criteria (WAC), will be used to characterize wastes prior to treatment in these units.

C-2. Waste Analysis Plan [IDAPA 58.01.05.012 and 58.01.05.008; 40 CFR 270.14(b)(3) and 264.13(b) and (c)]

The regulations under the RCRA, as implemented through IDAPA 58.01.05.008 (40 CFR 264.13), require a WAP for regulated waste management units. This WAP identifies what waste characterization information is needed, the nature and extent of information needed, the method(s) by which the information is gathered, and the quality assurance/quality control (QA/QC) goals.

The process outlined in this WAP is implemented for characterization of all hazardous wastes or potentially hazardous wastes managed at the INTEC units described herein. Wastes generated that are subject to this plan include wastes generated from INL operations, treatment residues generated from INL RCRA-regulated waste management activities, and off-Site wastes that have been verified in accordance with the WAP requirements of IDAPA 58.01.05.008 [40 CFR 264.13(c)]. As such, this WAP is intended for inclusion in the day-to-day waste management operations.

This WAP is established to ensure that all data used in waste characterization be scientifically valid, defensible, and of known precision and accuracy. This objective relies on the identification of appropriate parameters and rationale, analytical methods, sampling methodologies, and quality control.

The objectives of the WAP are as follows:

- Ensure that sufficient information is available to provide safe handling, storage, and treatment of waste materials

- Define the parameters for characterization and the rationale for selection

- Establish consistent sampling, sample management, analytical methods, parameter selection, and controls for waste received and generated

- Provide a description of the waste stream characterization and approval process from the point of waste generation through the final disposition of the waste

- Establish unit-specific waste acceptance criteria (where necessary) for treatment units to ensure that sufficient information is available to determine whether the wastes considered for storage at the respective units meet the requirements established in this permit

- Provide additional requirements for the characterization and acceptance of ignitable and reactive wastes

- Define LDR requirements applicable to wastes managed in the treatment, miscellaneous, and storage units

- Verify that EPA HWNs for wastes stored or treated are acceptable per the EPA hazardous waste numbers on the Part A.

This WAP will be revised whenever test methods are changed or whenever regulations change that affect the WAP.

C-2a. Parameters and Rationale [IDAPA 58.01.05.008; 40 CFR 264.13(b)(1)]

Tables C-1 and C-2 outline the parameters for analysis and corresponding rationale for selection. The parameters and rationale in these tables are selected to satisfy the requirements of RCRA and to ensure safe, compliant treatment and storage. Not all of the parameters identified in Tables C-1 and C-2 will be selected for each waste stream. Only the specific parameters applicable to each waste stream proposed for storage or treatment are evaluated. Before treatment, storage, or disposal, a given waste stream may undergo additional RCRA characterization based on knowledge of the waste stream, RCRA characterization requirements, and/or the waste acceptance characterization requirements for treatment or disposal.

Parameter Selection and Rationale for Debris Treatment

To determine whether debris requires treatment or if treated debris meets the clean debris surface standards outlined in 40 CFR 268.45, the decision tree contained in Appendix C-1 will be used. Upon verification that the debris meets the clean debris surface standard[6], treated debris intended for disposal in a non-RCRA unit will undergo parameter selection for toxicity characteristic leaching procedure (TCLP) metals and/or organics based on the EPA hazardous waste numbers applicable to the waste. Facility personnel may use process knowledge in lieu of testing. Table C-1 lists test methods, parameter selection, and rationale for performing hazardous waste determinations.

Treated debris that meets the clean debris surface standard is managed as a nonhazardous waste, unless the debris itself exhibits a characteristic of hazardous waste. Any debris that exhibits a characteristic of hazardous waste will undergo parameter selection for additional LDR assessments, if applicable. Table C-2 lists test methods, parameters, and rationale for LDR assessments, if applicable.

For hazardous/mixed debris and radioactive lead solids wastes that will be treated by macroencapsulation at the RMWSF, the waste is restricted from land disposal and is being treated to meet the applicable treatment standards to make it acceptable for disposal at an approved disposal facility.

[6] "Clean debris surface" means the surface, when viewed without magnification, shall be free of all visible contaminated soil and hazardous waste except that residual staining from soil and waste consisting of light shadows, slight streaks, or minor discolorations, and soil and waste in cracks, crevices, and pits may be present provided that such staining and waste and soil in cracks, crevices, and pits shall be limited to no more than 5% of each square inch of surface area.

For hazardous/mixed debris that will be treated by deactivation or distillation in the FDP Cell and FDP Area, the waste is restricted from land disposal and is being treated to meet the applicable treatment standards to make it acceptable for disposal at an approved disposal facility.

Table C-1. Test Methods for Waste Analysis Parameters and Rationale.

PARAMETER	SW-846 TEST METHODS	RATIONALE
Toxicity characteristic	1311 Toxicity Characteristic Leaching Procedure (TCLP) or Process Knowledge	Determine the waste and LDR status.
TC Metals: arsenic barium cadmium chromium lead mercury selenium silver	As determined most appropriate by facility personnel and the laboratory, per SW-846, Chapter Two, "Choosing the Correct Procedure" or Process Knowledge	Determine if the waste is characteristically hazardous for toxicity. Determine expected underlying hazardous constituents (UHCs).
Corrosivity/pH Corrosivity toward steel	9040B 1110 or Process Knowledge	Determine if the waste is characteristically corrosive.
Volatile organic and semivolatile organic compounds	As determined most appropriate by the laboratory, per SW-846, Chapter Two, "Choosing the Correct Procedure" or Process Knowledge	Determine whether the waste is characteristically toxic for organic compounds or whether listed waste constituents can be detected. Identify expected UHCs.
Paint filter test	9095A or Process Knowledge	Determine if the waste has a free liquid.
Flash Point	1010 1020A or Process Knowledge	Determine if waste is characteristically ignitable, per RCRA.
Reactivity	As determined by Process Knowledge and/or SW-846, Chapter Seven methods	Determine if waste is characteristically reactive according to RCRA and to prevent mixing of incompatible waste in tank and treatment systems.

Table C-2. Test Methods, Parameters, and Rationale for LDR Status.

PARAMETER	SW-846 TEST METHODS	RATIONALE
Toxicity characteristic	1311 Toxicity Characteristic Leaching Procedure (TCLP) or Process Knowledge	Determine waste and LDR status.
TC metals	As determined most appropriate by facility personnel and the laboratory, per SW-846, Chapter Two, "Choosing the Correct Procedure" Or Process Knowledge	Determine LDR status. Evaluate mercury subcategory and UHCs.
Total organic carbon (TOC)	As determined most appropriate by the facility personnel and the laboratory per SW-846, Chapter Two, "Choosing the Correct Procedure" Or Process Knowledge	Determine wastewater/nonwaste water and ignitable subcategories.
Total suspended solids (TSS)	Method 160.2 (Nonfilterable Residue) from Water and Wastewater methods (EPA-600/4-79-020) Or Process Knowledge	Determine wastewater/nonwaste water and ignitable subcategories.
Halogenated volatile organics (HOCs) semivolatile organics	As determined most appropriate by the facility personnel and the laboratory per SW-846, Chapter Two, "Choosing the Correct Procedure" Or Process Knowledge	Determine listed and LDR status, including UHCs
Paint Filter Test	9095A or Process Knowledge	Determine liquid/solid status.
Cyanides, Sulfides, Water Reactive, Chemical Stability, Shock Sensitive	As determined by Process Knowledge and/or SW-846, Chapter Seven methods	Determine reactive subcategory.
Flash point	1010 1020A or Process Knowledge	Determine if waste is characteristically ignitable per RCRA.
Corrosivity/pH Corrosivity Toward Steel	9040B 1110 or Process Knowledge	Determine acidity, basicity, or neutral.

The specific parameters selected for characterization are determined on a case-by-case basis. For example, facility personnel select the appropriate parameters, based on knowledge of the waste source, characterization requirements to identify RCRA-regulated wastes, and characterization requirements for waste storage, treatment, and subsequent disposal. Thus, not all of the parameters identified in Tables C-1 and C-2 will be selected for each waste stream.

HEPA Filter Leaching System

There are two potential treatment residuals from the HFLS process. The principal waste stream is the leachate from the nitric acid/water solution leaching process. The stream is piped to a drain, which goes to holdup tank VES-NCD-123 or collection tank VES-NCD-129. The leachate is subsequently transferred to the PEWE, the NWCF processes, or the Tank Farm Facility (TFF). In addition to the leachate, a minor amount of fiberglass residuals may be collected after the process is completed in the strainer leading to the tank system for the leachate disposal. These treatment residuals are evaluated per parameters and rationale of Tables C-1 and C-2. Treated filters are evaluated per clean debris surface standard and TCLP testing, as outlined in Section C-3d(2).

Sinks, Steam Spray Booth, Soak Tanks, Ultrasonic Cleaner, Decon Cubicles, and Decon Cell

Primarily, treatment residuals from the sinks, steam spray booth, soak tanks, ultrasonic cleaner, decon cubicles, and decon cell will be liquids[7]. The liquids will be evaluated prior to release to the PEWE, TFF, or NWCF processes to meet the waste acceptance criteria of the units. These treatment residuals are evaluated per parameters and rationale of Tables C-1 and C-2. Other treated debris are evaluated per clean debris standard and TCLP testing as outlined in Section C-3d(2). Any solid residuals resulting from the other miscellaneous treatment processes in these rooms/cells will be evaluated and the waste will be disposed of as appropriate.

C-2a(1) Waste Acceptance Criteria

Any wastes accepted at the waste management units addressed in this permit must meet the WAC as defined below. Prior to being accepted at these units, an evaluation is performed for each waste to

[7] When solid carbon dioxide blasting or spalling/scarification is used in the steam spray booth, the solid residuals will be collected and evaluated separately from treatment solutions.

ensure the WAC have been met. The preacceptance process is described in detail in Section C-2a of this WAP. The WAC are dependent on the waste form, EPA HWNs specified on the Part A, method of characterization, waste characteristics, and packaging. Waste generators or INTEC point-of-generation personnel are responsible for performing necessary characterization in accordance with the methods specified in this section (See Tables C-1 and C-2).

The following wastes and containers are prohibited from the waste management units addressed in this permit:

- Wastes designated with EPA HWNs not identified on the Part A permit application for the specified receiving treatment and/or storage unit

- Incompatible wastes within the same container or wastes not compatible with the container in which they are stored

- Wastes incompatible with the liquid waste system or with wastes in the liquid waste system (holdup and collection tanks)

- Liquid or wastes containing free liquids (waste pile storage areas in CPP-659 only, unless separated or segregated from waste piles in those areas where waste pile storage and container storage are co-located)

- Unstable, shock-sensitive wastes

- Wastes containing undeclared hazardous material

- Unknown wastes

- Hazardous or mixed wastes containing DOT Class 1 explosives or Class 4 Division 4.1 flammable solids meeting the definition of a wetted explosive, ad identified in 49 CFR 173 Subpart C

- Active pathogens, infectious, or etiologic agents

- Wastes which do not comply with the 40 CFR 268.3 dilution prohibition

- Contained wastes in which the outer container is not free of bulges, holes, swelling, significant rust, ice, snow, dirt, dents, or similar evidence of degradation or mishandling

- HEPA filters exceeding 2 ft 11 in. x 2 ft 5 in. x 1 ft 4 in. (HFLS only)

- HEPA filters containing cellulose-based material, e.g., wood, paper (HFLS only)

- Pressurized containers (DTUs only)

- Wastes that generate liquid treatment residuals possessing constituents that do not comply with the WAC of downstream treatment, storage, or disposal units (e.g., the PEWE). This assessment is performed on a case-by-case basis.

C-2a(2) Waste Acceptance Process

When an activity is expected to generate a new waste, or upon the generation of a waste, the WTS is contacted for guidance. Existing legacy waste will be evaluated and characterized prior to treatment as described below. See Figure C-1 for a flow diagram of the preacceptance process for on-Site waste. See Figure C-2 for a flow diagram of the preacceptance process for off-Site waste. Waste generated off-Site must be verified in accordance with the waste analysis plan (WAP) requirements of IDAPA 58.01.05.008 [40 CFR § 264.13(c)] at an approved facility before it can be accepted at any of the units addressed in this permit. An initial process knowledge evaluation of the waste stream is conducted to determine if the waste is from a recurring stream with an approved waste profile on file. If the stream has an approved profile on file, the process and waste are evaluated to ensure the waste is consistent with the approved profile. All approved waste stream profiles are reevaluated in accordance with Section C -2d, “Frequency of Analysis,” of the waste acceptance process. Table C-4 summarizes the minimum parameters to be evaluated during the waste pre-acceptance process.

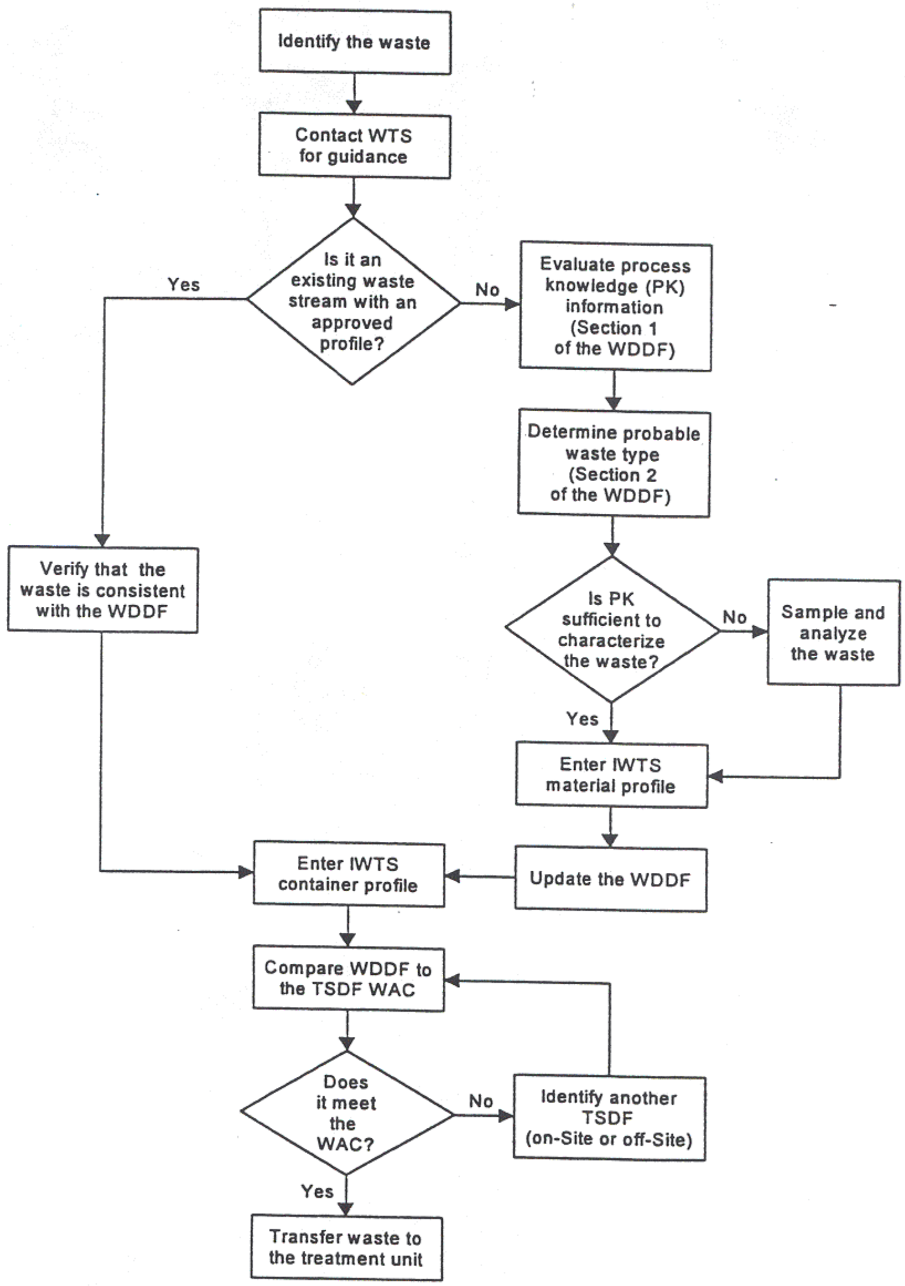

Figure C-1. Preacceptance Flow diagram for On-Site Waste.

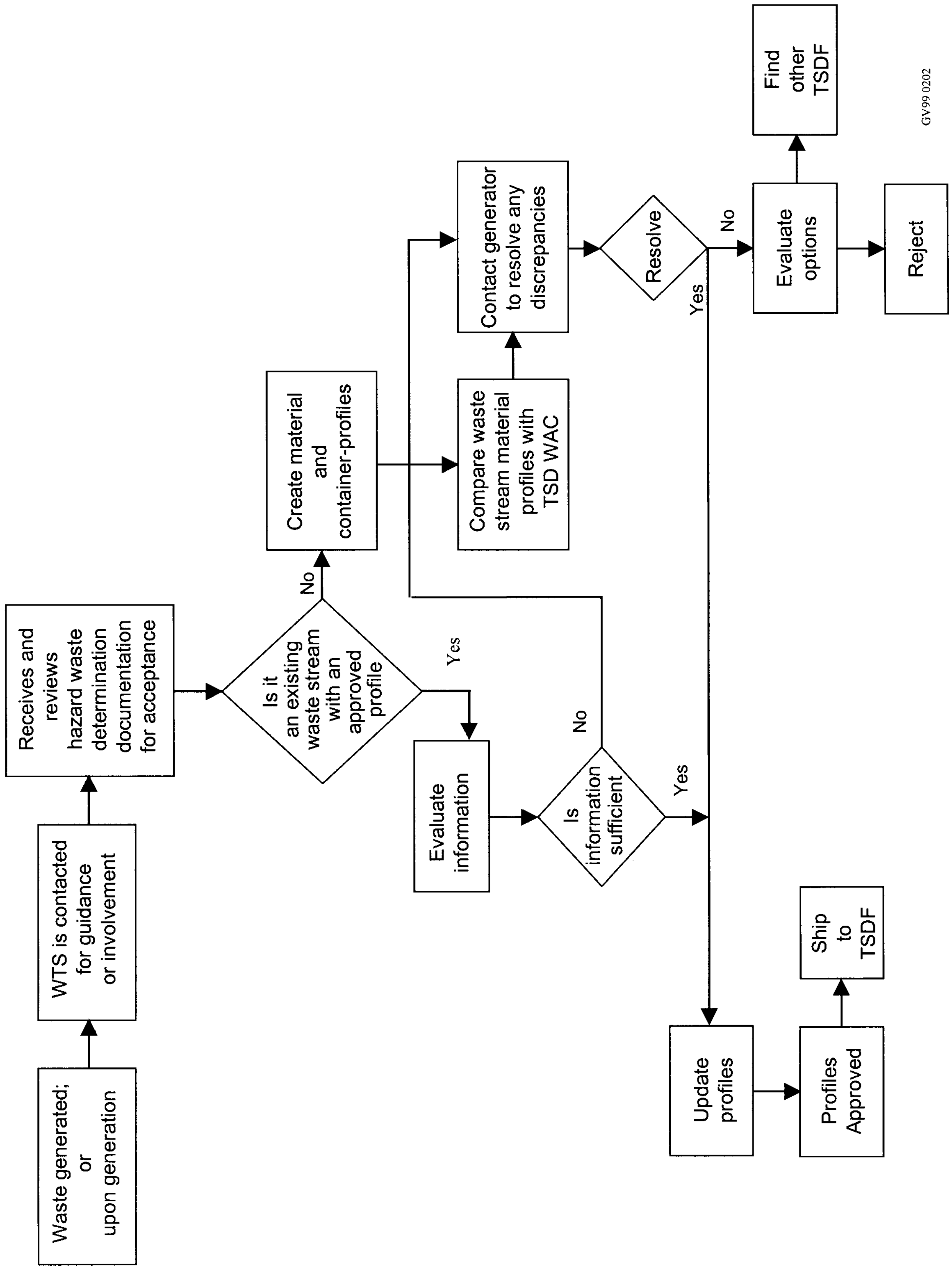

Figure C-2. Preacceptance Flow Diagram for Off-Site Waste.

If the waste stream does not match an existing profile, a WTS is assigned to evaluate the waste stream and determine its final disposition. The WTS initiates a hazardous waste determination as required by 40 CFR 262.11. Process knowledge information is obtained by using the Waste Determination & Disposition Form (WDDF). An example of a typical WDDF is included as Appendix C-2. The WDDF provides the preacceptance certification needed prior to accepting on-Site wastes. If process knowledge is not sufficient, sampling and analysis is conducted. If the waste is clearly not RCRA-regulated hazardous waste, it is managed in accordance with its properties (e.g., low-level, industrial, etc.).

If the waste is determined to be RCRA hazardous, based on the initial data obtained from the hazardous waste determination, the WTS performs an LDR evaluation and then evaluates the TSDF options available. Once an appropriate TSDF is identified, the WTS arranges for additional waste characterization, as needed, for acceptance to the TSDF. Waste characterization data and supporting documentation are filed and made available for both generators and TSDFs through the IWTS on-Site. The resulting information is entered into the IWTS material profile(s) and container profile(s).

The IWTS is an electronic database for tracking the storage, transfer, treatment, and on-Site disposal of waste at the INL and off-Site. The IWTS database contains the characterization information applicable to waste streams at the facility or the disposition of waste at or from the facility. The waste profile contains characterization data that bounds the waste stream, list of containers, generator certifications, and approvals. Container profiles track container-specific data, approvals, and task summaries for waste movement, placement, processing, and disposal of the waste. Task profiles also verify the permit capacity prior to receiving or shipping waste. IWTS was developed as a tool to assist personnel in completing daily activities and complying with the regulatory requirements, and to assist Site treatment personnel in meeting Site-wide mixed waste data tracking and reporting needs. Features of the IWTS include:

- Electronic material and container profiles

- Shipping descriptions (not for intra-facility transfers)

- Manifests

- Electronically tracking waste inventory

- Tracking the genealogy of waste from cradle to grave

- Creating and executing administrative tasks.

If the waste stream does not meet the acceptance criteria for the intended unit(s), another TSDF is identified (either on- or off-Site) that can compliantly accept the waste. Compliance with "acceptance criteria" implies compliance with the container requirements of the unit-specific Part A permit application, Section D (Attachments 1 and 1a), and adherence to the list of prohibited items in Section C-2a(1).

A second WTS independently verifies the shipment as a further assurance that the waste has been adequately and correctly characterized as well as properly packaged. This verification consists of reviewing the available information. If questions arise during this evaluation, additional characterization may be required for resolution, or it may be necessary to open some of the waste containers to verify the waste form and type.

Once the waste is determined to be acceptable for a given TSDF, the receiving unit is contacted to coordinate shipment of the material. The WTS coordinates with appropriate personnel to establish the proper packaging for the waste type, with regard to its characteristics and the receiving unit's WAC.

When resubmittal of a new WDDF is required, in accordance with Section C-2d, "Frequency of Analysis," a new preacceptance evaluation will be conducted. Recertification of existing forms requires written and signed documentation from the generator stating that the waste stream and corresponding forms remain the same as presently approved by the WTS. Recertification also requires that there have been no significant changes in the process generating the waste, the physical and chemical properties of the waste, or the LDR status of the waste per IDAPA regulations.

Wastes to be received at the waste management units addressed in this permit may be received from other INL locations. The waste may be shipped directly to the waste management unit, or it may initially be received at the RMWSF container storage unit. In either case, the methodology for receiving and accepting the waste shipment will be the same.

Wastes transferred within the INTEC perimeter are not subject to DOT shipping requirements. Shipping and receipt of waste from outside the INL is subject to DOT shipping requirements. For those shipments within the INL geographic boundaries, compliance with DOE Order 460.1B (or successor applicable DOE Orders) is required.

Hazardous and/or mixed waste and debris generated at CPP-659 may be transferred to either the storage or treatment areas addressed in this permit directly from the point of generation. Prior to transfer of waste, an evaluation is made to ensure that the constituents associated with the waste meet those specified in the Part A permit application, and that the waste form meets the applicable WAC for the intended unit. Uncontainerized wastes (e.g., HEPA filters, piping, valves, tools) within CPP-659 may be transferred directly from the point of generation to one of the waste pile storage areas.

LDR Requirements

Point-of-generation facility personnel provide waste characterization information and use this information to complete LDR notifications, per IDAPA 58.01.05.011 (40 CFR 268.7). In cases where facility personnel determine that an LDR waste does not meet the applicable treatment standard(s) set forth in IDAPA 58.01.05.011 (40 CFR 268, Subpart D), or exceeds the applicable prohibition level(s) set forth in IDAPA 58.01.05.011 (40 CFR 268.32) or Section 3004(d) of RCRA, facility personnel provide written notice in accordance with IDAPA 58.01.05.011 [40 CFR 268.7(a)(1)(ii)].

In cases where facility personnel determine that a restricted waste is being managed that can be land-disposed without further treatment, facility personnel submit written notice stating that the waste meets (or is exempt from) applicable treatment standards set forth in IDAPA 58.01.05.011 (40 CFR 268, Subpart D) and the applicable prohibition level(s) set forth in IDAPA 58.01.05.011 (40 CFR 268.32) or Section 3004(d) of RCRA. The notice must be in accordance with IDAPA 58.01.05.011 [40 CFR 268.7(a)(2)].

Required LDR notices are provided by point-of-generation facility personnel and transmitted to the waste management unit personnel receiving the waste.

C-2b. Test Methods [IDAPA 58.01.05.008; 40 CFR 264.13(b)(2)]

Waste Analysis

Analytical methods employed are primarily taken from *EPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (SW-846, Current Edition). In those cases where method-defined parameters[9] are required by regulation, SW-846 methods are always employed. Examples of method-defined parameter methods, where the analytical result is wholly dependent on the process used to make the measurement, include the use of the toxicity characteristic leaching procedure (TCLP) to prepare a leachate, flash point, pH, corrosivity tests, and paint filter liquids. The cited test methods will be performed at the laboratories per controlled implementing procedures.

The U.S. EPA provides for a degree of flexibility in the use of SW-846 and other approved methods. This flexibility is dependent on the maintenance of precision, accuracy (or bias), recovery, representativeness, comparability, and sensitivity (detection, quantitation, or reporting limits) relative to the data quality objectives for the intended use of the analytical results. "If an alternative analytical procedure is employed, then EPA expects the laboratory to demonstrate and document that the procedure is capable of providing appropriate performance for its intended application. This demonstration must not

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[9]. "The use of an SW-846 method is mandatory for the following Resource Conservation and Recovery Act (RCRA) applications contained in 40 CFR Parts 260 through 270:

- Section 260.22(d)(1)(I) - Submission of data in support of petitions to exclude a waste produced at a particular facility (i.e., delisting petitions)
- Section 261.22(a)(1) and (2) - Evaluation of waste against the corrosivity characteristic
- Section 261.24(a) - Leaching procedure for evaluation of waste against the toxicity characteristic
- Section 261.35(b)(2)(iii)(A) - Evaluation of rinsates from wood preserving cleaning processes
- Sections 264.190(a), 264.314(c), 265.190(a), and 265.314(d) - Evaluation of waste to determine if a free liquid is a component of the waste
- Sections 264.1034(d)(1)(iii) and 265.1034(d)(1)(iii) - Evaluation of organic emissions from process vents
- Sections 264.1063(d)(2) and 265.1063(d)(2) - Evaluation of organic emissions from equipment leaks
- Section 266.106(a) - Evaluation of metals from boilers and furnaces
- Sections 266.112(b)(1) and (2)(I) - Certain analyses in support of exclusion from the definition of a hazardous waste for a residue which was derived from burning hazardous waste in boilers and industrial furnaces
- Sections 268.7(a), 268.40(a), (b), and (f), 268.41(a), 268.43(a) - Leaching procedure for evaluation of waste to determine compliance with land disposal treatment standards
- Sections 270.19(c)(1)(iii) and (iv), and 270.62(b)(2)(I)(C) and (D) - Analysis and approximate quantification of the hazardous constituents identified in the waste prior to conducting a trial bum in support of an application for a hazardous waste incineration permit
- Sections 270.22(a)(2)(ii)(B) and 270.66(c)(2)(I) and (ii) - Analysis conducted in support of a destruction and removal efficiency (DRE) trial bum waiver for boilers and industrial furnaces burning low risk wastes, and analysis and approximate quantification conducted for a trial bum in support of an application for a permit to burn hazardous waste in a boiler and industrial furnace. Federal Register, Thursday, November 20, 1997, Vol. 62, No. 224, 62079.

be performed after the fact, but as part of the laboratory's initial demonstration of proficiency with the method. The documentation should be in writing, maintained in the laboratory, and available for inspection upon request by authorized representatives of the appropriate regulatory authorities (SW-846, Chapter Two, 'Choosing the Correct Procedure')."

Joint EPA/Nuclear Regulatory Commission (NRC) guidance[10] for mixed waste also provides flexibility in sample sizes with method-defined parameter methods, as long as the resulting test is sufficiently sensitive to measure the constituents of interest at the regulatory levels prescribed in the TCLP. Other variances to published testing and sampling protocols are permissible under 40 CFR 260.20-21, but must be approved prior to implementation by the Director of the Idaho Department of Environmental Quality (DEQ).

The EPA allows for the use of recognized methods other than those prescribed in SW-846. "Whenever methods from SW-846 are not appropriate, recognized methods from source documents published by the EPA, American Public Health Association (APHA), American Society for Testing and Materials (ASTM), the National Institute for Occupational Safety and Health (NIOSH), or other recognized organizations with appropriate expertise should be used, if possible (SW-846, Chapter One)."

Because of the broad range of acceptable methods available for testing specific constituents, and with the rapid incorporation/deletion of methods, not all of the SW-846 methods are specified in Tables C-1 and C-2. Only the method-defined parameter methods are specified by specific numbers.

Certain waste streams are generated at the INTEC which require remote handling and are subject to full RCRA characterization requirements. The remote sample handling requirements and specific process stream requirements cause deviations in some required analyses systems. For example, the EPA has determined that "if the analyst can demonstrate that the test is still sufficiently sensitive (in the case of reduced sample size in a TCLP extraction) to measure the constituents of interest at the regulatory levels specified in the TCLP and representative of the waste stream being tested" then the sample size can be legitimately decreased[10]. Sample size becomes a critical factor, especially with respect to radiation exposure hazards, and therefore, must be a factor for consideration in any sampling or analytical activity.

10. *Federal Register*, Thursday, November 20, 1997, Vol. 62, No. 224, 62079.

The analyses may be performed at INL laboratories or at approved off-Site laboratories. Laboratories contracted by the contractor to perform outside work are audited periodically, to ensure that each laboratory's quality control procedures and standard practices manuals meet the requirements for laboratories conducting EPA test procedures. If the laboratory has not been audited, or has failed to conform to the audit criteria, that laboratory is not authorized by the contractor to conduct waste characterization analysis.

Process Knowledge

The EPA/ NRC guidance emphasizes the use of process knowledge to determine if a radioactive waste is hazardous, as a way to avoid unnecessary exposures to radioactivity. The types of information that may be used as process knowledge (for either mixed or hazardous only waste) include, but are not limited to, the following:

- Chemical/material composition specifications - chemical specifications may be available from the purchase specifications of the particular chemical in question, from product information provided by the manufacturer, or from the labels for the particular chemical in question. For pure chemicals, where the material contents and characteristics are well known (e.g., hydrofluoric acid), standard chemical reference materials may supply the required information. Standard material composition reference tables may supply the required information for metals, plastics, and other materials manufactured to certain grades, alloy specifications, etc., where the material contents and characteristics are well known (e.g., Type 304 stainless steel).

- Material safety data sheets (MSDSs) - chemical specifications and related information are available on these standard reference materials. The MSDSs may be provided by the manufacturer, or acquired through available MSDS data bases.

- Process description - pertinent details of the process generating the waste and the chemicals used that have generated the waste must be described. The more complex the process, the more information would be required, such as process flow diagrams and listings of chemicals used or introduced at various points prior to the waste stream being generated.

- Previous analytical information.

If process knowledge is adequate to ensure that a particular constituent is not present in the waste, then there is no requirement to analyze for that constituent. For instance, if the waste comes from a well-defined aqueous process and there are no organic chemicals associated with that process, then it is not necessary to test for volatile or semivolatile organics. Similarly, if there is no reason to suspect pesticides or herbicides, analysis for those parameters (constituents) is not required. However, waste characterization documentation must establish that there is no reason to suspect the constituent is in the waste. This can be accomplished by including a detailed process description, published data for the process or materials used, or both.

C-2c. Sampling Methods [IDAPA 58.01.05.008 and 58.01.05.005; 40 CFR 264:13(b)(3) and 262, Appendix I]

Facility personnel are responsible for initially characterizing wastes to be managed at the waste management units addressed in this permit. Facility personnel can use process knowledge and/or analytical methods to adequately characterize waste. As part of the characterization process, facility personnel select the appropriate sampling method, based on knowledge of the waste material matrix [e.g., solid, liquid, sludge, radiological component and As Low As Reasonably Achievable (ALARA) considerations] and specific analytes of interest. Facility personnel are also responsible for arranging all sampling and laboratory support and for sample shipments. Sampling personnel document the sampling activities and chain of custody.

When collected, representative waste samples are obtained in accordance with the sampling approaches described in Chapter Nine of Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, current edition. Samples are collected using appropriate equipment and methods identified in, but not limited to, the following sources:

- EPA Test Methods for Evaluating Solid Waste, SW-846, Chapter 10, “Sampling Methods,” Third Edition

- 40 CFR 261, Appendix I, “Representative Sampling Methods”

- Annual Book of ASTM Standards, American Society for Testing and Materials, Current issue

- Characterization of Hazardous Waste Sites - A Methods Manual. Volume II: Available Sampling Methods, EPA-600/4-84-076, 2nd Edition, December 1984

- Characterizing Heterogeneous Wastes: Methods and Recommendations, EPA/600/R-92/033, February 1992

- EPA Waste Analysis at Facilities that Generate, Treat, Store, and Dispose of Hazardous Wastes: A Guidance Manual, April 1994

- Other recognized methods from source documents published by the EPA, American Public Health Association, American Society for Testing and Materials, the National Institute for Occupational Safety and Health; or other recognized organizations with appropriate expertise.

Sampling methods that deviate from approved or other recognized methods must be approved prior to implementation by the Director of the DEQ.

C-2c(1) Standard Sampling Methods

Table C-3 lists example methods used to obtain representative samples from various waste forms. These methods may need to be modified as a result of high radiation fields or difficult to sample items, such as HEPA filters and other types of mixed waste (e.g., valves and piping). Sampling will be conducted in accordance with approved sampling and operating procedures. In general, where standard samples are collected, the following basic sampling procedure used:

- Obtain samples using precleaned sample equipment, in accordance with the applicable method.

- Fill sample containers. Uniquely identify and label each sample, and document necessary information in the field record (e.g., location, time, characteristics).

- Properly clean and decontaminate the exterior of the sample containers and the sampling hardware.

Table C-3. Example Methods and Strategies for Sampling Wastes.

Primary Matrix	Waste Composition	Sampling Equipment	Sampling Strategies
Non-metal debris	Asphalt, uncoated concrete, firebrick, cinder block	Impact hammer (hammer and chisel), rotating coring device	Size-reduced composite sample
	Uncoated wood	Rotating coring device	Size-reduced composite sample
	Coated concrete, coated wood	Rotating coring device, shredder, scissors, shears, or other appropriate equipment	Size-reduced composite sample
	Glass, plastic	Shredder, scissors, shears, impact hammer for fracturing, etc.	Size-reduced composite sample
	High-efficiency particulate air (HEPA) filters, composite filters	Shredder, scissors, shears, scoop, spoon Rotating coring device	Shredding, cutting, or shearing an appropriately sized sample Size-reduced composite sample (Size-reduced composite sample, where applicable
	Plastic bags, baghouse bags, personal protective equipment	Shredder, scissors, shears, scoop, spoon	Shredding, cutting, or shearing an appropriately sized sample (Size-reduced composite sample, where applicable)
	Filter media	Shredder, scissors, shears, scoop, spoon Rotating coring device	Shredding, cutting, or shearing an appropriately sized sample Size-reduced composite sample, where applicable
	Rubber	Shredder, scissors, shears, scoop, spoon	Shredding, cutting, or shearing as appropriately sized sample (Size-reduced composite sample, where livable
	Paper, cloth	Shredder, scissors, shears, scoop, spoon	Shredding, cutting, or shearing an appropriately sized sample (Size-reduced composite sample, where applicable)

Table C-3. Example Methods and Strategies for Sampling Wastes (continued).

Primary Matrix	Waste Composition	Sampling Equipment	Sampling Strategies
Metal debris	Metal tools, structural steel, steel pipe, rebar, assorted scrap	Drill, rotating coring device	Size-reduced composite sample
	Drums; cans, furniture, motors/pumps, construction hardware (nails, screws, etc.)	Drill, rotating coring device	Size-reduced composite sample
Contaminated equipment (metal)	Machinery, tools, glove boxes	Drill, rotating coring device	Size-reduced composite sample
Contaminated equipment (non-metal)	Glass, plastic	Shredder, scissors, shears, impact hammer for fracturing, etc.	Size-reduced composite sample
Contaminated equipment (non-metal)	Rubber	Shredder, scissors, shears, scoop, spoon	Shredding, cutting, or shearing an appropriately sized sample
Free-flowing liquids and slurries	N/A	COLIWASA or peristaltic pump (containers) double hypodermic needle sampler (tanks)	Composite sample
Sludges	N/A	Trier, Scoop, Dipper	Grab sample
Moist powders or granules	N/A	Trier, Scoop	Grab sample
Dry powders or granules	N/A	Thief, Scoop, Shovel	Grab sample
Sand or packed powders and granules	N/A	Auger, Scoop, Tube, Shovel	Grab sample
Large grained solids	N/A	Large Trier, Shovel	Grab sample

COLIWASA = Composite Liquid Waste Sampler

- Place containers in a durable ice-filled cooler or comparable receptacle for storage or transport to the laboratory. The sample containers may use bubble wrap or other protective material before placement in the cooler or comparable receptacle, if necessary. Install custody seals to ensure sample integrity.

- Complete the chain-of-custody forms. Retain a record copy.

- Review: all paperwork and attach the forms to the cooler or comparable receptacle.

- Seal the coolers or comparable receptacles, and mark them in accordance with DOT and/or procedural requirements.

- Transport samples to the analytical laboratory.

Sampling procedures for certain mixed wastes may deviate from the standard sampling protocols, due to the hazards associated with radioactive materials. For example, due to radiological concerns, the use of remotely operated sample transfer systems may limit the size of sample containers, prevent sealing of the transfer receptacle, or preclude chain-of-custody and other documentation from directly accompanying the samples. However, all sampling procedures are consistent with the stated goals of SW-846, to collect representative samples and to maintain their physical and chemical integrity.

Equipment used to sample waste is disposable or designed for decontamination. Contaminated disposable equipment is managed appropriately. Equipment that can be cleaned and reused, as opposed to discarded, is thoroughly decontaminated before reuse or storage. Decontamination solutions are managed appropriately.

Prior to treatment of debris, if the generator has no knowledge of the materials in the waste or the processes) that generated the waste, the generator or point-of-generation personnel must perform a hazardous waste determination, per 40 CFR 262.11. The debris can be initially sorted by radioactive hazard category, as follows:

- Low-level mixed waste

- Transuranic mixed waste

- High-level mixed waste.

The debris may be sorted by form or type, to facilitate sampling, management, and final disposition. Sorting would also include determining whether the debris has fixed and/or removable radioactive on. This is accomplished through the use of surface swipes and/or hand held instruments.

C-2c(1)(a) Debris Sampling Methods

Debris may be sampled if the generator has no knowledge of the materials in the waste or the process(es) that generated the waste. The sampling method used to characterize debris depends on the type of material. Appropriate sampling strategies include cutting, sizing, or coring porous material for laboratory analysis. For example, stabilized or other solidified debris may require mechanical coring (e.g., reverse rotary coring); if mechanical coring is used, coolants and dusts are captured and managed appropriately. In any case, representative random samples must be gathered for laboratory sizing and analysis.

Fibrous combustibles, such as Tyvek® and baghouse bags, are best sampled by shredding, cutting, or shearing appropriately sized samples for laboratory analysis. Solid form combustibles, including Benelex and Plexiglas, are best sampled using a mechanical devise for sizing, such as a diamond saw or concrete corer. Combustible papers, filter media, and other paper-like materials may be sampled by cutting, shredding, or ripping samples of similar size.

Absorbents, absorbed liquids, pelletized materials, and other unconsolidated debris can be sampled using the more conventional EPA and ASTM strategies.

Sampling methods for treated debris are conducted in accordance with Table C-3 and the requirements of Section C-2d, as applicable, provided the debris meets the clean debris surface criteria. After achieving the clean debris surface standard, three grab samples may be taken from the debris and composited for analysis.

C-2c(2) Field Records

Records provide the direct evidence and support for the necessary technical interpretations, judgments, and discussions concerning project activities. These records, particularly those anticipated to be used as evidentiary data, directly support current or ongoing technical studies and activities, and provide the historical evidence needed for later reviews and analyses.

Field records may consist of bound field notebooks, sample collection forms, personnel qualification and training forms, sample location maps, equipment maintenance documentation, chain-of-custody forms, and/or sample analysis request forms. Records may include (but are not limited to) the following, as applicable:

Sample Collection - To ensure maximum utility of the sampling effort and resulting data, documentation of sampling protocol, as performed in the field, is essential. Sample collection records may contain the names of persons conducting the activity, sample number, sample location, equipment used, climatic conditions, documentation of adherence to protocol, and unusual observations.

Chain-of-Custody Records - The chain of custody involving the possession of samples from the time they are obtained until they are disposed or shipped off-Site are documented, and may include the following information: (1) the project name; (2) signatures of samplers; (3) the sample number, date and time of collection, and grab or composite sample designation; (4) signatures of individuals involved in sample transfer; and (5) if applicable, the air bill or other shipping number.

Quality Control (QC) Samples - Documentation for generation of QC samples, such as trip and equipment rinsate blanks, duplicate samples, and any field spikes, are maintained.

Deviations - All deviations from participated sampling and analysis protocols are recorded in the site logbook or project records.

Reports - A copy of any report issued and any supporting documentation are retained.

C-2c(3) Quality Control

Defensible and valid data are obtained through implementation of the processes controlling characterization and/or sampling and analysis. In addition, defensible and valid data require the implementation of the process of field and laboratory control samples, data validation, sampling performance assessments, and, as necessary, corrective action(s) as identified in this section.

C-2c(3)(a) Field Control Samples

Control samples are QC samples that are intended to monitor the performance of the sampling system. In accordance with this WAP, the following field control samples may be collected:

- Field duplicates
- Equipment rinsate
- Trip blank-sample.

C-2c(3)(b) Laboratory Quality Control

The INL maintains a laboratory certification program that includes a rigorous assessment and validation of the Quality Assurance/Quality Control (QA/QC) program at the laboratories. Depending on the data end use and overall data quality objectives (DQOs), the laboratory QA/QC control samples may include:

- Matrix spike
- Matrix duplicate
- Matrix spike duplicate.

C-2c(3)(c) Data Validation

Depending on the data end use and overall project DQOs, data validation may include evaluation of the following subjects:

- Completeness of laboratory records with regard to processing of all required samples and analyses

- Implementation of appropriate procedures
- Evaluation of sample analytical data to required detection and quantity
- Evaluation of QC analytical data to applicable control criteria
- Comparison of sample holding times to the required holding times prescribed by this WAP.

All deviations from the applicable guidance are documented and corrective actions implemented, as necessary.

C-2c(3)(d) Sampling Performance Assessment

A key function of a QC program is the periodic assessment of activities for conformance to required protocols. Sampling performance assessments may evaluate the following activities:

Completeness of Field Reports - This evaluation determines that a complete record exists for each field activity, and the procedures specified by this WAP or the documents implementing this WAP were executed.

Identification of Valid Samples - This review involves the evaluation and interpretation of field records to detect problems affecting the representativeness of samples.

All resultant concerns are documented and corrective actions implemented, as necessary.

C -2c(3)(e) Corrective Action

Corrective action measures can be divided into two categories as follows:

Project Corrective Action - Corrective actions are performed when the project objectives are not met, when conditions adverse to quality have been identified, or when an assessment of data reveals questionable or unknown data quality. Conditions adverse to quality are identified promptly, and corrected as soon as possible. When significant conditions adverse to quality are identified, the causes are determined, and corrective actions to prevent their recurrence are performed and documented.

Laboratory Corrective Actions - The contract laboratory possesses a QA program plan identifying warning, control, and rejection limits and what actions will be taken when the warning, control, and rejection limits are exceeded. Warning conditions may require only more frequent observations of a piece of equipment, while rejection conditions require instrument maintenance and reanalysis of all samples run in the out-of-control condition.

C-2d. Frequency of Analysis [IDAPA 58.01.05.008; 40 CFR 264.13(b)(4)]

Waste streams generated several times a year from highly controlled processes in which the waste composition remains consistent for the duration of the year are initially characterized and re-characterized when:

- The process generating an established waste stream changes
- The waste characteristics are highly variable from shipment to shipment
- There is reason to suspect a change in the waste based on inconsistencies in the manifest, packaging, or labeling of the wastes, or there are inconsistencies between the waste verification results and the waste characterization data provided by the generator
- TSDF personnel reject the waste because it fails verification
- An off-Site TSDF rejects the waste due to improper characterization.

TSDF personnel can require additional waste analysis to substantiate waste characterization data.

C-2e Additional Requirements for Wastes Generated Off-Site [IDAPA 58.01.05.008; 40 CFR 264.13(c)]

Wastes generated off-Site may be accepted at the permitted units for storage and subsequent treatment in an INL treatment unit. These wastes are initially brought into an INL storage unit pending treatment. The off-Site generator must provide adequate documentation to ensure the waste is adequately characterized in accordance with the requirements stipulated in this WAP (for data quality, WAC, and acceptable methods). All off-Site waste shipped to the INL must undergo waste verification before acceptance. This verification may occur at the RMWSF upon receipt, or other approved locations, or at the generator site prior to shipment

Ten percent of the off-Site hazardous waste and five percent of the off-Site mixed waste received at the INL undergo verification. This verification percentage is based on the total number of containers in each waste shipment or waste stream.

The waste verification may be performed upon delivery to the INL, before finally accepting the waste at a permitted unit, or at the generator's location before shipping. In this instance, the shipping containers are sealed at the generator site with tamper-indicating devices to ensure the waste received is the same as the waste that underwent verification. Regardless of whether the verification is performed at the INL or the generator location, the requirements contained in this section are followed for all off-Site wastes intended for management at the INL.

Each waste container is assigned a container identification number. Specific containers in a shipment are randomly selected for verification by using the container identification number in conjunction with a random number table or random number generator. Containers in addition to the appropriate percentage may be selected for verification at the discretion of the contractor personnel performing the verification. The verification program is implemented to ensure the waste received by the unit matches the expected physical and chemical characteristics of the waste from the generator-supplied characterization information. A sample technician or individual trained in sampling in the presence of another designated verification individual performs the verification. A review of the applicable waste stream profiles is conducted to determine if there are specific safety concerns, compatibility of the sampling equipment and containers, appropriate sampling devices, analytical test procedures for the particular waste stream, and approved procedures for sample collection and analysis for the specific waste stream. All information is recorded and placed into facility files. Prior to conducting verification facility support, such as Radiological Control Technician (RCT) and Industrial Hygiene (IH), as needed is contacted. The type of equipment used for verification depends on the type of media being sampled, such as liquid, solid, or semisolid. Before a sample is extracted the following is performed:

- Ensure the packaging, marking, and labeling on the waste container(s) are consistent with the information provided on the waste profiles

- Ensure facility support personnel have performed surveys of the waste and confirm the levels match what is listed on the container profile

- Ensure all required personal protective equipment identified by facility support be provided to team participants

- Weigh container and record weight on facility forms

- Move container into the sampling area.

Waste verification involves opening waste containers for visual inspection or performing a qualitative field test parameter to insure that the waste in the container is the same that was approved for shipment and matches the description on the waste characterization data package and shipping papers. The waste containers are opened at RMWSF CPP -1617. Verification is relayed to contractor personnel involved with verification by obtaining the waste profile pertaining to the specified waste stream and checking various parameters to ensure the waste stream is consistent with the waste profile.

Physical characteristics of the waste examined during the visual waste verification process include color, volume, phases, physical state, and layering. The qualitative field-test parameters, test methods, and ranges of acceptance are identified in Table C-4. The verification information is documented in a verification checklist for inclusion in the waste verification logbook. Each step in the verification checklist is initialed off by the person performing the verification. A signature at the beginning of the checklist and the initials at each item verify approval of the verification process. Contractor personnel perform all qualitative tests and verify the results of the tests at the time of performance in accordance with the ranges established for acceptance. Laboratory packs are verified by comparing the inventory provided by the generator with the waste characterization data package to the contents of the laboratory packs.

Upon detection of discrepancies between the generator's waste characterization data and the results of the verification activities, the discrepancies are immediately addressed. Resolution of discrepancies ranges from immediate on-the-scene resolution to the rejection of the waste shipment.

A waste is nonconforming if the verification test results fall outside the specified parameter ranges shown on Table C-4. Once a waste discrepancy is noted, the waste is placed on hold, for storage or treatment, until the discrepancy is resolved. All available data relevant to the discrepancy (including the verification test results, WDDF characterization, and waste history) is evaluated. If the discrepancy can be resolved based on available information, waste processing may continue. If not, additional information will be gathered. Additional information may be obtained from further testing of the waste received, consultation with the generator, or from other references. The additional analyses could include a recheck of selected verification parameters as well as discretionary parameters to augment the characterization of the waste. If the discrepancy is resolved, the waste will be reevaluated using the preacceptance criteria. If discrepancies cannot be resolved or if it is determined the waste is not acceptable per the preacceptance criteria in time to process the shipment the day it arrives at the storage unit, the shipment may be returned to the generator or stored on the truck. If the discrepancy is not resolved within 15 days after receiving the waste, the DOE contractor will immediately submit a letter to the Regional Administrator, describing the discrepancy and attempts to reconcile it, and a copy of the manifest or shipping paper at issue. If the waste is rejected, the waste will be shipped back to the generator.

Table C-4. Qualitative waste verification parameters.

Parameter	Acceptance Range: Test Method	Acceptance Range: Test Results
Ph	pH paper or meter	Paper: Specified pH ±2.5 units Meter: Specified pH ± 1.0 units
Specific gravity	Hydrometer or scale/volume for homogeneous media	Confirm specific gravity: solids ± 1.00 units liquids ± 0.25 units
Water reactivity (not required for aqueous waste)	Addition of water	For nonreactive: no evolution of gases or significant increase in temperature
Solids screen for free liquids	Visual inspection	No free liquids observed in wastes that are stated not to contain free liquids
Organic vapors	Organic vapor analyzer or combustibility meter	≥200 ppm for volatile or semivolatile organic-bearing wastes; <200 ppm for aqueous wastes
Oxidizer	Potassium iodide starch paper in hydrochloric acid or redox probe/meter	Paper: changes in color Meter: >0.5 volts of the reducer scale
Reducer	Iodine/starch water redox or probe/meter	Water: changes in color Meter: >0.5 volts on the reducer scale

ppm = parts per million.

C-2f. Additional Requirements for Ignitable, Reactive, or Incompatible Wastes [IDAPA 58.01.05.008; 40 CFR 264.13(b)(6) and 264.17]

FDPA and FDP Cell Container Storage and CPP-659/-1659 Storage

Container storage of wastes in the FDP cell and FDPA container storage units are not limited to nonliquid, physically solid waste forms. Container storage areas in CPP-659/-1659 are not limited to nonliquid, physically solid waste forms. Waste matrices will be evaluated by facility personnel for free liquids prior to acceptance into the CPP-659 waste pile storage areas, and the point of generation facility personnel responsibility is to ensure and certify that no free liquids are present in waste that will be stored in the CPP-659 waste pile storage areas. Containers with free liquids will be separated/segregated from waste piles in those areas where waste pile storage and container storage are co-located.

EPA HWNs are applied to hazardous and/or mixed waste and debris, such as HEPA filters, through the process of acceptable knowledge, which involves both process knowledge and/or chemical, physical testing of the waste. F and U EPA HWNs have been applied based on knowledge of the processes. The F and U HWNs have been assigned as a result of the contained-in rule. Since these F- or U-listed wastes chemicals are not in their pure or concentrated form, the characteristics of ignitability or reactivity would not and could not arise from these codes.

In some cases, due to high radiation fields associated with the wastes, the generator has discretionarily assigned EPA HWNs to the waste, in lieu of testing.

Individually, the D, F, and U EPA HWNs have the potential to pose an incompatible scenario, i.e., if mixed with sufficient concentration of the pure chemical, as well as, other factors, such as time, mixing configuration, and containment of the chemicals. However, the EPA HWNs have been primarily assigned based on the contained in rule. The chemical constituents associated with these EPA HWNs already have achieved chemical equilibrium and stability within the final physically solid waste form or exist in low concentrations. Any danger to (1) generate extreme heat or pressure, fire or explosion, violent reaction, (2) produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to pose a risk of fire or explosions, or (3) damage the structural integrity of the facility as a result of chemical reactions would have been eliminated by the following: (a) insufficient quantity of the chemicals in a pure, concentrated form to pose a problem, (b) a containment configuration that does not permit a pressure buildup and release if event "a" were achieved, and (c) lack of an adequate ignition or energy source to initiate the reaction.

HEPA filters by design have a poor ability to retain organic chemicals other than in trace amounts, as their primary purpose is to retain larger particles. Listed hazardous wastes do not exist on the HEPA filters in either a pure, concentrated form or in more than de minimis or trace quantities. Other debris, like HEPA filters, lacks the quantity of chemicals necessary to provide a vehicle for reaction to create a hazard to human health or the environment.

Ignitable or reactive wastes may be stored in CPP-659 NWCF Rooms 308, 417, 418, 428, and CPP-1659 Contaminated Equipment Maintenance Area. Ignitable or reactive wastes may be treated via repackaging in CPP-659 Room 308. Additionally, ignitable or reactive wastes may be stored in CPP-666 FDP Cell and Rooms 301, 114C, 115, 180, B-4, B-5, and SB-8. Ignitable or reactive wastes may be treated via repackaging or sodium deactivation in CPP-666 FDP Cell, or sodium distillation in Room SB-8.

Waste characterization, verification, and treatment are conducted to ensure that waste is appropriately packaged and acceptable for transport to the Waste Isolation Pilot Plant (WIPP) or other off-site facility for disposal. This effort consists of some or all of the following steps: removing multiple smaller waste cans from canisters, spreading the contents on the sorting tables to identify/remove/treat WIPP prohibited items (such as liquids, ignitables, reactives, etc.), and repackaging of the contents into standard-sized containers that can be processed through the necessary physical and radiological characterization equipment to demonstrate compliance with the waste acceptance criteria for WIPP or other off-site facility.

Because sodium reacts in water and air, controls are established to minimize the risk of fire. These controls include the use of the oxygen deficient environment in the ARS, use of inert gas when sizing special case components on the sizing table and having fire extinguishing media staged in the Cell for use (Met-L-X, sodium carbonate, or other inert material). Thermal events are expected during treatment of ignitable and reactive waste. A controlled area around the treatment unit will be established during sizing, air treatment, and water treatment as part of the work control process. Thermal reactions within this controlled area that do not damage the operational integrity of the ARS and/or secondary containment are a planned event. Activities that may be performed to maintain a controlled thermal reaction are, stop activities that may be contributing to the thermal reaction, maximize the argon purge, monitor the event, and/or apply Met-L-X. Thermal reactions within these parameters are considered to be a part of the treatment process, and as such do not require activation of the contingency plan or reporting process.

If the thermal reaction results in a fire outside of the controlled area, or results in damaging the operational integrity of the ARS and/or secondary containment, then the RCRA Contingency Plan will be activated and a verbal notification will be provided to the DEQ, and a 15-day follow-up report will be completed.

Debris Treatment Processes

HEPA filter and other debris treatment involves treatment of a physically solid waste form. The HFLS process and other debris treatment involves treatment of HEPA filters and other debris, by leaching the hazardous waste contaminants from the filters and other debris, using water and nitric acid solutions. Highly concentrated nitric acid solutions are not employed in the leaching process. The use of these solutions in the treatment processes will not affect the chemical conditions existing in HEPA filters/other debris and are consistent with the logic stated above, in "FDP Cell Container Storage and CPP-659/1659 Storage."

Holdup and Collection Tanks

Solutions and wastes from the debris treatment processes are compatible if mixed in these tanks.

FDP Cell Slab Tank Storage

The slab tank unit may be used to store liquid mixed wastes. The primary source of liquid to be stored in the tank would be liquids accumulated in the cell sump as a result of activities occurring within the cell.

Acceptable knowledge, i.e., process knowledge and/or physical-chemical testing, per the waste acceptance criteria (WAC), will be used to characterize mixed waste liquids that may be stored in the FDP cell slab tank.

RMWSF Container Storage and Macroencapsulation Treatment and CPP-659 Room 428 Macroencapsulation Treatment

Each waste stream proposed for storage and macroencapsulation treatment in the units addressed in this permit and is evaluated for all applicable RCRA characteristics by the WTS as part of the waste characterization process. Waste that is determined to be D001, D002, or D003 will not be allowed to be treated by the macroencapsulation process at the RMWSF or at CPP-659 Room 428. Additionally, if a waste is determined to be D001, (ignitable), the waste is managed in a manner to prevent its ignition while in storage. Either process knowledge or analysis using the methods described in Section C-2a of this WAP may be used to make the determination of whether or not a waste is ignitable.

Incompatibility determinations are based on the characterization data the WTS develops during the initial characterization activities. The storage and treatment units at the RMWSF operate in accordance with defined procedures, which demonstrate how these data are used to prevent incompatible wastes, including reactives, from contacting one another. The tables in Appendix V of 40 CFR 264, 265 and 49 CFR 177.848 are examples of resources that may be used to determine compatibility.

The WTS evaluates for the characteristic of reactivity during the waste characterization process. If, based on the information provided by the source generating the waste, the waste is a new, unused chemical product that is either a P- or U-listed waste for which reactivity is the basis for listing, the waste is considered a reactive waste. If the waste is a mixture that contains P- or U-listed constituents for which reactivity is the basis for listing, the waste is evaluated to determine if the waste matrix will be a reactive waste. Consideration must be given to concentration, purity, and processes in which the chemicals have been previously employed, the matrix in which they may be combined, specific characteristics of the chemicals (i.e., volatility, mobility, reaction to water and/or other solvents, viscosity, density, pH, etc.), cumulative chemical effects, and the time the chemical constituents have been in contact with each other.

In the event that an evaluation based on the knowledge of the waste stream is not adequate to make the determination of whether or not the waste is reactive, analytical data are evaluated. This evaluation determines if the constituent of concern is present in a concentration that will cause the waste stream to be reactive. The analytical data reviewed could be new data obtained from sampling and analyzing the waste stream, or may be based on process data for the source generating the waste.

If, during the waste characterization process, the WTS identifies a constituent in the waste that is not familiar, and that is regulated as a listed waste, the WTS will consult reference material to determine if the constituent may be reactive. References used may include published text on chemical properties and/or manufacturers' specifications. A chemist or other qualified professional who can be used as a consultant in making the appropriate determination may also be used as a reference. Regardless of whether or not a consultant is used, the WTS performing the waste characterization has the responsibility to certify waste characterization is correct.

C-3. Waste Analysis Requirements Pertaining to Land Disposal Restrictions [IDAPA 58.01.05.011; 40 CFR 268]

The Hazardous and Solid Waste Amendments to RCRA permit the land disposal of certain types of wastes, only if LDR treatment standards are met. Information provided in this section describes the additional requirements for generating facilities and treatment unit personnel to characterize, document, and determine LDR applicability.

C-3a. Waste Characterization

The waste generators are responsible for providing accurate waste characterization information for wastes to be managed and generated at the units addressed in this permit. This information includes, where applicable, characteristic and listed determinations in addition to identification of wastewaters and nonwastewaters treatability groups [i.e., total organic carbon, total suspended solids (IDAPA 58.01.05.001; 40 CFR 268.48)] underlying hazardous constituents (IDAPA 58.01.05.001; 40 CFR 268.40), treatment standards applicable to waste, liquid/nonliquid determinations, and LDR subcategories.

LDRs are assigned to the waste at the point of generation, based on EPA hazardous waste numbers assigned to individual waste streams received and generated. Waste streams are assigned "F", "P", and "U" listed EPA HWNs, in addition to characteristic hazardous waste numbers (D001 through D043). Such hazardous waste is considered to be an LDR restricted waste. Once assigned by the generators at their respective facilities, LDRs will carry through to treatment residuals.

Waste generated from TSDF activities, e.g., maintenance and spill cleanup, will undergo a hazardous waste determination and LDR assessments, based on testing and/or process knowledge, as outlined in Tables C-1 and C-2, prior to management of the waste. If the waste is determined to be subject to the LDR requirements, generators will determine if the waste is wastewater or nonwastewater and applicable subcategories, using the parameters listed in Table C-2. In addition, total metal or total organic analyses are used to identify and determine compliance between LDR regulated hazardous waste constituents associated with the waste and the LDR treatment standards, unless otherwise specified in IDAPA 58.01.05.011 (40 CFR 268.40 and 40 CFR 268.49). Additional information on the characterization process is found in Section C-2.

C-3b. Sampling and Analytical Procedures

Refer to Sections C-2a and C-2b, and also Tables C-1 and C-2, for a discussion of sampling and analytical procedures. Test methods used to assess LDR treatment standards, except for treated debris, will be based on total analysis, unless otherwise specified in IDAPA 58.01.05.011 (40 CFR 268.40 - 268.45).

C-3c. Frequency of Analysis

Waste streams generated several times a year from highly controlled processes in which the waste composition remains consistent for the duration of the year are initially characterized and re-characterized when:

- The process generating an established waste stream changes
- The waste characteristics are highly variable from shipment to shipment
- There is reason to suspect a change in the waste, based on inconsistencies in the manifest, packaging, or labeling of the wastes, or there are inconsistencies between the waste verification results and the waste characterization data provided by the generator
- TSDF personnel reject the waste because it fails verification
- An off-Site TSDF rejects the waste due to improper characterization.

TSDF personnel can require additional waste analysis to substantiate waste characterization data.

C-3d. Additional Requirements for Treatment Facilities

C-3d(2) Analysis of Treatment Residues

Treated debris will be examined to verify that a clean debris surface has been met, per IDAPA 58.01.05.011 (40 CFR 268.45). In addition, this debris may be sampled and analyzed in accordance with the methods described below and in accordance with Sections C-2a, C-2b, and C-2c, or undergo process knowledge evaluation prior to disposal.

The HFLS treatment process addressed in this permit can generate residual fiberglass fines. The fines will be collected, characterized, and sent to either an on-Site or off-Site TSDF for storage and treatment. The liquid leachate from HFLS and other debris treatment will be collected in Tanks VES-NCD-123 or VES-NCD-129. The residues and treatment solutions will be characterized by applying the EPA HWNs associated with the wastes that were treated and, where applicable, may be tested for characteristics of hazardous waste and for LDR information, using the approved test methods provided in Tables C-1 and C-2, or process knowledge may be used in lieu of testing. Likewise, residuals from other debris treatment processes will be handled in the same manner.

HEPA filters or other debris received, that has not previously undergone the acceptance process, will be tested for TCLP after treatment, unless process knowledge is adequate to be used in lieu of testing. If there is a change in the process generating HEPA filters or other debris that could involve changes in concentrations of constituents, the filters or other debris from that system will be recharacterized. Facility personnel will be required to verify that the process system has not changed since the treated filters from the specific process system were characterized.

Treated HEPA filters and other debris are evaluated by decontamination technicians, to determine if the treatment standards specified in IDAPA 58.01.05.011 (40 CFR 268.45) for a clean debris surface have been met and whether the debris is characteristically hazardous. A major problem with inspection involves high radiation fields associated with the debris. Although high radiation field debris can be evaluated remotely, inspection involves more operational steps and specialized equipment. Once the debris has been radiologically decontaminated and is capable of being contact-handled, more options become available for inspection. Trained facility personnel, in debris treatment evaluations, can then more closely examine the debris. The debris itself (e.g., valves, pumps, or electric motors) can be dismantled for evaluation. Piping length is adequate to allow the use of high-intensity lighting to view down through it. Piping that is small (or large) in diameter can be inspected either visually or with the use of a boroscope. Once debris is capable of being contact-handled there is little chance of an item being uninspectable. If debris cannot be contact-handled, for any reason, it may be evaluated and treated remotely using manipulators or other handling devices and inspected through sight glass or via remote imaging equipment (e.g., camera or boroscope). If debris cannot be treated to a clean debris surface, because of high radiation fields, materials of construction, complex structure, or other handling concerns, it may be treated by an appropriate technology identified in Table 1 of 40 CFR 268.45, at an approved TSDF either on-Site or off-Site. If the debris is determined not to have met the “clean debris surface” requirement, then the debris must be retreated or managed as hazardous (See Appendix C-1). Treatment residuals are characterized based on the EPA HWNs originally assigned to the treated waste prior to treatment, characteristic assessments, and applicable LDR requirements (e.g., total organic carbon, total suspended solids, underlying hazardous constituents, and LDR treatment standards).

Hazardous/mixed waste debris and radioactive lead solids treated by macroencapsulation at the RMWSF and CPP-659 Room 428 will not produce any hazardous treatment residues.

Na/NaK contaminated debris waste treated by deactivation or distillation will no longer exhibit the characteristic of ignitability or reactivity. Treatment residuals will be characterized based on the EPA HWNs originally assigned to the waste prior to treatment, characteristic assessments, and applicable LDR requirements (e.g., total organic carbon, total suspended solids, underlying hazardous constituents, and LDR treatment standards).

C-3d(3) Sampling and Analytical Procedures

The sampling and analytical procedures that are used to characterize treated waste and residuals are addressed in Sections C-2a, C-2b, and C-2c of this permit.

C-3d(4) Frequency of Analysis

The frequency at which treated waste and associated residuals are characterized is described in Section C-2d of this permit.

C-4 SUBPART AA, SUBPART BB AND SUBPART CC APPLICABILITY [IDAPA 58.01.05.008; 40 CFR §§ 264.1030, 264.1050, AND 264.1080]

40 CFR 264 Subpart AA Applicability

40 CFR 264 Subpart AA requires owners or operators of facilities with process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations managing hazardous wastes with organic concentrations of at least 10 ppmw to either: 1) reduce total organic emissions from all affected process vents at the facility below 1.4 kg/hr (3 lb/hr) and 2.8 Mg/yr (3.1 tons/yr); or 2) reduce, by use of a control device, total organic emissions from all affected process vents at the facility by 95 weight percent. A process vent is defined in 40 CFR 264.1031 as any open-ended pipe or stack that is vented to the atmosphere either directly, through a vacuum-producing system, or through a tank (e.g., distillation receiver, condenser bottoms receiver, surge control tanks,

separator tank, or how well) associated with hazardous waste distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations.

Since the CPP-666 separation of sodium contamination from waste occurs through distillation, the distillation off-gas passes through the CPP-666 off-gas system, and is then vented to the atmosphere through the CPP-666 stack, the SDS is considered a process vent.

Characterization data for the waste to be processed through the SDS identified the waste to be 97% metal/inorganic. The characterization data conservatively assigns 4 characteristic organic waste codes and 3 solvent listed waste codes. Conservatively assuming a potential for the waste to be 3% organics, 40 CFR Subpart AA is applicable to the SDS.

Air modeling completed for the SDS conservatively assumed an organic emissions rate of 0.007 lb/hr, 24-hr average. This emission rate will be combined in the overall INL process vent emissions evaluation to ensure the INL facility remains below the regulatory limit of 3 lb/hr for all process vents.

40 CFR 264 Subpart BB Applicability

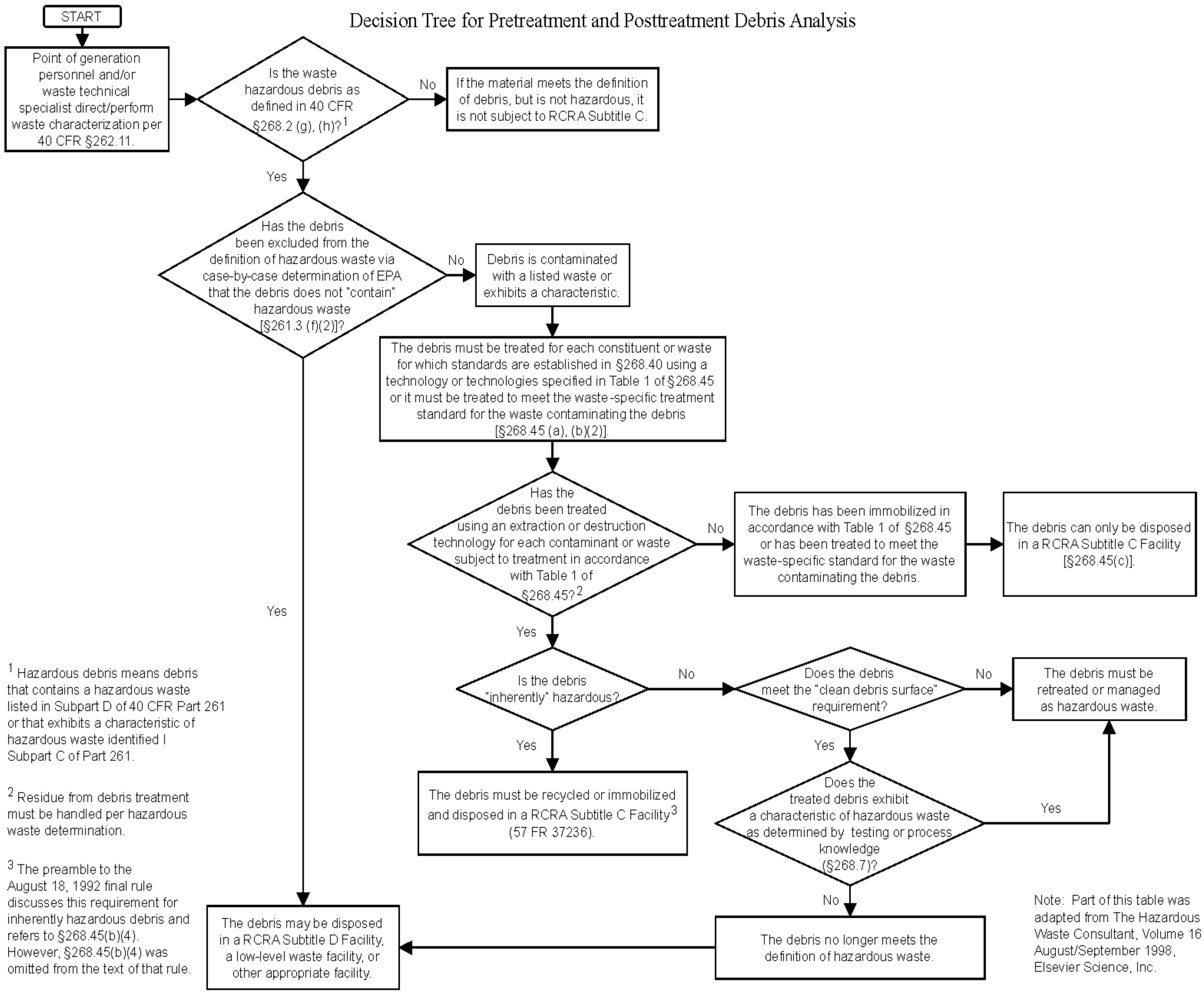
IDAPA 58.01.05.008 (40 CFR 264 Subpart BB) applies to equipment that contains or contacts hazardous wastes with organic concentrations of at least 10% by weight. Characterization data for the waste to be processed through the SDS identified the waste to be 97% metal/inorganic. Since the TOC is less than 10 percent by weight, the requirements of 40 CFR 264 Subpart BB do not apply.

40 CFR 264 Subpart CC Applicability

40 CFR 264.1080(b)(6) exempts from applicability a waste management unit that is used solely for the management of radioactive mixed waste in accordance with all applicable regulations under the authority of the Atomic Energy Act and the Nuclear Waste Policy Act. The wastes processed through the sodium distillation system are radioactive mixed waste and are exempt from regulation under Subpart CC.

Appendix C-1. Decision Tree for Pretreatment and Posttreatment Debris Analysis

Decision Tree for Pretreatment and Posttreatment Debris Analysis



[1] Hazardous debris means debris that contains a hazardous waste listed in Subpart D of 40 CFR Part 261 or that exhibits a characteristic of hazardous waste identified I Subpart C of Part 261.

[2] Residue from debris treatment must be handled per hazardous waste determination.

[3] The preamble to the August 18, 1992 final rule discusses this requirement for inherently hazardous debris and refers to §268.45(b)(4). However, §268.45(b)(4) was omitted from the text of that rule.

Note: Part of this table was adapted from The Hazardous Waste Consultant, Volume 16, August/September 1998, Elsevier Science, Inc.

Appendix C-2. Example of Waste Determination & Disposition Form

WASTE DETERMINATION & DISPOSITION FORM (WDDF)

(This form is used with MCP-1390, MCP-454, MCP-3811, MCP-9424, MCP-1396)

WDDF Number: ______________________

Waste Stream: ______________________ Material Profile Number: ______________________

SECTION I: PROCESS KNOWLEDGE EVALUATION (Completed by the generator with assistance from the Facility Representative)

1. Waste Generation Location: Facility: Building/Room: Area: Generator: Facility Rep.:

2. Process and Waste Description:

3. Were any waste minimization activities a part of this process: ☐ Yes ☐ No (If Yes, provide description or reference.)

4. Generation Status (check all that apply): ☐ INL ☐ ICP ☐ non-CERCLA DD&D/RCRA Closure Activities ☐ CERCLA ☐ VCO ☐ Routine Operations

5. Physical Description (check all that apply): ☐ Solid ☐ Sludge ☐ Organic Liquid ☐ Aqueous Liquid ☐ Aerosol ☐ Multiphase ☐ Gas Cylinder ☐ Stabilized/Solidified

6. Sources used for process evaluation (e.g., MSDS, operational logs, procedures, analyses):

7. Waste composition (e.g., paper, plastic, metal, liquid) and percentages (if known):

8. Additional Items of Concern:

A. Are free liquids present? ☐ Yes ☐ No ☐ Unknown

WASTE DETERMINATION & DISPOSITION FORM (WDDF)

(This form is used with MCP-1390, MCP-454, MCP-3811, MCP-9424, MCP-1396)

WDDF Number: ____________________

Waste Stream: ______________________________ Material Profile Number: ____________________

A1. If free liquids are present, are there multiple layers/phases? ☐ Yes ☐ No ☐ Unknown ☐ NA

A2. If multiple layer/phases are present, identify the number of layers/phases and the percentage of each (e.g., 2 layers [50 vol% liquid and 50 vol% sludge]): ☐ Yes ☐ No ☐ Unknown ☐ NA

A3. If free liquids are present, are the Total Suspended Solids (TSS) <1 wt%? ☐ Yes ☐ No ☐ Unknown ☐ NA

A4. If free liquids, are present, is the Total Organic Carbon (TOC) <1 wt%? ☐ Yes ☐ No ☐ Unknown

B. Is asbestos present?

B1. If asbestos is present, specify the form: ☐ Friable ☐ Non-friable ☐ Unknown ☐ NA

C. Is this a PCB waste? ☐ Yes ☐ No ☐ Unknown If Yes, complete Form 435.93, "PCB Waste Certification"

D. Is debris present (>60 mm, >50 vol% by visual inspection)? ☐ Yes ☐ No ☐ Unknown

E. Are classified items present? ☐ Yes ☐ No ☐ Unknown

F. Is elemental beryllium or insoluble beryllium compound or alloy containing ≥0.1% beryllium present? ☐ Yes ☐ No ☐ Unknown

G. Are animal carcasses present? ☐ Yes ☐ No ☐ Unknown

G1. If animal carcasses are present, was formaldehyde used as a preservative? ☐ Yes ☐ No ☐ Unknown ☐ NA

H. Are chelating or complexing agents present at a volume >1% of the total volume of waste? ☐ Yes ☐ No ☐ Unknown

I. Are pathogens, infectious wastes, or other etiologic agents present? ☐ Yes ☐ No ☐ Unknown

J. Does the waste have >15 wt% of particles with a diameter <200 micrometers? ☐ Yes ☐ No ☐ Unknown

K. Does the waste contain >1 wt% of particles with a diameter <10 micrometers? ☐ Yes ☐ No ☐ Unknown

9. Does the waste contain accountable nuclear material or source material, or is the waste originating from a nuclear accountable area (see DOE M 470.4-6, Table I-1)?

☐ Yes If Yes, list the isotopes:

☐ No ☐ Unknown

10. Radioisotopes: Are radioisotopes present? ☐ Yes ☐ No ☐ Unknown

A. If No, list references that justify the no-rad determination (e.g., Form 435.02, EDF, analytical data): If Yes, reference source term:

B. Are sealed sources present? ☐ Yes ☐ No ☐ Unknown

B1. If sealed sources are present, do any of them contain transuranic nuclides? ☐ Yes ☐ No ☐ Unknown ☐ NA

B2. If sealed sources are present, do any of them have an activity ≥100 uCi? ☐ Yes ☐ No ☐ Unknown ☐ NA

11. Waste Characteristics (check all that apply):

NOTE: *The waste characteristics may not be known at time of initial determination.*

WASTE DETERMINATION & DISPOSITION FORM (WDDF)

(This form is used with MCP-1390, MCP-454, MCP-3811, MCP-9424, MCP-1396)

WDDF Number: ______________________

Waste Stream: ______________________ Material Profile Number: ______________________

Ignitability	Corrosivity	Reactivity
Flash point less than 60°C (140°F)? ☐ Yes ☐ No ☐ Unknown	pH less than or equal to 2? ☐ Yes ☐ No ☐ Unknown	It is normally unstable and readily undergoes violent change without detonating. ☐ Yes ☐ No ☐ Unknown
Ignitable compressed gas? ☐ Yes ☐ No ☐ Unknown	pH greater than or equal to 12.5? ☐ Yes ☐ No ☐ Unknown	It reacts violently with water. ☐ Yes ☐ No ☐ Unknown
It is not a liquid and is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard. ☐ Yes ☐ No ☐ Unknown	It is a liquid and corrodes steel (SAE 1020) at a rate greater than 6.35 mm (0.250 inch) per year at a test temperature of 55°C (130°F). ☐ Yes ☐ No ☐ Unknown	It forms potentially explosive mixtures with water. ☐ Yes ☐ No ☐ Unknown When mixed with water, it generates toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment. ☐ Yes ☐ No ☐ Unknown
It is an oxidizer as defined in 49 CFR 173.127 ☐ Yes ☐ No ☐ Unknown		It is a cyanide or sulfide-bearing waste which, when exposed to pH conditions between 2 and 12.5, can generate toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment. ☐ Yes ☐ No ☐ Unknown
		It is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement. ☐ Yes ☐ No ☐ Unknown It is a forbidden explosive as defined in 49 CFR 173.51, or a Class A explosive as defined in 49 CFR 173.53 or a Class B explosive as defined in 49 CFR 173.54. ☐ Yes ☐ No ☐ Unknown

Metals and Organics (Select "Yes" if the following are present at any concentration and provide supporting documentation [e.g., EDF, sample analysis, process knowledge statements].)

Metals	Organics

WASTE DETERMINATION & DISPOSITION FORM (WDDF)

(This form is used with MCP-1390, MCP-454, MCP-3811, MCP-9424, MCP-1396)

WDDF Number: ______________________

Waste Stream: ______________________ Material Profile Number: ______________________

Arsenic ☐ Yes ☐ No ☐ Unknown	Benzene ☐ Yes ☐ No ☐ Unknown	Cresol ☐ Yes ☐ No ☐ Unknown	Hexachlorobenzene ☐ Yes ☐ No ☐ Unknown	Pyridine ☐ Yes ☐ No ☐ Unknown
Barium ☐ Yes ☐ No ☐ Unknown	Carbon Tetrachloride ☐ Yes ☐ No ☐ Unknown	2,4-D ☐ Yes ☐ No ☐ Unknown	Hexachlorobutadiene ☐ Yes ☐ No ☐ Unknown	Tetrachloroethylene ☐ Yes ☐ No ☐ Unknown
Cadmium ☐ Yes ☐ No ☐ Unknown	Chlordane ☐ Yes ☐ No ☐ Unknown	1,4-Dichlorobenzene ☐ Yes ☐ No ☐ Unknown	Hexachloroethane ☐ Yes ☐ No ☐ Unknown	Toxaphene ☐ Yes ☐ No ☐ Unknown
Chromium ☐ Yes ☐ No ☐ Unknown	Chlorobenzene ☐ Yes ☐ No ☐ Unknown	1,2-Dichloroethane ☐ Yes ☐ No ☐ Unknown	Lindane ☐ Yes ☐ No ☐ Unknown	Trichloroethylene ☐ Yes ☐ No ☐ Unknown
Lead ☐ Yes ☐ No ☐ Unknown	Chloroform ☐ Yes ☐ No ☐ Unknown	1,1-Dichloroethylene ☐ Yes ☐ No ☐ Unknown	Methoxyclor ☐ Yes ☐ No ☐ Unknown	2,4,5-Trichlorophenol ☐ Yes ☐ No ☐ Unknown
Mercury ☐ Yes ☐ No ☐ Unknown	o-Cresol ☐ Yes ☐ No ☐ Unknown	2,4-Dinitrotoluene ☐ Yes ☐ No ☐ Unknown	Methyl ethyl ketone ☐ Yes ☐ No ☐ Unknown	2,4,6-Trichlorophenol ☐ Yes ☐ No ☐ Unknown
Selenium ☐ Yes ☐ No ☐ Unknown	m-Cresol ☐ Yes ☐ No ☐ Unknown	Endrin ☐ Yes ☐ No ☐ Unknown	Nitrobenzene ☐ Yes ☐ No ☐ Unknown	2,4,5-TP (Silvex) ☐ Yes ☐ No ☐ Unknown
Silver ☐ Yes ☐ No ☐ Unknown	p-Cresol ☐ Yes ☐ No ☐ Unknown	Heptachlor ☐ Yes ☐ No ☐ Unknown	Pentachlorophenol ☐ Yes ☐ No ☐ Unknown	Vinyl Chloride ☐ Yes ☐ No ☐ Unknown

12. Waste Usage Information

A. Was the waste used as a solvent or extractant? ☐ Yes ☐ No ☐ Unknown

A1. If Yes, did the solvent or extractant before use exceed 10% of product composition? ☐ Yes ☐ No ☐ Unknown ☐ NA

A2. If Yes, did the solvent or extractant retain the characteristic of ignitability upon generation as a waste? ☐ Yes ☐ No ☐ Unknown ☐ NA

B. Is the waste an unused chemical or an off-specification commercial chemical product? ☐ Yes ☐ No ☐ Unknown

B1. If Yes, is the waste a combination of unused commercial chemical products? ☐ Yes ☐ No ☐ Unknown ☐ NA

WASTE DETERMINATION & DISPOSITION FORM (WDDF)

(This form is used with MCP-1390, MCP-454, MCP-3811, MCP-9424, MCP-1396)

WDDF Number: ______________________

Waste Stream: ______________________ Material Profile Number: ______________________

B1.1. If Yes, does the unused commercial chemical product(s) contain only one sole active ingredient?	☐ Yes ☐ No ☐ Unknown ☐ NA
B2. If Yes (Line B), is the waste soil, water, or other media resulting from a spill or release of an unused commercial chemical product?	☐ Yes ☐ No ☐ Unknown ☐ NA
13. Is the waste covered by a RCRA closure plan? (If Yes, list the RCRA closure plan number.)	☐ Yes ☐ No
14. Is the waste generated by or governed under a CERCLA activity? (If Yes, list the governing document for waste generation.)	☐ Yes ☐ No

CERTIFICATION

I certify that the information in Section I of this form and the applicable attachments are fully disclosed. A good faith effort has been put forward to acquire and verify the information. Willful or deliberate omissions have not been made, and all known and suspected hazards have, to the best of my knowledge, been identified.

Generator Print/Type Name	Generator Signature	Date

WASTE DETERMINATION & DISPOSITION FORM (WDDF)

(This form is used with MCP-1390, MCP-454, MCP-3811, MCP-9424, MCP-1396)

WDDF Number: ____________________

Waste Stream: ____________________ Material Profile Number: ____________________

SECTION II: WASTE DETERMINATION AND DISPOSITION (Completed by the WGS Technical Specialist)

A. Waste Determination

1. Is the information provided, other than container specific information (e.g., the container source term, dose rates), adequate for the waste determination, management, transportation, treatment, and disposal of waste? ☐ Yes ☐ No (If No, provide additional information or analysis needed.)

2. Waste Stream Data or Analysis Required (TCLP, EDF, Source Term, etc):	Data Received (Yes / No):	Date:	Adequate (Yes / No):

3. Provide a documented evaluation of the process knowledge sources used for waste characterization that identifies the uncertainties, inconsistencies, limitations, and usefulness of the process knowledge sources (provide attachments as needed).

4. Is this a solid waste (per 40 CFR 261.2)? ☐ Yes ☐ No

5. Is this a hazardous waste (per 40 CFR 261.3)? ☐ Yes ☐ No

5a. Is the waste excluded from regulation under 40 CFR 261.4 or 40 CFR 261.5(g)? ☐ Yes ☐ No ☐ NA

(If Yes, provide the regulatory citation) ____________________

5b. Is the waste listed in Subpart D of 40 CFR 261? ☐ Yes ☐ No ☐ NA
(If Yes, provide information in C.2.)

5c. Is the waste characteristic per Subpart C of 40 CFR 261? ☐ Yes ☐ No ☐ NA

(If Yes, provide information in C.2.)

5d. Is the waste exempt for recycling in accordance with 40 CFR 261.2(e)(1)? ☐ Yes ☐ No ☐ NA

(If Yes, provide the regulatory citation.)

B. Evaluation of Land Disposal Restrictions

1. Is waste subject to 40 CFR 268 regulations? ☐ Yes ☐ No

If Yes, specify the waste treatability group: ☐ Waste Water ☐ Nonwastewater

1a. Does the waste require evaluation in accordance with 40 CFR 268.48? ☐ Yes ☐ No ☐ NA

(If Yes, provide Information in C.3.)

1b. Is this waste debris per 40 CFR 268.45? ☐ Yes ☐ No ☐ NA

1c. Is this waste a lab pack? ☐ Yes ☐ No ☐ NA

WASTE DETERMINATION & DISPOSITION FORM (WDDF)

(This form is used with MCP-1390, MCP-454, MCP-3811, MCP-9424, MCP-1396)

WDDF Number: ____________________

Waste Stream: ______________________________ Material Profile Number: ____________________

C. Waste Type

1. Based on an evaluation of the process and available data, identify the waste type. (Check all that apply. If mixed low-level, then hazardous and low-level need not be checked.)

☐ Hazardous	☐ Low-level	☐ Mixed low-level	☐ Industrial
☐ High-level	☐ Transuranic	☐ Mixed transuranic	☐ Recyclable
☐ Used oil	☐ Waste regulated as asbestos-containing waste material	☐ Other—Describe:	☐ Waste incidental to reprocessing
☐ Universal waste	☐ Friable or ☐ Nonfriable		
	☐ TSCA regulated as PCBs		

2. Applicable EPA Waste Codes (D, F, K, P, and/or U) ______________________________
3. Applicable Underlying Hazardous Constituents: ______________________________

D. Proposed Disposition Plan

1. Will this waste be treated on-site? ☐ Yes ☐ No

   If Yes, provide references: ______________________________

2. Proposed disposition path (e.g., Energy Solutions, RWMC, NTS):

CERTIFICATIONS

I certify that the information in Section II of this form (and the applicable attachments) is fully disclosed and accurate. A good faith effort has been put forward to acquire and verify the information. Willful or deliberate omissions have not been made.

WGS Waste Technical Specialist Print/Type Name	WGS Waste Technical Specialist Signature	Date
WGS Independent Reviewer Print/Type Name	WGS Independent Reviewer Signature	Date

APPROVAL

I approve this WDDF:

WGS Facility Representative Print/Type Name	WGS Facility Representative Signature	Date

HWMA/RCRA PART B PERMIT

FOR THE

IDAHO NATIONAL LABORATORY

Volume 18 – Idaho Nuclear Technology and Engineering Center

ATTACHMENT 3

Debris Treatment Processes
Holdup and Collection Tanks
CPP-659/-1659 Storage
CPP-666 FDP Cell and FDP Area Container Storage and Slab Tank Storage
Other Miscellaneous Treatment Processes
Radioactive Mixed Waste Staging Facility (CPP-1617)

Section F - Procedures to Prevent Hazards

and

Section F-1 - Security

Revision Date: August 7, 2013

CONTENTS

F. PROCEDURES TO PREVENT HAZARDS

The waste management units addressed in this permit are designed and operated to minimize exposure of hazardous constituents to the general public, operating personnel, and the environment. This section describes the procedures and equipment/structures used at these units to help prevent, mitigate, or respond to environmental or human health hazards. Also described in this section are the inspection plans and schedules at these units to ensure proper maintenance and operation.

The waste management units addressed in this permit are debris treatment processes and other miscellaneous treatment processes, holdup and collection tanks, storage in CPP-659/-1659, container storage and slab tank storage in the CPP-666 Fluorinel Dissolution Process (FDP) Cell, container storage in FDP Area and miscellaneous treatment in the FDP Cell and miscellaneous treatment, container storage and tank storage in the FDP Area (Room SB-8), and container storage and macroencapsulation treatment at the Radioactive Mixed Waste Staging Facility (RMWSF). The first four of these processes/units are located at the New Waste Calcining Facility (NWCF), and the FDP Cell and FDP Area processes are located at the Fluorinel Dissolution Process and Fuel Storage (FAST) Facility (Building CPP-666). The RMWSF is located at CPP-1617. These units are all located at the Idaho Nuclear Technology and Engineering Center (INTEC) at the Idaho National (INL). Attachments 1 and 1a of this permit describe the operations of these units.

F-1. Security

Specific security measures taken for INTEC include fencing, warning signs, keycard access or personnel sign-in, and building locks.

F-1a. Security Procedures and Equipment [IDAPA 58.01.05.008 and 58.01.05.012; 40 CFR 264.14 and 270.14(b)(4)]

A security system, physical control procedures, and equipment control access to the INTEC. The security system is operated by a security force under a contract with the U. S. Department of Energy, Idaho Operations Office (DOE-ID).

The security force's operations are consistent with DOE-ID directives and orders on access control. DOE operates a personnel security clearance program to ensure that employees that are required to have a clearance to perform their duties are evaluated and cleared consistent with DOE-ID security policies.

Fencing, guarded gates and uniformed guards with communication devices area used at INTEC to provide facility security. There are internal communication devices, such as a phones and two-way radios in occupied buildings at the INTEC. The same communication devices are used for communication outside the plant. The INTEC also has a plant-wide voice paging system that is used to announce critical information regarding security and safety.

F-1a(1) 24-Hour Surveillance System [IDAPA 58.01.05.008; 40 CFR 264.14(b)(1)]

Security at the INTEC is maintained by a staff of trained security guards, who monitor the entry and egress of people and material from the INTEC facility. The main INTEC guard gate at the west side of the INTEC is staffed with guards 24 hours a day, seven days a week. There are other gates into the INTEC, and they are either locked or staffed with guards. The guards also perform other security functions within the plant premises, including patrolling the perimeter fence and areas throughout the INTEC on a 24-hour basis.

F-1a(2) Barrier and Means to Control Entry

The treatment, storage, or disposal facilities (TSDFs) at INTEC are enclosed within a fence. All gates into INTEC are either locked or manned with security guards.

F-1a(2)(a) Barrier [IDAPA 58.01.05.008; 40 CFR 264.14(b)(2)(I)]

The INTEC facility is located approximately 42 air miles west of the largest nearby population area, Idaho Falls, Idaho. The entire INTEC facility area is enclosed within a fence. There are gates in the perimeter fences but only three are guarded gates. These gates are identified with the Guard Post (building) where they are located. The other gates are locked but can be opened by patrols when requested.

Additionally, all access doors or gates to the units are fitted with locks. All entrances to these units remain locked when not staffed for operation. Keys are issued to a limited number of personnel who have direct responsibility for securing the units and maintaining access control.

F-1a(2)(b) Means to Control Entry [IDAPA 58.01.05.008; 40 CFR 264.14(b)(2)(ii)]

Employees, sub-contractors, or vendors that have completed required access training and have keycard access are not escorted in the general INTEC interior.

Individuals that have the required access training but do not have key card access sign an "Employee Log" and are allowed into INTEC without being escorted.

Individuals that do not have the required access training and do not have keycard access are escorted and sign a "Visitor Log" to gain access to INTEC.

These entry procedures into the INTEC prevent access into Hazardous Waste Management Act (HWMA)/Resource Conservation and Recovery Act (RCRA)-regulated units by the general public and visitors.

For accountability reasons, all persons entering the INTEC must either enter through the card reader turnstile as they enter or sign the INTEC entrance log ("Visitor Log" or "Employee Log" as applicable). When personnel leave the INTEC, they exit through the card reader turnstiles or sign out at the guard gate.

F-1a(3) Warning Signs [IDAPA 58.01.05.008; 40 CFR 264.14(c)]

Warning signs that are visible and legible from at least 25 ft are posted at guard gates and on the fence around the INTEC. Entrances into HWMA/RCRA-regulated storage or treatment areas will have, at a minimum, signs reading "**DANGER**--Unauthorized Personnel Keep Out."

HWMA/RCRA PART B PERMIT

FOR THE

IDAHO NATIONAL LABORATORY

Volume 18 – Idaho Nuclear Technology and Engineering Center

ATTACHMENT 4

Debris Treatment Processes
Holdup and Collection Tanks
CPP-659/-1659 Storage
CPP-666 FDP Cell and FDP Area Container Storage and Slab Tank Storage
Other Miscellaneous Treatment Processes
Radioactive Mixed Waste Staging Facility (CPP-1617)

Section F-2

Inspection Schedule

Revision Date: February 12, 2016

CONTENTS

APPENDICES

F-2. Inspection Schedule

F-2a. General Inspection Requirements [IDAPA 58.01.05.012 and 58.01.05.008; 40 CFR 270.14(b)(5), 264.15, 264.33, 264.174, 264.195, and 264.254]

The schedules for inspecting equipment vital in preventing, detecting, and responding to environmental or human health hazards are summarized in Appendix F-1. Results of inspections are recorded on forms or operating logs. Examples of inspection forms are found in Appendix F-2.

Inspection records are placed in the appropriate RCRA inspection logs as part of the operating record. The records are stored at INTEC or other INL approved records storage area and are retained for the life of the regulated unit.

Inspection records include the time and date of the inspection, the printed name and signature of the inspector, a notation of observations made, and the date and nature of any repairs or other remedial actions. The inspection forms show the inspections, frequencies, and responsibilities. Examples of the inspection forms are provided in Appendix F-2. Other, similar forms containing the same substantive information may be used to document these inspections.

Debris Treatment Processes

The HFLS is equipped with local instrumentation to maintain proper operation and to detect system upsets or operator error. Trained personnel monitor the system instrumentation and alarms daily while the system is in operation for process changes and to verify that no errors have been made. Personnel are required to verify instrument readings are within the normal range. Inspections of the tanks are conducted daily when the HFLS is in use.

For the other debris treatment processes addressed in this permit, trained personnel inspect and/or monitor the equipment and processing locations as summarized in Appendix F-1. Note that the inspection requirements vary among these processes according to the unit classification (tank treatment, container treatment, or miscellaneous unit).

VES-NCD-123 and VES-NCD-129 Tanks

Before debris treatment that will involve the draining of liquid residuals to the holdup tank (VES-NCD-123) or the collection tank (VES-NCD-129), the level instrument for the chosen tank is checked to ensure adequate capacity is available. The level instruments are also checked on a daily basis. The primary means of inspecting these tanks for leaks, spills, or deterioration is a liquid-level sensor, LE-219, located in a pipe that drains the trenches in these cells. If LE-219 is actuated, an alarm (L-NC-219C) will be set off in the NWCF control room. For details on this leak detection system, see Attachment 1, Section D-2f(1)(b) of this permit.

CPP-659/-1659 Storage

The CPP-659/-1659 hazardous and/or mixed waste and debris storage areas are inspected weekly to ensure the integrity of the containers stored, and to ensure no liquids have contacted the waste piles.

CPP-659 Room 428 Macroencapsulation Treatment Area

The macroencapsulation treatment process area in CPP-659 Room 428, system equipment, and in-process macroencapsulation containers are inspected each operating day. The inspections ensure that the in-process containers are in good condition and that no conditions exist that could threaten human health or the environment. The inspection records list completed inspections and any remedial action status.

CPP-666 FDP Cell and FDP Area Container Storage Areas and Other Miscellaneous Treatment Processes

The containers in the FDP cell and FDP Area container storage areas and other miscellaneous treatment processes (i.e., sorting, segregating, repackaging, compacting, sizing, absorbent addition, and sodium deactivation by water immersion/misting or exposure to air within the FDP cell) are visually inspected on a weekly basis. The sodium distillation treatment system (i.e., VES-FC-101 and VES-FC-85A) and process area are inspected on a daily basis when waste is present. Both the daily and weekly inspections are intended to detect deterioration or conditions that threaten human health or the environment. The inspection records include conditions noted within the FDP cell, the FDP Area, and general building.

FDP Cell Slab Tank Storage Unit

The level instrumentation for the slab tank is monitored on a daily basis via the DCS located in the FAST control room.

Additionally, the FDP cell is sloped and drains to the FDP process cell sump. The sump is monitored on a daily basis via the DCS located in the FAST control room. For details on this leak detection system, see Attachment 1, Section D-2f(1)(b) of this permit.

RMWSF Container Storage Area and Macroencapsulation Treatment Areas

The RMWSF container storage area is inspected weekly to ensure that the containers are in good condition and that no conditions exist that could threaten human health or the environment. The macroencapsulation treatment process areas, system equipment, and in-process macroencapsulation containers are inspected each operating day. The inspections ensure that the containers are in good condition and that no conditions exist that could threaten human health or the environment. The inspection records list completed inspections and any remedial action status.

F-2a(1) Types of Problems [IDAPA 58.01.05.008; 40 CFR 264.15(b)(3)]

The inspection schedules found in Appendix F-1 list types of problems looked for during inspections.

F-2a(2) Frequency of Inspection [IDAPA 58.01.05.008; 40 CFR 264.15(b)(4)]

The frequency of inspections or observations, and the inspecting organization are listed in the schedules in Appendix F-1.

If a problem is found during an inspection surveillance or performance of a preventive maintenance inspection or action in progress, it is reviewed and confirmed by the applicable supervision or systems engineer. If the deficiency warrants immediate attention, shift supervision will be informed, and if necessary, the affected process will be immediately shut down. All items observed during an inspection that require repair, replacement, corrective action, or other attention are documented on the associated record sheet and tracked until final resolution. If the responsible supervision determines the need, an engineering evaluation will be conducted to determine whether operations can proceed, repair must be made, or materials must be replaced. Environmental and facility personnel work together to decide whether or not a remedial action is required and to plan the required action. Remedial actions are documented.

In those cases where an off-normal operational event (such as ventilation upset and potential radioactive contamination) prevents access to an area where inspections are performed, a RCRA remedial will be opened and the remedial will be noted in the spaces on the inspection forms where the inspections or readings would normally be recorded. The RCRA remedial will be closed, and inspections resumed, as soon as the upset conditions have been corrected and the area released for re-entry.

F-2b. Specific Process Inspection Requirements

F-2b(1) Container Inspection [IDAPA 58.01.05.008; 40 CFR 264.174]

Facility personnel visually inspect the waste containers and the container storage areas addressed in this permit on a weekly basis, when waste is present. During visual inspections, the waste containers are viewed for signs of deterioration. One or more of the following inspection methods will be used: (a) direct visual, (b) looking through shielded windows, or (c) remotely operated cameras. Use of methods (b) and (c) is necessary in some areas to maintain radiation exposure levels as low as reasonably achievable (ALARA). Where these methods are used, complete inspections of the cell and any waste containers will be conducted when the cell is first entered for maintenance or repairs and repeated at least weekly when such activities are prolonged. An evaluation of radiation exposure and other personnel safety hazards is performed prior to cell entries. When the anticipated personnel radiation dose is not ALARA, or other safety hazards preclude entry into parts of a cell, then visual inspection of these cell areas or waste containers may be completed via methods (b) or (c) above.

For example, in CPP-659 Room 205 the storage area is separated from the remaining areas of the cell by a lead shielding blanket. When work is performed in the cell that does not require entry to the storage area, inspections of that area are completed via camera rather than subjecting personnel to the radiation exposure that would result from direct visual inspection.

During container treatment in any of the portable soak tanks, facility personnel visually monitor the tanks periodically for leaks or overflows. When treatment is not occurring in these tanks, inspections will be done weekly for leaks or deterioration.

F-2b(2) Tank System Inspection [IDAPA 58.01.05.008; 40 CFR 264.195]

F-2b(2)(a) Certification for Tank Repairs [IDAPA 58.01.05.008; 40 CFR 264.196(f)]

Major repairs made to the tank treatment systems addressed in this permit will be certified by an independent, qualified, registered professional engineer (PE).

F-2b(2)(b) Tank System External Corrosion and Releases [IDAPA 58.01.05.008; 40 CFR 264.195]

On each day a tank system is being operated, the portions of the tank system that can be visually inspected will be checked for leaks, cracks, corrosion, and external deterioration. Out-of-cell piping runs from tank systems being operated will be monitored once each operating day for leaks, by means of Alarm L-NC-219C in the NWCF control room.

When VES-NCD-123 or VES-NCD-129 holds waste, the tank level indicators and L-NC-219C are monitored daily to detect releases. L-NC-219C will also indicate whether releases have occurred from the pumps (P-NCD-223 and -229) used to transfer waste from VES-NCD-123 and -129 to processing destinations. Visual inspections of these tanks and pumps are limited to infrequent occasions during equipment maintenance and repair. High radiation levels prevent visual inspections of these items on a daily basis.

The FDP cell slab tank level instrumentation and FDP cell sump level instrumentation are monitored on a daily basis to detect a release. Visual inspections of this tank and the FDP cell sump are limited to infrequent occasions during equipment maintenance and repair. High radiation levels prevent visual inspections of these items on a daily basis.

F-2b(2)(c) Tank System Construction Materials and Surrounding Area [IDAPA 58.01.05.008; 40 CFR 264.195(b)(3)]

The construction materials and the area immediately surrounding the externally accessible portion of the HFLS, sinks, and ultrasonic cleaner, including the secondary containment system, will be inspected or monitored once each operating day to detect deterioration or signs of any releases into the secondary containment. Because of high radiation levels, such daily inspections will not be possible for VES-NCD-

123 and VES-NCD-129. However, these inspections will be done during the infrequent occasions of equipment maintenance and repair in these tank cells.

Because of high radiation levels, visual daily inspections of the FDP slab tank and cell sump will not be possible. However, these inspections will be done during the infrequent occasions of equipment maintenance and repair in these tank cells.

F-2b(2)(d) Tank System Overfilling Control Equipment [IDAPA 58.01.05.008; 40 CFR 264.195(a)]

Overfilling control equipment for the tank systems addressed in this permit includes:

- Level sensors and indicators on the high-efficiency particulate air (HEPA) Filter Leaching System (HFLS) remote control panel

- An overflow line on the HFLS that transfers any solution overflow to the drain line

- An overflow outlet on the ultrasonic cleaner to prevent overflowing of the stainless-steel tank

- An overflow line from VES-NCD-129 to VES-NCD-123

- The level sensor (LE-219) and its indicator alarm (L-NC-219C) for VES-NCD-123 and VES-NCD-129 and their associated piping and pumps.

- Level indicators on the FDP cell slab tank and FDP Cell sump

The overflow line for the HFLS and the overflow outlet for the ultrasonic cleaner will be inspected as part of the daily inspections during debris treatment for leaks, corrosion, and external deterioration. The overflow line from VES-NCD-129 to VES-NCD-123 will be inspected as part of overall tank inspections during the infrequent occasions of equipment maintenance and repair in these tank cells.

Level sensors and indicators are calibrated on an annual basis to ensure reliability of instrumentation. Level readings on the receiving tanks are monitored daily. When an anomalous level reading is identified the cause is investigated. Corrective actions are completed as necessary to resolve the issue.

F-2b(2)(e) Tank System Monitoring and Leak Detection Equipment [IDAPA 58.01.05.008; 40 CFR 264.195(b)(2)]

Data gathered from monitoring and leak detection equipment for the tank systems addressed in this permit are inspected daily during operation to ensure each tank is operated according to design specifications.

Information is recorded daily for both of the HFLS tanks when the HFLS is being operated. The facility operator will review and initial the inspection form weekly and take note of any ongoing corrective actions before conducting further inspection. While taking the readings, the decontamination technician or waste operator is able to ensure the system is operating properly.

Data are also gathered from monitoring equipment during treatment in the sinks and the ultrasonic cleaner, and recorded in the shift log.

Level recordings for VES-NCD-123 and VES-NCD-129 are recorded, per written procedure, on a daily basis. Level recordings for these tanks are also recorded during draining from debris treatment areas to the tanks.

The use of Valve PL-122-5 above the Non-Fluoride Hot Sump Tank (VES-NC-122) is administratively and physically controlled. The valve is only manipulated during the execution of a procedure and is left in the closed position when the activity is complete. The valve is located in a cell behind a locked door. The valve is inspected during the execution of a procedure.

For the FDP cell slab tank, the liquid level in the tank is monitored and recorded, on a daily basis. Currently the only source of waste to this tank is from jetting the FDP cell process sump, the sump levels are also monitored on a daily basis.

Level sensors and indicators are calibrated on an annual basis to ensure reliability of instrumentation. Level readings on the receiving tanks are monitored daily. When an anomalous level reading is identified the cause is investigated. Corrective actions are completed as necessary to resolve the issue.

F-2b(2)(f) Tank System Cathodic Protection [IDAPA 58.01.05.008; 40 CFR 264.195(c)]

Tank system piping addressed in this permit is located within Building CPP-659 and CPP-666. No cathodic protection is necessary for this piping.

F-2b(2)(g) Tank Condition Assessment [IDAPA 58.01.05.008; 40 CFR 264.195(b)(1)]

Tanks are inspected or monitored daily, when the tank systems are in operation, for corrosion or spills. In addition, during maintenance turnarounds, the tanks are assessed. The assessment consists of visual inspections of the tanks for leaks, corrosion, and deterioration.

F-2b(3) Waste Pile Inspection [IDAPA 58.01.05.008; 40 CFR 264.254(b)]

Facility personnel inspect the waste pile storage areas addressed in this permit on a weekly basis, when waste is present. One or more of the following inspection methods will be used: a) direct visual, (b) looking through shielded windows, (c) remotely operated cameras, or (d) monitoring of leak detection systems. Use of methods (b), (c), or (d) is necessary in some areas to maintain radiation exposure levels as low as reasonably achievable (ALARA). Where these methods are used, complete inspections of the cell and any waste pile will be conducted when the cell is first entered for maintenance or repairs and repeated at least weekly when such activities are prolonged. An evaluation of radiation exposure is performed prior to cell entries. When the anticipated personnel radiation dose is not ALARA, or other safety hazards preclude entry into parts of a cell, inspection of these cell areas or waste piles may be made by methods (b), (c) or (d).

During inspections, the waste pile storage locations are inspected for presence of liquids and generation of leachate. Any liquids discovered during the inspections are removed as soon as possible. Since the piles are stored in rooms within a completely enclosed, self-supporting building, there is no need for inspection of the waste piles after storms.

F-2b(3)(a) Run-on and Run-off Control System [IDAPA 58.01.05.008; 40 CFR 264.254(b)(1)]

Because of the location of the waste piles in rooms within a completely enclosed, self-supporting building, the waste piles are not susceptible to run-off. The waste piles are not subject to run-on either, for reasons given in Attachment 1, Section D-3b(1) of this permit.

F-2b(3)(b) Wind Dispersal Control System [IDAPA 58.01.05.008; 40 CFR 264.254(b)(2)]

There is no wind dispersal control system present (or needed) for the waste piles.

F-2b(3)(c) Leachate Collection and Removal Systems [IDAPA 58.01.05.008; 40 CFR 264.254(b)(3)]

Liquids that may come in contact with the waste piles will be collected and removed as soon as possible using floor drains or other means.

F-2b(8) Miscellaneous Unit Inspections [IDAPA 58.01.05.012; 40 CFR 270.14(b)(5)]

An inspection program for the miscellaneous units addressed in this permit, the two decon cubicles, the steam spray booth, the decon cell, and the other miscellaneous treatment processes [i.e., sizing, compaction, repackaging, sodium deactivation (Room 308), and absorbent addition] in CPP-659 and the other miscellaneous treatment processes (i.e., sorting, segregating, repackaging, compacting, sizing, and absorbent addition, sodium deactivation and sodium distillation) in CPP-666 FDP Cell and FDP Area is in place to ensure compliance with the environmental performance standards specified in Section D-8 in Attachment 1 of this permit.

Soak tanks, if used, and ancillary equipment are visually inspected for leaks during treatment of mixed waste debris in the decon cubicles. Liquid residuals generated by treatment within the cubicles are collected and dispositioned. However, the drain piping below the cubicles in the second level corridor is visually inspected for leaks daily. During and after use of the decon cubicles for treatment of mixed waste debris, the portion of CPP-659 located below the decon cubicles (in the second level corridor) is visually inspected to ensure the cubicle floors are not leaking. Any leaks from the drain piping in the valve pit can be detected by means of level sensor LE-219 [see Section D-2f(1)(b)].

As described in Section D-8b(2), the steam spray booth has a primary floor and a secondary floor for containment. Liquid residuals generated by treatment within the booth are drained through doubly encased stainless-steel piping to VES-NCD-123. Leaks into the booth's secondary containment system can be detected by liquid-level sensor LE-219. In addition, the glove box and drain line are visually inspected daily in the following areas during debris treatment: Room 418 stainless-steel floor between the glove box and the steam spray booth wall, the steam spray booth floor, and the glove box shell.

The decon cell is designed to prevent the spread of contamination during treatment activities. The floor, ceiling, and walls are lined with stainless steel. The cell floor is sloped toward a trench along the west wall. The cell trench is equipped with a drain line that can be drained to either VES-NCD-129 or to VES-NCD-123, depending on the valve lineup.

Treatment can be conducted in a portable soak tank or on the floor of the cell. Steam is available to heat the treatment solutions, if necessary. During treatment activities in the portable soak tank, the valve on the drain line leading to either VES-NCD-123 or VES-NCD-129 is kept open. Facility personnel visually monitor the tanks periodically for leaks, deterioration, or overflows.

During treatment activities in the decon cell when not using a portable soak tank, the valves on the drain lines are closed. Treatment solutions are placed in the trench along the west wall. A steam jet is available to heat treatment solutions, as necessary, in the trench. The jet is used to remove treatment solution from the trench and spray it onto the item(s) being treated. Upon completion of treatment, the valve on the drain line to the selected tank is opened and the solution is drained from the trench.

The drain lines from the decon cell are secondarily contained. The secondary containment is sloped and drains to the trench in the pump room for VES-NCD-129. The trench in the pump room is sloped and drains through an encased line to VES-NCC-122. This line is equipped with a level sensor, LE-219, that would detect the presence of liquid [see Attachment 1, Section D-2f(1)(b)].

For details on the drain piping between the decon cell and VES-NCD-123 and -129, see Drawing 133446. For details on inspections related to leak detection for the decontamination cell, see above.

Secondary containment and leak detection for VES-NCD-123 and -129 are described in Attachment 1, Section D-2f(1)(b).

The NWCF heating, ventilation, and air conditioning (HVAC) filtering system is monitored daily for high differential pressures, and radiation levels. See Section F-4f for a description of how releases to the atmosphere from the steam spray booth and the decon cubicles are minimized.

Appendix F-1. Inspection Schedule for CPP-659/-1659 Storage and Other Miscellaneous Treatment Processes, CPP-666 FDP Cell and FDP Area Container Storage Units, Other Miscellaneous Treatment Processes, and Slab Tank Storage, CPP-659/-1659 Debris Treatment Processes, Tanks VES-NCD-123 and VES-NCD-129, and the RWMSF Container Storage Area and Macroencapsulation System and Process Area

Inspection Schedule for CPP-659/-1659 Storage and Other Miscellaneous Treatment Processes

Equipment Inspected	Types of Problems or Observations	Frequency	Inspecting Organization
FIRE PROTECTION SYSTEM			
Wet-pipe/deluge fire sprinkler system	Alarm condition multiplex interface panel (MIP) Class A alarms	Daily	Shift Operations
Dry horizontal sidewall fire sprinkler system	Alarm condition on MIP	Daily	Shift Operations
Portable fire extinguishers	Physical damage, charge, accessibility, seals	Monthly	Shift Operations
EMERGENCY EQUIPMENT			
Safety showers and eyewashes	Supply valve is open, accessibility, check for leaks	Monthly	Shift Operations
Spill control cabinets	Broken seals, Inventory equipment	Monthly	Shift Operations
Plant voice paging and evacuation alarm system	Operation, coverage	Monthly	Shift Operations
Telephones/building paging system	Operation at each building level (in occupied levels only for telephones)	Daily	Shift Operations
OPERATING AND STRUCTURAL EQUIPMENT			
Access warning signs	Warning signs in place – inside the INTEC facility Warning signs in place – INTEC perimeter fence and guard gates	Weekly Semiannually	Shift Operations Shift Operations
Floors and containment systems	Free of cracks and gaps, no hazardous liquids, no deterioration	Weekly[1]	Shift Operations
Containers (in one or more of the container storage rooms)	Condition, leaks – visual inspection of storage area	Weekly[2]	Shift Operations
Loading/Unloading areas, all on first level of CPP-659: (1) vehicle entry, (2) north unloading dock, and (3) east unloading dock	Condition, presence of hazardous solid or liquid waste spills.	Daily when loading/un-loading is occurring	Shift Operations
Waste piles (in one or more of the waste pile storage rooms)	Presence of leachate or liquids	Weekly[2]	Shift Operations
CPP-659 Miscellaneous Treatment process areas (i.e., sorting, segregating, repackaging, compacting, sizing, absorbent addition)	Deterioration, visible leaks, liquids	Daily when operating, and Weekly[2]	Shift Operations
Room 308 ARS – sodium deactivation treatment by water immersion, misting or wetting	Water leaks from the argon repackaging station, deterioration of immersion pan/sieve	Daily when operating, and Weekly[2]	Shift Operations
Room 308 sodium deactivation by air exposure	Deterioration	Daily when operating, and Weekly[2]	Shift Operations

MACROENCAPSULATION INSPECTIONS IN CPP-659 ROOM 428			
Macroencapsulation system equipment	Physical damage, deterioration, functional issues	Daily when in use (prior to initiation of macro operation)	Facility Operations
Macroencapsulation Containers	Leaks, spills, container integrity	Each operating day*	Facility Operations
Macroencapsulation Processing Areas	Leaks, spills	Each operating day*	Facility Operations

[1] Remote shielded storage areas are inspected weekly, when waste is present, through shielded glass or via remote cameras. Complete cell inspections are performed, except for areas where unsafe conditions preclude personnel entry, when the cell must be entered for maintenance or repairs.

[2] Remote shielded storage areas are inspected weekly, when waste is present. Treatment areas are inspected daily when waste is present. Inspections may be performed (as appropriate) through shielded windows, by use of remotely-operated cameras, by monitoring of leak detection systems, or by cell entry. Complete cell inspections are performed, except for areas where unsafe conditions preclude personnel entry, when the cell must be entered for maintenance or repairs.

*Each Operating Day for the purposes of this inspection is defined as the start of waste placement into the macroencapsulation container until the final sealing of the container at the completion of the macroencapsulation operation for that container. At the completion of container macroencapsulation, the container will then be inspected on a weekly basis.

Inspection Schedule for FDP Cell and FDP Area Container Storage Units and Other Miscellaneous Treatment Processes

Equipment Inspected	Types of Problems or Observations	Frequency	Inspecting Organization
FIRE PROTECTION SYSTEM			
Wet-pipe fire sprinkler system	Alarm condition multiplex interface panel (MIP) Class A alarms	Monthly	Shift Operations
Fire alarms	Alarm condition, MIP Class A alarms[1], AC power light active or battery backup	Monthly	Shift Operations
Portable fire extinguishers	Physical damage, charge, accessibility, and sealed	Monthly	Shift Operations
EMERGENCY EQUIPMENT			
Spill control cabinets	Broken seals, inventory equipment	Monthly	Shift Operations
Plant voice paging and evacuation alarm system	Operation, coverage	Monthly	Shift Operations
Telephones/building paging system	Operation at each building level (in occupied areas only for telephones)	Weekly	Shift Operations
OPERATING AND STRUCTURAL EQUIPMENT			
FDP cell and FDP Area container storage units and other miscellaneous treatment processes areas (i.e., sorting, segregating, repackaging, compacting, sizing, and absorbent addition)	Deterioration, visible leaks, liquids (FDP cell inspections will be performed by visual inspection through shielded glass windows at the -13' and 0'0" levels)	Weekly[2]	Shift Operations
FDP Area, Room SB-8 (container storage area and containment system at the -31' level)	Condition (free of deterioration – cracks, gaps, corrosion), visible liquids or leaks	Weekly[2]	Shift Operations
FDP Area, Room SB-8 distillation treatment system/unit (VES-FC-101 Distillation Vessel and VES-FC-85A Collection Vessel) and process area	FDP Cell distillation treatment unit – Free of Deterioration (cracks, gaps, corrosion), no visible liquids or leaks at the -31'level, no hazardous waste spills	Daily[2]	Shift Operations

Inspection Schedule for FDP Cell and FDP Area Container Storage Units and Other Miscellaneous Treatment Processes (continued)

Equipment Inspected	Types of Problems or Observations	Frequency	Inspecting Organization
FDP Cell ARS - sodium deactivation treatment by water immersion, misting or wetting	Water leaks for the argon repackaging station, deterioration of immersion pan/sieve	Weekly[2]	Shift Operations
FDP Cell sodium deactivation treatment by air exposure	Deterioration	Weekly[2]	Shift Operations
Containers (at -13 and 0 levels)	Condition, leaks--visual inspection of storage areas	Weekly[2]	Shift Operations
Loading/Unloading areas	Condition, presence of hazardous solid or liquid waste spills	Daily when waste is being loaded or unloaded	Shift Operations
FDP cell sump (at -27' level)	Alarm	Daily	Shift Operations

1 When alarm panels are not functional appropriate compensatory measures such as fire watches are implemented. During operational times in the FDP cell, visual monitoring will be performed. During nonoperational times, fire detection cameras will be used.

2 Remote shielded storage areas and sodium deactivation treatment areas are inspected weekly. Distillation treatment vessels and areas are inspected daily when waste is present. Inspections may be performed (as appropriate) through shielded windows, by use of remotely-operated cameras, by monitoring of leak detection systems, or by cell entry. Complete cell inspections are performed, except for areas where unsafe conditions preclude personnel entry, when the cell must be entered for maintenance or repairs.

Inspection Schedule for FDP Cell Slab Tank Storage

Equipment Inspected	Types of Problems or Observations	Frequency	Inspecting Organization
FIRE PROTECTION SYSTEM			
Wet-pipe fire sprinkler system	Alarm condition multiplex interface panel (MIP) Class A alarms	Monthly	Shift Operations
Fire alarms	Alarm condition, MIP Class A alarms[1], AC power light active or battery backup	Monthly	Shift Operations
Portable fire extinguishers	Physical damage, charge, accessibility, and sealed	Monthly	Shift Operations
EMERGENCY EQUIPMENT			
Spill control cabinets	Broken seals, inventory equipment	Monthly	Shift Operations
Plant voice paging and evacuation alarm system	Operation, coverage	Monthly	Shift Operations
Telephones/building paging system	Operation at each building level (in occupied areas only for telephones)	Weekly	Shift Operations
OPERATING AND STRUCTURAL EQUIPMENT			
Slab Tank level sensor instrument	Level checked to determine no release from tank	Daily[1]	Shift Operations
FDP cell sump (at -27' level)	Alarm	Daily[1]	Shift Operations

1 Complete inspections are performed when the cell must be entered for maintenance or repairs.

Inspection Schedule for Debris Treatment Processes

Equipment Inspected	Types of Problems or Observations	Frequency	Inspecting Organization
FIRE PROTECTION SYSTEM			
Wet-pipe/deluge fire sprinkler system	Alarm condition multiplex interface panel (MIP) Class A alarms	Daily	Shift Operations
Dry horizontal sidewall fire sprinkler system	Alarm condition on MIP	Daily	Shift Operations
Portable fire extinguishers	Physical damage, charge, seals, accessibility	Monthly	Shift Operations
EMERGENCY EQUIPMENT			
Safety showers and eyewashes	Supply valve is open, accessibility, check for leaks	Monthly	Shift Operations
Spill control cabinets	Broken seals, Inventory equipment	Monthly	Shift Operations
Plant voice paging and evacuation alarm system	Operation, coverage	Monthly	Shift Operations
Telephones/building paging system	Operation at each building level (in occupied levels only for telephones)	Daily	Shift Operations
OPERATING AND STRUCTURAL			
Access Warning Signs	Warning signs in place	Weekly	Shift Operations
Loading/Unloading areas	Condition, presence of hazardous solid or liquid waste spills	Daily when waste is being loaded or unloaded	Shift Operations
HEPA FILTER LEACHING SYSTEM			
VES-NCD-141, VES-NCD-142, and in-cell ancillary equipment (including overflow line)	Leaks from or deterioration of tank	Daily when waste is being treated in HFLS	Shift Operations/Decon Techs
VES-NCD-141, VES-NCD-142	Unusual Level or Temperature Fluctuations	Periodically during HFLS treatment	Shift Operations/Decon Techs
Floor, trench, and drain	Deterioration or signs of releases	Daily when waste is being treated in HFLS	Shift Operations/Decon Techs
Primary drain piping from HFLS to VES-NCD-123 (inspected by means of alarm L-NC-219C)	Alarm could indicate leak from primary drain piping into outer encasement of piping	Daily when waste is being treated in HFLS	Shift Operations/Decon Techs

Inspection Schedule for Debris Treatment Processes

Equipment Inspected	Types of Problems or Observations	Frequency	Inspecting Organization
SINKS			
SH-NCD-933, -934	Leaks from or deterioration of sink	Daily when waste is being treated in sinks	Shift Operations/Decon Techs
SH-NCD-933, -934	Liquid level in sink--no overflows	Periodically during sink treatment	Shift Operations/Decon Techs
Floor and drain	Deterioration or signs of releases	Daily when waste is being treated in sinks	Shift Operations/Decon Techs
Primary drain piping from sinks to VES-NCD-123 (inspected by means of alarm L-NC-219C)	Alarm could indicate leak from primary drain piping into outer encasement of piping	Daily when waste is being treated in sinks	Shift Operations/Decon Techs
SOAK TANKS			
VES-NCD-138, TK-NCD-139, or TK-NCD-137, and applicable trench and/or drain	Leaks from or deterioration of tank	Daily when waste is being treated in soak tanks	Shift Operations/Decon Techs
VES-NCD-138, TK-NCD-139, or TK-NCD-137	Liquid level in tank--no overflows, leaks	Periodically during soak tank treatment	Shift Operations/Decon Techs
VES-NCD-138, TK-NCD-139, or TK-NCD-137	Condition, leaks	Weekly when soak tanks are not in use	Shift Operations/Decon Techs
ULTRASONIC CLEANER			
UC-NCD-921 (including overflow outlet)	Leaks from or deterioration of tank	Daily when waste is being treated in UC-NCD-921	Shift Operations/Decon Techs
UC-NCD-921 control panel indicators	Unusual readings	Periodically during -921 treatment	Shift Operations/Decon Techs
Floor and drain	Deterioration or signs of releases	Daily when waste is being treated in -921	Shift Operations/Decon Techs
Primary drain piping from UC-NCD-921 to VES-NCD-123 (inspected by means of alarm L-NC-219C)	Alarm could indicate leak from primary drain piping into outer encasement of piping	Daily when waste is being treated in -921	Shift Operations/Decon Techs

Inspection Schedule for Debris Treatment Processes

Equipment Inspected	Types of Problems or Observations	Frequency	Inspecting Organization
STEAM SPRAY BOOTH			
Steam spray booth (visual): (1) room 418 stainless-steel floor between the glove box and the booth wall, (2) the booth floor, (3) glove box shell	Leaks	Daily when treatment is occurring in steam spray booth	Shift Operations/Decon Techs
Secondary containment system (inspected by means of alarm L-NC-219C)	Alarm could indicate leak into secondary containment system	Daily when treatment is occurring in booth	Shift Operations/Decon Techs
Liquid abrasive spray glove box (visual): the glove box shell and drain line	Leaks	Daily when glove box is being used for treatment	Shift Operations/Decon Techs
DECON CUBICLES			
Second level corridor, 303, below decon cubicles (visual)	Liquids, which could indicate leaks or deterioration in decon cubicle floor	Daily when cubicles are being used for treatment	Shift Operations/Decon Techs
Drain piping from decon cubicles in second level corridor, 303 (visual)	Liquids, which could indicate leaks through the permanent plugs or deterioration in piping	Daily when cubicles are being used for treatment	Shift Operations/Decon Techs
Drain piping from decon cubicles in valve pit, 307 (inspected by means of L-NC-219C)	Liquids, which could indicate leaks or deterioration in piping	Daily when cubicles are being used for treatment	Shift Operations/Decon Techs

Inspection/Monitoring Schedule for VES-NCD-123 and VES-NCD-129

Equipment Inspected/Monitored	Types of Problems or Observations	Frequency	Inspecting Organization
VES-NCD-123 and -129 instruments	Level checks. Unexpected increases in level in -123 could indicate spills or leaks from ultrasonic cleaner (UC-NCD-921) or from sinks (SH-NCD-933 and -934). Unexpected increases in -123 or -129 could indicate leaks from HFLS tanks.	Daily. Level is also checked before debris treatment that will generate liquids to be drained to -123 or -129	Shift Operations/Decon Techs
VES-NCD-123, floor, trench (visually in tank cell)	Leaks or deterioration	During maintenance or repair in cell	Shift Operations/Decon Techs Plant Maintenance
VES-NCD-129 (including overflow line to VES-NCD-123), floor, trench (visually in tank cell)	Leaks or deterioration	During maintenance or repair in cell	Shift Operations/Decon Techs Plant Maintenance
Pumps P-NCD-223 and -229 (visually in the pump cell, room 203)	Leaks or deterioration	During maintenance or repair in cell	Shift Operations/Decon Techs Plant Maintenance
VES-NCD-123 and -129 and P-NCD-223 and -229 (inspected by means of L-NC-219C alarm)	Alarm could indicate leaking of VES-NCD-123 or -129, or pump P-NCD-223 or –229	Daily when waste is in the tanks or waste is being treated in the decon area (residuals of which are bound for -123 or -129)	Shift Operations/Decon Techs

Inspection Schedule for the RMWSF

Equipment Inspected	Types of Problems or Observations	Frequency	Inspecting Organization
CONTAINER STORAGE INSPECTIONS			
Containers	Physical Damage, Deterioration, Discoloration, Leaks	Weekly	Facility Operator
Loading/Unloading Operations	Inspect loading and unloading areas for leaks or spills	Daily when in use	Facility Operator
Elevated Cargo Containers	Inspect that timbers have not settled more than 2” for the length of the timber being used to elevate the cargo container	Weekly	Facility Operations
MACROENCAPSULATION INSPECTIONS			
Macroencapsulation system equipment	Physical damage, deterioration, functional issues	Daily when in use (prior to initiation of macro operation)	Facility Operations
Macroencapsulation Containers	Leaks, spills, container integrity	Each operating day*	Facility Operations
Macroencapsulation Processing Areas	Leaks, spills	Each operating day*	Facility Operations
FIRE PROTECTION SYSTEM INSPECTIONS			
Portable Fire Extinguishers	Physical Damage, Charge, Accessibility and Sealed	Monthly	Facility Operator
EMERGENCY EQUIPMENT INSPECTIONS			
Safety Showers and Eye washes	Supply Valve is Open, Accessibility, Check for Leaks	Weekly	Facility Operator
Spill Control Cabinets	Broken Seals, Inventory Equipment	Monthly	Facility Operator
Plant Voice Paging and Evacuation Alarm System	Operation, Coverage	Monthly	Plant Utilities/ Facility Operator
Telephones	Operation at Each Building	Weekly	Facility Operator

Inspection Schedule for the RMWSF (continued)

SECURITY INSPECTIONS			
Doors/Gates and Their Signs	Missing, Damaged or Obstructed Signs, Not Locked	Weekly	Facility Operator

*Each Operating Day for the purposes of this inspection is defined as the start of waste placement into the macroencapsulation container until the final sealing of the container at the completion of the macroencapsulation operation for that container. At the completion of container macroencapsulation, the container will then be inspected on a weekly basis.

APPENDIX F-2 EXAMPLES OF INSPECTION FORMS

The following list of example inspection forms (current revision) for each unit are included:

NOTE: Forms are provided only once, but may be applicable to more than one unit

CPP-659/1659 Storage

- Form INTEC 4004, Rev. 35
- Form INTEC 4028, Rev. 28
- Form INTEC 4215, Rev. 17
- Form INTEC 4216, Rev. 17
- Form INTEC 9123, Rev. 8
- Form INTEC 9123A, Rev. 4
- Form INTEC 9124, Rev. 14
- FRM-907, Rev. 6

CPP-666 FDP Cell and FDP Area Container Storage Units, Other Miscellaneous Treatment Processes, and Slab Tank Storage

- Form INTEC 4026, Rev. 19
- Form INTEC 4026A, Rev. 4
- Form INTEC 9131, Rev. 5
- Form INTEC 9135, Rev. 6
- FRM-1028, Rev. 4
- FRM-1029, Rev. 10
- FRM-1030, Rev. 9

CPP-659/1659 Debris Treatment Processes

- Form INTEC 4004, Rev. 35
- Form INTEC 4028, Rev. 28
- Form INTEC 4043, Rev. 28
- Form INTEC 9123, Rev. 8
- Form INTEC 9123A, Rev. 4
- Form INTEC 9124, Rev. 14
- FRM-907, Rev 6

Tanks VES-NCD-123 and VES-NCD-129

- Form INTEC 4004, Rev. 35

CPP-1617 Facility (RMWSF)

- Form INTEC 4089X, Rev. 4
- Form INTEC 5410, Rev 14
- Form INTEC 9181, Rev. 5
- Form INTEC 9182, Rev. 7
- Form 435.79H, Rev. 0

RCRA NWCF TANK LEAK AND OVERFILL DAILY FACILITY INSPECTIONS

Previous Week's Inspection Checked (Initials): ______________________

The Open RCRA Remedials Tracking Book Index for this form has been compared to the previous week's form, the index has been updated, and the current open RCRA Remedials have been recorded on the tracking table (Initials): ____________________

Date: **Through** **Time:**

Area/Item	Normal Condition	Off Spec. Condition	Thu	Fri	Sat	Sun	Mon	Tue	Wed
INTEC Perimeter Fence									
"No Trespassing" signs posted at guard gates and on the fence around INTEC. Signs are visible and legible from at least 25 ft.(1)	Yes	No				Yes/No/N/A			
First Level									
Hazardous liquids on floor?	No	Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes
Phone/paging functional & accessible?(2)	Yes	No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
"Danger–Unauthorized Personnel Keep Out" and "Notice–No Smoking Beyond This Point" signs - missing, damaged, obstructed?(3)	No	Yes			No/Yes				
Acid Recycle room doors locked?	Yes	No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Second Level Corridors									
Hazardous liquids on floor?	No	Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes
Hazardous liquids on utility corridor floor?	No	Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes
Phone/paging functional & accessible?(2)	Yes	No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Third Level Corridors									
Hazardous liquids on floor?	No	Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes
Phone/paging functional & accessible? (2)	Yes	No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Loading and Unloading Docks									
North Dock: Presence of hazardous solid or liquid waste spills?(4)	No	Yes	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA
East Dock: Presence of hazardous solid or liquid waste spills?(4)	No	Yes	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA

(1) Perform inspection semi-annually on the second Sunday of April and October.
(2) Check designated phone.
(3) See list on page 2.
(4) This inspection is required daily only when loading/unloading is occurring.

RCRA NWCF TANK LEAK AND OVERFILL DAILY FACILITY INSPECTIONS

Doors which should be posted with "Danger–Unauthorized Personnel Keep Out" and “Notice–No Smoking Beyond This Point” signs:

South side of NWCF:

1. Personnel door between Acid Recycle Storage Tank Enclosure (Room 443) and outdoors. Sign posted on the outside.
2. Roll-up door between Decon Vehicle Entry (Room 417) and outside ramp. Sign posted on the outside.

West side of NWCF:

1. Personnel door between Decon Vehicle Entry (Room 417) and outdoors. Sign posted on the outside.
2. Personnel door between Decon Hot Shop (Room 442) and outdoors. Sign posted on the outside.

East side of NWCF:

1. Personnel door between Emergency Generator Room (432) and outdoors. Sign posted on the outside.
2. Personnel emergency exit door from Stair No. 1 to outdoors. Sign posted on the outside.
3. Outer door from elevator to east loading dock. Sign posted on the outside.
4. Double door between vestibule (Room 431) and east loading dock. Sign posted on the outside.

North side of NWCF:

1. Double door between Decon Solution Makeup Room (429) and north loading dock. Sign posted on the outside.
2. Roll-up door between Crane Maintenance Area (Room 428) and north loading dock. Sign posted on the outside.
3. Personnel door between Calcium Nitrate Addition Room (427) and north loading dock. Sign posted on the outside.
4. Roll-up door between Calcium Nitrate Addition Room (427) and north loading dock. Sign posted on the outside.
5. Double door between Decon Exhaust Air Plenum Room (431) and outside ramp. Sign posted on the outside.
6. Personnel emergency exit door from Corridor 424 to Tank Farm. Sign posted on the outside.
7. Personnel door between Equipment Decon Room (418) and Glycol Chiller Units. Sign posted on the outside.

Inside NWCF, first level:

1. Personnel door between Lunchroom and Decon Shift Office (Room 415). Sign posted on lunchroom side.
2. Personnel door between Corridor 441 and Crane Maintenance Area (Room 428). Sign posted on the corridor side.
3. Personnel door between Corridor 411 and Stair No. 3. Sign posted on the corridor side.
4. Personnel door between Corridor 411 and Decon Area. Sign posted on the corridor side.
5. Personnel door between Corridor 409 and Elevator Entry (Room 430). Sign posted on the corridor side.
6. Personnel door between Corridor 409 and Stair No. 1. Sign posted on the corridor side.

RCRA NWCF TANK LEAK AND OVERFILL DAILY FACILITY INSPECTIONS

Fire Systems-Fire Alarm Control Panel FACP0659-01

Display on Panel FACP0659-01	Normal Condition	Off Spec. Condition	Thu	Fri	Sat	Sun	Mon	Tue	Wed
Normal Condition (5)	Display On	Display Off	On/Off	On/Off	On/Off	On/Off	On/Off	On/Off	On/Off
L1M1 Waterflow 400 Level East	Display Off	Display On	On	On	On	On	On	On	On
L1M2 Waterflow 300 Level East	Display Off	Display On	On	On	On	On	On	On	On
L1M3 Waterflow 200 Level East	Display Off	Display On	On	On	On	On	On	On	On
L1M4 Waterflow Calciner Exhaust	Display Off	Display On	On	On	On	On	On	On	On
L1M5 Waterflow 300 Level West	Display Off	Display On	On	On	On	On	On	On	On
L1M6 Waterflow Calciner Supply	Display Off	Display On	On	On	On	On	On	On	On
L1M7 Waterflow Decon Exhaust	Display Off	Display On	On	On	On	On	On	On	On
L1M8 Waterflow Calciner Exhaust	Display Off	Display On	On	On	On	On	On	On	On
L1M9 Waterflow Decon Cell 308	Display Off	Display On	On	On	On	On	On	On	On
L1M10 Waterflow Filter Cell 309	Display Off	Display On	On	On	On	On	On	On	On
L1M11 Calciner Cell (Waterflow)	Display Off	Display On	On	On	On	On	On	On	On
L1M12 Heat Detector 400 Level Decon	Display Off	Display On	On	On	On	On	On	On	On
L1M13 Heat Detector 400 Level Decon	Display Off	Display On	On	On	On	On	On	On	On
L1M14 Heat Detector Decon/Calcine Cell	Display Off	Display On	On	On	On	On	On	On	On
L1M15 Manual Station 400 Level North	Display Off	Display On	On	On	On	On	On	On	On
L1M16 Manual Station 400 Level South	Display Off	Display On	On	On	On	On	On	On	On
L1M17 Manual Station 300 Level West	Display Off	Display On	On	On	On	On	On	On	On
L1M18 Manual Station 200 Level South	Display Off	Display On	On	On	On	On	On	On	On
L1M19 Smoke Detector 659 Control Room	Display Off	Display On	On	On	On	On	On	On	On
L1M30 Smoke Detector 659 400 Level Hall	Display Off	Display On	On	On	On	On	On	On	On
L1M33 Manual Station Acid Recycle Exit	Display Off	Display On	On	On	On	On	On	On	On
L1M45 Manual Station 659 400 Level East	Display Off	Display On	On	On	On	On	On	On	On
L1M46 Manual Station 659 300 Level East	Display Off	Display On	On	On	On	On	On	On	On
L1M51 Heat Detector 400 Level Calciner	Display Off	Display On	On	On	On	On	On	On	On
L1M52 Heat Detector 400 Level Calciner	Display Off	Display On	On	On	On	On	On	On	On

(5) If “Normal Condition” is displayed, circle “On” and skip all subsequent FACP0659-01 alarm display inspections. If “Normal Condition” is not displayed, circle “Off”, then circle “On” for all alarm conditions displayed that are listed. Alarms that are NOT listed do not require opening a remedial.

RCRA NWCF TANK LEAK AND OVERFILL DAILY FACILITY INSPECTIONS

Area/Item	Normal Condition	Off Spec. Condition	Thu	Fri	Sat	Sun	Mon	Tue	Wed
Calciner Cell									
New leaks observed in cell?	No	Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes
NCC-105–New cracks, gaps, or deterioration visible?	No	Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes
NCC-107–New cracks, gaps, or deterioration visible?	No	Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes
Piping–New cracks, gaps, or deterioration visible?	No	Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes
Floor–New cracks, gaps, or deterioration visible?(6)	No	Yes	No/Yes						

Area/Item	Normal Condition	Off Spec. Condition	Thu	Fri	Sat	Sun	Mon	Tue	Wed
Off-Gas Cell									
New leaks observed in cell?	No	Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes
Tanks or piping–New cracks, gaps, or deterioration visible?	No	Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes
Floor–New cracks, gaps, or deterioration visible?(6)	No	Yes	No/Yes						

Filter Cell and Valve Cubicle

New leaks observed in cell?	No	Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes
Piping–New cracks, gaps, or deterioration visible?	No	Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes
Floor–New cracks, gaps, or deterioration visible?(6)	No	Yes	No/Yes						

Liquid Sample Cell

New leaks observed in cell?(7)	No	Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes
Piping–New cracks, gaps, or deterioration visible?	No	Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes
Floor–New cracks, gaps, or deterioration visible?(6)	No	Yes	No/Yes						

Footnote 7 is an item that has been previously identified. The operation of the Calciner process has been terminated; do not re-report these items unless new leaks are observed.

(6) The areas of the floor that are visible from the shielding windows are inspected. The entire floor is inspected only when a cell entry is made.

(7) Liquid Sample Cell. Evidence of leakage. Component leaking is unknown. See Form INTEC-4004 dated April 3, 2002.

RCRA NWCF TANK LEAK AND OVERFILL DAILY FACILITY INSPECTIONS

Flowmeter Cubicle

New leaks observed in cell?	No	Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes
Piping–New cracks, gaps, or deterioration visible?	No	Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes
Floor–New cracks, gaps, or deterioration visible?(6)	No	Yes	No/Yes						

Acid Recycle Room/Cell

Leaks observed in room/cell?	No	Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes
Tanks or piping-Cracks, gaps, or deterioration visible?(8)	No	Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes
Floor-Cracks, gaps, or deterioration visible?(8)	No	Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes

(6) The areas of the floor that are visible from the shielding windows are inspected. The entire floor is inspected only when a cell entry is made.
(8) The areas of the tanks, piping, and floor that are visible with mirrors are inspected. The entire floor is inspected only when a room/cell entry is made.

RCRA NWCF TANK LEAK AND OVERFILL DAILY FACILITY INSPECTIONS

Vessel	Instrument	Normal Range	Off Spec. Condition	Thu	Fri	Sat	Sun	Mon	Tue	Wed
Tank Farm Encasement	LSH-102-2C	Off Alarm	On Alarm	Off/On	Off/On	Off/On	Off/On	Off/On	Off/On	Off/On
VES-NCC-101 Volume	VOL101C	0 to 4,950 gal	>4,950 gal							
VES-NCC-102 Volume	VOL102C	0 to 3,460 gal	>3,460 gal							
VES-NCC-103 Volume	VOL103C	0 to 3,460 gal	>3,460 gal							
VES-NCC-104 Volume	VOL104C	0 to 10 gal	>10 gal							
Air Lift Pit Sump (Local)	LI-552-1	0 to 8 in.	>8 in.							
Blend and Hold Cell Drain	L-215C	Off Alarm	On Alarm	Off/On	Off/On	Off/On	Off/On	Off/On	Off/On	Off/On
VES-NCC-108 Volume	VOL108C	0 to 1,700 gal	>1,700 gal							
Off-Gas Cell Drain	L-207C	Off Alarm	On Alarm	Off/On	Off/On	Off/On	Off/On	Off/On	Off/On	Off/On
Absorber Cell Drain Line	L-206C	Off Alarm	On Alarm	Off/On	Off/On	Off/On	Off/On	Off/On	Off/On	Off/On
Decon Holdup Collection Tank Cell Drain	L-219C	Off Alarm	On Alarm	Off/On	Off/On	Off/On	Off/On	Off/On	Off/On	Off/On
VES-NCC-119 Volume	VOL119C	0 to 5,301 gal	>5,301 gal							
VES-NCC-122 Volume	VOL122C	0 to 4,082 gal	>4,082 gal							
Hot Sump Tank Cell Sump (Local) (9)	LI-551-1	0 to 10 in.	>10 in.							
VES-NCR-171	L171-1C	0 to 109 in.	>109 in.							
Acid Recycle Sump	L174-1C	0 to 4 in. WC	>4 in. WC							
LET&D to Acid Recycle Leak Detection	MJAH-174-1C	Off Alarm	On Alarm	Off/On	Off/On	Off/On	Off/On	Off/On	Off/On	Off/On
VES-NCR-171 to Valve Box Leak Detection	MJAH-174-2C	Off Alarm	On Alarm	Off/On	Off/On	Off/On	Off/On	Off/On	Off/On	Off/On
VES-NCC-150 Volume	Q150-1C	0 to 2,500 gal	>2,500 gal							
VES-NCC-152 Volume	Q152-1C	0 to 170 gal	>170 gal							

(9) If the magnehelic for the Hot Sump Tank Cell Sump, LI-551-1, indicates any level increase in the sump, GO TO EAR-211,"Calciner Process Alarm Conditions," for response.

RCRA NWCF TANK LEAK AND OVERFILL DAILY FACILITY INSPECTIONS

Record the following information for leaks of hazardous materials from NWCF systems:

Date/time of leak discovery	
Location of leak: System/Cell	
Component leaking (valve, fitting, etc.)	
Estimated leak volume or rate	
Continuous or occasional leak? If occasional, when does leak occur?	
Comments:	

Form Review	Thu	Fri	Sat	Sun	Mon	Tue	Wed
Supervision Initials:							

Day	Inspector's Name (Print)	Inspector's Signature	Inspection Completed Date	Nature of Any Repairs or Other Remedial Actions	Repairs/Remedial Actions Completed or Not Required Supervision Signature/Date
Thu					
Fri					
Sat					
Sun					
Mon					
Tue					
Wed					

RCRA NWCF TANK LEAK AND OVERFILL DAILY FACILITY INSPECTIONS

Comments:

Open RCRA Remedials on this form:

Footnote Letter	Tracking Number	Date Remedial was Identified	Deficiency Description/Comments

RCRA CPP-659 CALCINER/CSSF MONTHLY EMERGENCY EQUIPMENT, DCS ALARM FUNCTIONS, AND VALVE PL-122-5 CHECKS

____

Previous Month's Inspection Checked (Initials): ________________ Date: ______________ Time: ____________

The Open RCRA Remedials Tracking Book Index for this form has been compared to the previous month's form, the index has been updated, and the current open RCRA Remedials have been recorded on the tracking table. (Initials): ______________

CSSF Fire Extinguishers

Check for accessibility, physical damage, sealed, and gauge indication in green (if equipped).

Location	Requirements Met		Problem(s) Found
SS I, Instrument Bldg.	Yes	No	
SS II, Instrument Bldg.	Yes	No	
SS III, Instrument Bldg.	Yes	No	
SS IV, Instrument Bldg.	Yes	No	
SS V, Roof	Yes	No	
SS V, Instrument Bldg.	Yes	No	
SS VI, Instrument Room	Yes	No	
SS VI, Roof	Yes	No	

NWCF Fire Extinguishers

Check for accessibility, physical damage, sealed, and gauge indication in green (if equipped) or red pop-up button down (if equipped).

Location	Requirements Met		Problem(s) Found
Room 423 East wall	Yes	No	
Corridor 424 East wall	Yes	No	
Room 601 East wall	Yes	No	
Room 426 West wall	Yes	No	
Room 427 Southwest wall	Yes	No	
Room 430 North wall	Yes	No	
Room 432 Northwest wall (there are 2 at this location)	Yes	No	
Corridor 409 South wall	Yes	No	
Room 433 West wall	Yes	No	
Room 438 East wall	Yes	No	
Room 438 Southwest wall	Yes	No	
Room 439 South wall	Yes	No	
Corridor 401 East wall	Yes	No	
Room 318 Southeast wall	Yes	No	
Room 318 West wall	Yes	No	
Room 311 Northeast wall	Yes	No	
Room 310 Northeast wall	Yes	No	
Room 311 Northwest wall	Yes	No	
Room 312 South wall	Yes	No	
Room 317 North wall	Yes	No	
Room 201 South wall	Yes	No	
Room 201 Southwest wall	Yes	No	
Room 209 East wall	Yes	No	
Room 211 East wall	Yes	No	
Room 211 West wall	Yes	No	

RCRA CPP-659 CALCINER/CSSF MONTHLY EMERGENCY EQUIPMENT, DCS ALARM FUNCTIONS, AND VALVE PL-122-5 CHECKS

Location	Requirements Met		Problem(s) Found
Room 212 Northeast wall	Yes	No	
Room 212 Northwest wall	Yes	No	
Room 217 Northeast wall	Yes	No	

Safety Showers/Eyewash Fountains

Check for leaks, accessibility, supply valve open, and that PM tag is current for the month being inspected.

Level	Location	Equipment No.	Requirements Met?	Problem(s) Found
First	Room 427	SSW-NWCF-10 EFN-NWCF-10	Yes/No	
	Room 431	SSW-NWCF-14 EFN-NWCF-14	Yes/No	
	Room 429	SSW-NWCF-1 EFN-NWCF-1	Yes/No	
		SSW-NWCF-11 EFN-NWCF-11	Yes/No	
Second	Room 318	SSW-NWCF-7 EFN-NWCF-7	Yes/No	
	Room 312	SSW-NWCF-0 EFN-NWCF-0	Yes/No	
Third	Room 201	SSW-NWCF-8 EFN-NWCF-8	Yes/No	
	Room 211	SSW-NWCF-9 EFN-NWCF-9	Yes/No	

Stretchers

Level	Location	Stretcher in Location?	Problem(s) Found
First	Room 409 – North wall	Yes/No	
	Room 430 – South wall	Yes/No	
Second	Room 317 – South wall	Yes/No	
Third	Room 209 – South wall	Yes/No	

Equipment/Item Inspected	Types of Problems/Inspection Items		Observations	Nature of Any Repairs or Other Remedial Actions	Completion Date for Repairs/Remedial Actions
Safety showers/ eyewashes	Leaks, accessibility, supply valve open, PM tag current				
Spill control cabinets	Equipment inventory				
Equipment	**Normal Condition**	**Off Spec. Condition**	**Observations**	**Nature of Any Repairs or Other Remedial Actions**	**Completion Date for Repairs/Remedial Actions**
PL-122-5	Closed	Open	Closed/Open		
Test Three DCS Alarm Functions	Audible and Visual Alarms	No audible and/or Visual Alarms	Alarms Do/Do Not Operate		

RCRA CPP-659 CALCINER/CSSF MONTHLY EMERGENCY EQUIPMENT, DCS ALARM FUNCTIONS, AND VALVE PL-122-5 CHECKS

Spill Control Equipment Inventory

Cabinets are located in Room 431 (Chemical Makeup Room entry), Room 317 (second-level elevator entry), and Room 209 (third-level elevator entry).

Place "√" if minimum quantity (or greater) is present. Notify supervision of any usage so that cabinet can be restocked.
If seal no. is the same and the seal has not been broken, an inventory needs only to be taken every other year, in the even years, during the July monthly inspection.

Item	Minimum Quantity Required	Room 431	Room 317	Room 209
Non-rad acid suits (green) **(1)** (These are reusable)	6 pair			
Acid Boots **(1)**	6 pair (2> Size 12)			
Rad Acid Suits (yellow) **(1)**	6			
Acid Gloves (neoprene) **(1)**	12 pair			
Splash Goggles	4			
Plastic Buckets	2			
Spill Control Pillows	24			
Hazardous Material Pigs	12			
Hazardous Material Bags **(1)**	12			
Mop Handles	1			
Mop Heads	3			
Safety Rope	25 ft			
Signs (5 total)	4 "Danger-Acid Spill" 1 "Chemical Spill"			
pH Paper	2 boxes			
Duct Tape (white) **(1)**	2 rolls			
Shovel (flat head)	1			
Smear Paper and Envelopes	1 box			
Pencils, Grease Pencils	2 each			
Radiological Tags, Signs	5 each			
Acid Neutralizer	5-gallon bucket			
Caustic Neutralizer	5-gallon bucket			
Radiation Rope or Ribbon	25 feet			
Previous Inspections Seal Number for Cabinet				
Seal Number for Cabinet				

(1) Replace these items with new, out-of-the-box equipment, in July, in the even years.

Open RCRA Remedials on this form:

Footnote Letter	Tracking Number	Date Remedial was Identified	Deficiency Description/Comments	Nature of Any Repairs or Other Remedial Actions	Completion Date for Repairs/Remedial Actions

RCRA CPP-659 CALCINER/CSSF MONTHLY EMERGENCY EQUIPMENT, DCS ALARM FUNCTIONS, AND VALVE PL-122-5 CHECKS

Footnote Letter	Tracking Number	Date Remedial was Identified	Deficiency Description/Comments	Nature of Any Repairs or Other Remedial Actions	Completion Date for Repairs/Remedial Actions

Inspector's Name (Print): ______________________________

Inspector's Signature: ______________________________

Inspection Completed; Shift Supervisor's Signature: ______________________________

Remedial Actions Completed or Not Required;
Shift Supervisor's Signature:

Comments: ______________________________

RCRA DECON FACILITY WEEKLY INSPECTIONS

This form is the current revision per EDMS.

____
Signature/Date

Reviewed the last form INTEC-4215 completed (Initials): _________

The Open RCRA Remedials Tracking Index for this form has been compared to the last form INTEC-4215 completed, the index has been updated, and the current open RCRA remedials have been recorded on the tracking table on this form. (Initials): ______________

Inspections may be performed through shield windows (as appropriate).

Locations where hazardous waste may be stored in containers:

Storage Location	Location Description	Hazardous Waste Stored at Location?	Inspection	Inspection Date/Time: Normal Condition	Off-Spec Condition	Inspection	Comments
Room 306	Equipment Decon Storage Room	Yes/No[(a)]	Containers leaking? Containers deteriorating? Containers closed? Hazardous liquids on floor? Deterioration visible?[(b)]	No No Yes No No	Yes Yes No Yes Yes	No/Yes No/Yes Yes/No No/Yes No/Yes	
Room 308	Decon Cell	Yes/No[(a)]	Containers leaking? Containers deteriorating? Containers closed? Hazardous liquids on floor? Deterioration visible?[(b)]	No No Yes No No	Yes Yes No Yes Yes	No/Yes No/Yes Yes/No No/Yes No/Yes	
Room 308	Decon Cell ARS sodium deactivation treatment	Yes/No/NA[(c)]	ARS and immersion/ spritz pan/sieve are free of deterioration (cracks, gaps, or corrosion), visible liquids, or leaks The ARS secondary containment is free of deterioration and no liquids are present.	Yes Yes	No No	Yes/No Yes/No	
Room 309	Filter Handling Cell	Yes/No[(a)]	Containers leaking? Containers deteriorating? Containers closed? Hazardous liquids on floor? Deterioration visible?[(b)]	No No Yes No No	Yes Yes No Yes Yes	No/Yes No/Yes Yes/No No/Yes No/Yes	

(a) Inspections are not required if containerized hazardous waste is not stored in this location.
(b) Inspect stainless steel containment liner on floor and walls for cracks, gaps, corrosion, and deterioration. Inspections may be performed through shield windows (as appropriate), or by use of remotely operated cameras.
(c) The ARS inspection must be performed weekly regardless of whether waste is present. If the ARS is NOT present in Room 308, mark this “NA” and no inspection is required.
(d) Container storage must involve a stacking arrangement of no more than three containers high and no more than two containers wide.
(e) Adequate aisle space must be maintained to allow unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment.
(f) Inspect secondary containment beneath containers, if provided.
(g) Inspections are not required if a hazardous waste pile is not stored in this location.

RCRA DECON FACILITY WEEKLY INSPECTIONS

Storage Location	Location Description	Hazardous Waste Stored at Location?	Inspection	Inspection Date/Time: Normal Condition	Off-Spec Condition	Inspection	Comments
Room 415	Low Level Decon Room	Yes/No(a)	Containers leaking?	No	Yes	No/Yes	
			Containers deteriorating?	No	Yes	No/Yes	
			Containers closed?	Yes	No	Yes/No	
			Hazardous liquids on floor?	No	Yes	No/Yes	
			Deterioration visible?(b)	No	Yes	No/Yes	
			Container storage requirements met?(d)	Yes	No	Yes/No	
			Adequate aisle space maintained?(e)	Yes	No	Yes/No	
Room 416	Decon Room Storage Area	Yes/No(a)	Containers leaking?	No	Yes	No/Yes	
			Containers deteriorating?	No	Yes	No/Yes	
			Containers closed?	Yes	No	Yes/No	
			Hazardous liquids on floor?	No	Yes	No/Yes	
			Deterioration visible?(b)	No	Yes	No/Yes	
			Container storage requirements met?(d)	Yes	No	Yes/No	
			Adequate aisle space maintained?(e)	Yes	No	Yes / No	
Room 417	Vehicle Entry	Yes/No(a)	Containers leaking?	No	Yes	No/Yes	
			Containers deteriorating?	No	Yes	No/Yes	
			Containers closed?	Yes	No	Yes/No	
			Hazardous liquids on floor?	No	Yes	No/Yes	
			Deterioration visible?(b)	No	Yes	No/Yes	
			Container storage requirements met?(d)	Yes	No	Yes No	
			Adequate aisle space is maintained?(e)	Yes	No	Yes No	
Room 418	Equipment Decon Room	Yes/No(a)	Containers leaking?	No	Yes	No/Yes	
			Containers deteriorating?	No	Yes	No/Yes	
			Containers closed?	Yes	No	Yes/No	
			Hazardous liquids on floor?	No	Yes	No/Yes	
			Deterioration visible?(b)	No	Yes	No/Yes	
			Container storage requirements met?(d)	Yes	No	Yes/No	
			Adequate aisle space maintained?(e)	Yes	No	Yes/No	

(a) Inspections are not required if containerized hazardous waste is not stored in this location.
(b) Inspect stainless steel containment liner on floor and walls for cracks, gaps, corrosion, and deterioration. Inspections may be performed through shield windows (as appropriate), or by use of remotely operated cameras.
(c) The ARS inspection must be performed weekly regardless of whether waste is present. If the ARS is NOT present in Room 308, mark this "NA" and no inspection is required.
(d) Container storage must involve a stacking arrangement of no more than three containers high and no more than two containers wide.
(e) Adequate aisle space must be maintained to allow unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment.
(f) Inspect secondary containment beneath containers, if provided.
(g) Inspections are not required if a hazardous waste pile is not stored in this location.

RCRA DECON FACILITY WEEKLY INSPECTIONS

Storage Location	Location Description	Hazardous Waste Stored at Location?	Inspection	Inspection Date/Time: Normal Condition	Off-Spec Condition	Inspection	Comments
Room 421	Equipment Decon Room	Yes/No[(a)]	Containers leaking?	No	Yes	No/Yes	
			Containers deteriorating?	No	Yes	No/Yes	
			Containers closed?	Yes	No	Yes/No	
			Hazardous liquids on floor?	No	Yes	No/Yes	
			Deterioration visible?[(b)]	No	Yes	No/Yes	
			Container storage requirements met?[(d)]	Yes	No	Yes/No	
			Adequate aisle space maintained?[(e)]	Yes	No	Yes/No	
Room 422	Equipment Decon Room	Yes/No[(a)]	Containers leaking?	No	Yes	No/Yes	
			Containers deteriorating?	No	Yes	No/Yes	
			Containers closed?	Yes	No	Yes/No	
			Hazardous liquids on floor?	No	Yes	No/Yes	
			Deterioration visible?[(b)]	No	Yes	No/Yes	
			Container storage requirements met?[(d)]	Yes	No	Yes/No	
			Adequate aisle space maintained?[(e)]	Yes	No	Yes/No	
Room 428	Crane Maintenance Area	Yes/No[(a)]	Containers leaking?	No	Yes	No/Yes	
			Containers deteriorating?	No	Yes	No/Yes	
			Containers closed?	Yes	No	Yes/No	
			Hazardous liquids on floor?	No	Yes	No/Yes	
			Deterioration visible?[(f)]	No	Yes	No/Yes	
			Container storage requirements met[(d)]	Yes	No	Yes / No	
			Adequate aisle space maintained[(e)]	Yes	No	Yes / No	
Room 442	Contaminated Equipment Maintenance Bldg	Yes/No[(a)]	Containers leaking?	No	Yes	No/Yes	
			Containers deteriorating?	No	Yes	No/Yes	
			Containers closed?	Yes	No	Yes/No	
			Hazardous liquids on floor?	No	Yes	No/Yes	
			Deterioration visible?[(b)]	No	Yes	No/Yes	
			Container storage requirements met[(d)]	Yes	No	Yes/No	
			Adequate aisle space maintained[(e)]	Yes	No	Yes/No	

(a) Inspections are not required if containerized hazardous waste is not stored in this location.
(b) Inspect stainless steel containment liner on floor and walls for cracks, gaps, corrosion, and deterioration. Inspections may be performed through shield windows (as appropriate), or by use of remotely operated cameras.
(c) The ARS inspection must be performed weekly regardless of whether waste is present. If the ARS is NOT present in Room 308, mark this “NA” and no inspection is required.
(d) Container storage must involve a stacking arrangement of no more than three containers high and no more than two containers wide.
(e) Adequate aisle space must be maintained to allow unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment.
(f) Inspect secondary containment beneath containers, if provided.
(g) Inspections are not required if a hazardous waste pile is not stored in this location.

RCRA DECON FACILITY WEEKLY INSPECTIONS

Locations where hazardous waste may be stored in waste piles:

Storage Location	Location Description	Hazardous Waste Stored at Location?	Inspection	Inspection Date/Time: Normal Condition	Off-Spec Condition	Inspection	Comments
Room 308	Decon Cell	Yes/No([g])	Liquid leaching from waste pile? Liquid collecting at waste pile?	No No	Yes Yes	No/Yes No/Yes	
Room 309	Filter Handling Cell	Yes/No[g])	Liquid leaching from waste pile? Liquid collecting at waste pile?	No No	Yes Yes	No/Yes No/Yes	
Room 416	Decon Room Storage Area	Yes/No[(g)]	Liquid leaching from waste pile? Liquid collecting at waste pile?	No No	Yes Yes	No/Yes No/Yes	
Room 418	Steam Spray Booth	Yes/No[(g)]	Liquid leaching from waste pile? Liquid collecting at waste pile?	No No	Yes Yes	No/Yes No/Yes	

Comments: ____

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(a) Inspections are not required if containerized hazardous waste is not stored in this location.
(b) Inspect stainless steel containment liner on floor and walls for cracks, gaps, corrosion, and deterioration. Inspections may be performed through shield windows (as appropriate), or by use of remotely operated cameras.
(c) The ARS inspection must be performed weekly regardless of whether waste is present. If the ARS is NOT present in Room 308, mark this “NA” and no inspection is required.
(d) Container storage must involve a stacking arrangement of no more than three containers high and no more than two containers wide.
(e) Adequate aisle space must be maintained to allow unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment.
(f) Inspect secondary containment beneath containers, if provided.
(g) Inspections are not required if a hazardous waste pile is not stored in this location.

RCRA DECON FACILITY WEEKLY INSPECTIONS

Open RCRA remedials on this form:

Footnote Letter	Tracking Number	Date Remedial Was Identified	Deficiency Description/Comments	Nature of Any Repairs or Other Remedial Actions	Completion Date for Repairs/Remedial Actions

Inspector's Name (Print): ______________________________

Inspector's Signature: ______________________________ Date ______________

Inspection Completed; Shift Supervisor's Signature: ______________________________

Remedial Actions (Circle One): Completed or Not Required;
Shift Supervisor's Signature: ______________________________ Date ______________

RCRA NWCF WEEKLY INSPECTIONS

Previous Week's Inspection Checked (Initial):___________

The Open RCRA Remedials Tracking Book Index for this form has been compared to the previous week's form, the index has been updated, and the current open RCRA Remedials have been recorded on the tracking table. (Initials):___________

Inspections may be performed through shield windows or door (as appropriate), or by use of remotely operated cameras.

Locations where hazardous waste may be stored in containers:

Storage Location	Location Description	Hazardous Waste Stored at Location?	Inspection if Waste is Stored at Location	Inspection Date/Time: Normal Condition	Off-Spec Condition	Inspection	Comments
Room 205	Hot Sump Tank Removal Cell	Yes/No[a]	Camera operable?	Yes	No	Yes/No	
			Containers leaking?	No	Yes	No/Yes	
			Containers deteriorating?	No	Yes	No/Yes	
			Containers closed?	Yes	No	Yes/No	
			Hazardous liquids on floor?	No	Yes	No/Yes	
			Deterioration visible[c]	No	Yes	No/Yes	
Room 206 [f]	Adsorber Cell	Yes/No[a]	Containers leaking?	No	Yes	No/Yes	
			Containers deteriorating?	No	Yes	No/Yes	
			Containers closed?	Yes	No	Yes/No	
			Hazardous liquids on floor?	No	Yes	No/Yes	
			Deterioration visible[b]	No	Yes	No/Yes	
			Container storage requirements met?[d]	Yes	No	Yes/No	
			Adequate aisle space maintained?[e]	Yes	No	Yes/No	
Room 207	Off-Gas Cell	Yes/No[a]	Containers leaking?	No	Yes	No/Yes	
			Containers deteriorating?	No	Yes	No/Yes	
			Containers closed?	Yes	No	Yes/No	
			Hazardous liquids on floor?	No	Yes	No/Yes	
			Deterioration visible[b]	No	Yes	No/Yes	
			Container storage requirements met?[d]	Yes	No	Yes/No	
			Adequate aisle space maintained?[e]	Yes	No	Yes/No	
Room 214	Calciner Cell	Yes/No[a]	Containers leaking?	No	Yes	No/Yes	
			Containers deteriorating?	No	Yes	No/Yes	
			Containers closed?	Yes	No	Yes/No	
			Hazardous liquids on floor?	No	Yes	No/Yes	
			Deterioration visible[b]	No	Yes	No/Yes	
			Container storage requirements met?[d]	Yes	No	Yes/No	
			Adequate aisle space maintained?[e]	Yes	No	Yes/No	

(a) Inspections are not required if containerized hazardous waste is not stored in this location.
(b) Inspect stainless steel containment liner on floor and walls for cracks, gaps, corrosion, and deterioration. Inspections may be performed through shield windows (as appropriate), or by use of remotely operated cameras.
(c) Inspect secondary containment beneath containers, if provided.
(d) Container storage must involve a stacking arrangement of no more than three containers high and no more than two containers wide.
(e) Adequate aisle space must be maintained to allow unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment.
(f) Check the IWTS report to determine if mixed or hazardous waste is stored in this area. Go to the ICP home page, select Other Links, and select Integrated Waste Tracking System (IWTS). At the IWTS web page, select Reports, select IWTS Reports, and select Inventory-Current. Scroll down the Company and select CWI. Scroll down the Facilities and click on INTEC, then click the right arrow to place INTEC in the Facility Selection box. In the top right blue box, select Active Waste Inventory at Units within a Facility. Scroll down the Facilities and click on INTEC. Scroll down the Unit list and click CPP659c, then click the right arrow to place CPP659c in the Unit Selection box. Select Formatted Report in the lower right blue box, then click on Generate Report. Room numbers where waste containers or waste piles are stored are given in the Grid column of the report. Note any rooms on this inspection form which have a footnote (f) in the first column, then determine if any of these rooms are listed in the Grid column of the IWTS report. Inspect waste in any rooms with footnote (f) where MLLW, Haz, or MTRU waste is stored.

RCRA NWCF WEEKLY INSPECTIONS

Storage Location	Location Description	Hazardous Waste Stored at Location?	Inspection if Waste is Stored at Location	Inspection Date/Time: Normal Condition	Off-Spec Condition	Inspection	Comments
Room 215[f]	Blend and Hold Cell	Yes/No[a]	Containers leaking?	No	Yes	No/Yes	
			Containers deteriorating?	No	Yes	No/Yes	
			Containers closed?	Yes	No	Yes/No	
			Hazardous liquids on floor?	No	Yes	No/Yes	
			Deterioration visible [b]	No	Yes	No/Yes	
			Container storage requirements met?[d]	Yes	No	Yes/No	
			Adequate aisle space maintained?[e]	Yes	No	Yes/No	
Room 216	Filter Cell/Valve Cubicle	Yes/No[a]	Containers leaking?	No	Yes	No/Yes	
			Containers deteriorating?	No	Yes	No/Yes	
			Containers closed?	Yes	No	Yes/No	
			Hazardous liquids on floor?	No	Yes	No/Yes	
			Deterioration visible[b]	No	Yes	No/Yes	
Room 218 [f]	PaR Parking Area	Yes/No[a]	Containers leaking?	No	Yes	No/Yes	
			Containers deteriorating?	No	Yes	No/Yes	
			Containers closed?	Yes	No	Yes/No	
			Hazardous liquids on floor?	No	Yes	No/Yes	
			Deterioration visible [b]	No	Yes	No/Yes	
			Container storage requirements met?[d]	Yes	No	Yes/No	
			Adequate aisle space maintained?[e]	Yes	No	Yes/No	
Room 323	Crane Maintenance and Transfer Area	Yes/No[a]	Containers leaking?	No	Yes	No/Yes	
			Containers deteriorating?	No	Yes	No/Yes	
			Containers closed?	Yes	No	Yes/No	
			Hazardous liquids on floor?	No	Yes	No/Yes	
			Deterioration visible[b]	No	Yes	No/Yes	
			Container storage requirements met?[d]	Yes	No	Yes/No	
			Adequate aisle space maintained?[e]	Yes	No	Yes/No	
Room 326	Transfer Area (Mezzanine)	Yes/No[a]	Containers leaking?	No	Yes	No/Yes	
			Containers deteriorating?	No	Yes	No/Yes	
			Containers closed?	Yes	No	Yes/No	
			Hazardous liquids on floor?	No	Yes	No/Yes	
			Deterioration visible[b]	No	Yes	No/Yes	
			Container storage requirements met?[d]	Yes	No	Yes/No	
			Adequate aisle space maintained?[e]	Yes	No	Yes/No	
Room 419	Decon Transfer Room	Yes/No[a]	Containers leaking?	No	Yes	No/Yes	
			Containers deteriorating?	No	Yes	No/Yes	
			Containers closed?	Yes	No	Yes/No	
			Hazardous liquids on floor?	No	Yes	No/Yes	
			Deterioration visible[c]	No	Yes	No/Yes	
			Container storage requirements met?[d]	Yes	No	Yes/No	
			Adequate aisle space maintained?[e]	Yes	No	Yes/No	

(a) Inspections are not required if containerized hazardous waste is not stored in this location.

(b) Inspect stainless steel containment liner on floor and walls for cracks, gaps, corrosion, and deterioration. Inspections may be performed through shield windows (as appropriate), or by use of remotely operated cameras.

(c) Inspect secondary containment beneath containers, if provided.

(d) Container storage must involve a stacking arrangement of no more than three containers high and no more than two containers wide.

(e) Adequate aisle space must be maintained to allow unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment.

(f) Check the IWTS report to determine if mixed or hazardous waste is stored in this area. Go to the ICP home page, select Other Links, and select Integrated Waste Tracking System (IWTS). At the IWTS web page, select Reports, select IWTS Reports, and select Inventory-Current. Scroll down the Company and select CWI. Scroll down the Facilities and click on INTEC, then click the right arrow to place INTEC in the Facility Selection box. In the top right blue box, select Active Waste Inventory at Units within a Facility. Scroll down the Facilities and click on INTEC. Scroll down the Unit list and click CPP659c, then click the right arrow to place CPP659c in the Unit Selection box. Select Formatted Report in the lower right blue box, then click on Generate Report. Room numbers where waste containers or waste piles are stored are given in the Grid column of the report. Note any rooms on this inspection form which have a footnote (f) in the first column, then determine if any of these rooms are listed in the Grid column of the IWTS report. Inspect waste in any rooms with footnote (f) where MLLW, Haz, or MTRU waste is stored.

RCRA NWCF WEEKLY INSPECTIONS

Locations where hazardous waste may be stored in waste piles:

Storage Location	Location Description	Hazardous Waste Stored at Location?	Inspection if Waste is Stored at Location	Inspection Date/Time: Normal Condition	Off-Spec Condition	Inspection	Comments
Room 216	Filter Cell/Valve Cubicle	Yes/No(g)	Liquid leaching from waste pile?	No	Yes	No/Yes	
			Liquid collecting at waste pile?	No	Yes	No/Yes	
Room 323	Crane Maintenance and Transfer Area	Yes/No(g)	Liquid leaching from waste pile?	No	Yes	No/Yes	
			Liquid collecting at waste pile?	No	Yes	No/Yes	
Room 326	Transfer Area (Mezzanine)	Yes/No(g)	Liquid leaching from waste pile?	No	Yes	No/Yes	
			Liquid collecting at waste pile?	No	Yes	No/Yes	
Room 207	Off-Gas Cell (VES-NCC-109 and attached piping)	Yes	Liquid leaking from VES-NCC-109 or attached piping?	No	Yes	No/Yes	
Room 214	Calciner Cell (All equipment in the cell)	Yes	Liquid leaking from any Calciner equipment?	No	Yes	No/Yes	
Room 322	Off-Gas Blower Cell (intercoolers)(h)	Yes	Liquid leaking from intercoolers?	No	Yes	No/Yes	
			Liquid collecting below intercoolers?	No	Yes	No/Yes	

(g) Inspections are not required if a hazardous waste pile is not stored in this location.
(h) Inspection includes only what can be seen from the door without entering Room 322.

Comments: ______________________________

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Open RCRA Remedials on this form:

Footnote Letter	Tracking Number	Date Remedial Was Identified	Deficiency Description/Comments:	Nature of Any Repairs or Other Remedial Actions	Completion Date for Repairs/Remedials Actions

Inspector’s Name (Print): ______________________________

Inspector’s Signature: ______________________________

Inspection Completed; Shift Supervisor’s Signature: ______________________________

Remedial Actions Completed or Not Required; Shift Supervisor’s Signature: ______________________________

RCRA LWFC CELL INSPECTIONS

This form is the current revision per EDMS.

____
Signature/Date

Previous Inspection Checked (Initial): ______________

The Open RCRA Remedials Tracking Book Index for this form has been compared to the previous form, the index has been updated, and the current open RCRA Remedials have been recorded on the tracking table. (Initials): ______________

Facility: ____________________ Cell Inspected: ____________________ Date: ____________ Time: ____________

A full inspection of the cell will be conducted when the cell is initially entered. If the cell remains open for more than one day (24 hours), and cell conditions have not changed, a cell inspection will be performed using either Form INTEC-9123 or 9123A each day the cell is re-entered. If the cell remains open for 7 days or longer, then perform a full cell inspection every 7 days when entering the cell.

Equipment/Area Inspected	Types of Problems/Inspection Items	Observations	Nature of Any Repairs or Other Remedial Actions	Completion Date for Repairs/Remedial Actions
Sump	Erosion, cracks, debris, settling, spills			
Sump jet	Steam leaks, debris			
Concrete floor (stainless lined)	Cracks, gaps, deterioration, uneven settling, spills			
Concrete walls (stainless lined)	Cracks, gaps, deterioration, settlement			
Concrete floor (epoxy painted)	Cracks, gaps, deterioration, uneven settling, spills, paint			
Concrete walls(1)	Cracks, deterioration, settlement, paint			
Tank exteriors	Corrosion, erosion, leaks, cracks, gaps, discoloration, buckles, bulges			
Piping	Corrosion, erosion, leaks, cracks, gaps, loose or corroded connections			
Valves	Leaks (internal and external), corrosion			
Cell door	Deterioration, corrosion, will not close			
Pumps (if any)	Corrosion, erosion, leaks, deterioration, loose connections			
Filter unit exterior	Deterioration, corrosion, bulges, buckles, leaks			

(1) The WL-161, Cell at INTEC-604 is known to have defects in the concrete walls above the stainless-steel liner. When this cell is inspected, compare the photos in EDF-6859, located on EDMS. If no change is noted, write NO CHANGE in the Observations section. No remedial actions will be necessary. If additional deterioration is noted, write this observation down and forward to the facility support engineer for further evaluation. Remedial action for this observation will be evaluated and repairs completed, if warranted.

RCRA LWFC CELL INSPECTIONS

Containerized Hazardous Waste Stored at Location?	Inspection if Waste is Stored at Location	Normal Condition	Off-Spec Condition	Inspection	Comments
Yes/No[2]	Containers leaking?	No	Yes	No/Yes	
	Containers deteriorating?	No	Yes	No/Yes	
	Containers closed?	Yes	No	Yes/No	
	Hazardous liquids on floor?	No	Yes	No/Yes	
	Deterioration visible [3]	No	Yes	No/Yes	

(2) Inspection is not required if containerized hazardous waste is not stored at location. Inspection is required on a weekly basis if containerized hazardous waste is stored at location.

(3) Inspect stainless steel containment liner on floor and walls for cracks, gaps, corrosion, and deterioration.

Comments: ____________________

Open RCRA Remedials on this form:

Footnote Letter	Tracking Number	Date Remedial was Identified	Deficiency Description/Comments

Inspector's Name (Print): ____________________

Inspector's Signature: ____________________

Inspection Completed; Shift Supervisor's Signature: ____________________

Remedial Actions Completed or Not Required; Shift Supervisor's Signature: ____________________

ABBREVIATED RCRA CELL INSPECTION

This form is the current revision per EDMS.

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Signature/Date

Previous Inspection Checked (Initials): ____________

Cell Inspected: ________________________ Date: __________ Time: __________

The Open RCRA Remedials Tracking Book Index for this form has been compared to the previous inspection form, the index has been updated, and the current open RCRA Remedials have been recorded on the tracking table (Initials): __________

Equipment/Area Inspected	Types of Problems/Inspection Items	Observations	Nature of Any Repairs or Other Remedial Actions	Completion Date for Repairs/Remedial Actions
Sump(s), floor, walls, exterior tank surfaces, piping, valves, and pumps that are visible, and waste containers [1]	Erosion, deterioration, cracks, settling, leaks, spills, debris, or corrosion			

1. Abbreviated inspections may be performed by several means (e.g., cameras, observing the area through the cell entryway, walkthroughs, etc.). Walkthrough inspections completed by personnel performing work within the cell will be limited to those areas encountered while traversing between the cell entrance and the specific work location.

Containerized Hazardous Waste Stored at Location?	Inspection if Waste is Stored at Location	Normal Condition	Off-Spec Condition	Inspection	Comments
Yes/No[(2)]	Containers leaking?	No	Yes	No/Yes	
	Containers deteriorating?	No	Yes	No/Yes	
	Containers closed?	Yes	No	Yes/No	
	Hazardous liquids on floor?	No	Yes	No/Yes	
	Deterioration visible [(3)]	No	Yes	No/Yes	

2. Inspection is not required if containerized hazardous waste is not stored at location. Inspection is required on a weekly basis if containerized hazardous waste is stored at location.

3. Inspect stainless steel containment liner on floor and walls visible through shield window for cracks, gaps, corrosion, and deterioration.

ABBREVIATED RCRA CELL INSPECTION

Comments: ____

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Footnote Letter	Tracking Number	Date Remedial was Identified	Deficiency Description/Comments

Inspector's Name (Print) ____

Inspector's Signature ____

Inspection Completed:
Shift Supervisor's Signature ____

Remedial Actions
Completed or Not Required:
Shift Supervisor's Signature ____

RCRA MONTHLY VOICE PAGING/EVACUATION SYSTEM INSPECTIONS

Previous Inspection for this Facility Checked (Initials): ___________________ Date: ___________ Time: ___________

The Open RCRA Remedial Tracking Book Index for this form has been compared to the previous month's form, the index has been updated, and the current open RCRA Remedials have been recorded on the tracking table. (Initials): _________

NOTE 1: *The Voice Paging System and the Evacuation System use the same speakers.*

NOTE 2: *Use only one copy of this form as a "Master Copy." Ensure all areas checked are transferred to the Master Copy and keep a copy of the completed form at CPP-1683.*

Facility	Area Checked "√"(1)	Areas to Check	Requirements Met?(2)		Inspector's Initials
NWCF		All levels in the facility (including the Decon area)	Yes	No	
Waste Side		Tank Farm	Yes	No	
		CPP-604/605 (all levels in the facility)	Yes	No	
		LET&D (all levels in the facility)	Yes	No	
		CPP-1683	Yes	No	
CPP-1617		Areas in CPP-1617	Yes	No	
Solids Storage Facilities		Solids Storage Facilities I, II, III, IV, V, VI(3)	Yes	No	

(1) Place a "√" in the "Area Checked" column to indicate which area(s) was inspected; leave the other boxes blank. Only fill in the "Requirements Met" section for the area(s) inspected:

(2) Requirements are met if the Voice Paging/Evacuation System is operational and can be heard throughout the normally accessible area(s) inspected. If an area is a high noise area, the requirements are met if the visual alarms are operational.

(3) Requirements are met if the Voice Paging/Evacuation System is operational and can be heard throughout the Solids Storage Facilities area(s).

RCRA MONTHLY VOICE PAGING/EVACUATION SYSTEM INSPECTIONS

List areas where system is not operating properly (if any):

Area Where System is Not Operating Properly	Nature of any Repairs or Other Remedial Actions	Completion Date for Repairs/Remedial Actions

Comments: ______________________________

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Open RCRA Remedials on this form:
Note: *The Open RCRA Remedial Tracking Index for this inspection form is maintained at CPP-1683.*

Footnote Letter	Tracking Number	Date Remedial was Identified	Deficiency Description/Comments

Inspector's Name (Print): ______________________________

Inspector's Signature: ______________________________

Inspection Completed; Shift Supervisor's Signature: ______________________________

Remedial Actions Completed or NOT Required;
Shift Supervisor's Signature: ______________________________

RCRA CPP-659 DECON FACILITY MONTHLY EMERGENCY EQUIPMENT CHECKS

This form is the current revision per EDMS.

____
Signature/Date

Reviewed last completed form FRM-907 (Initials): ____________ Date: ______________ Time: ____________

The Open RCRA Remedials Tracking Book Index for this form has been compared to the last completed form FRM-907, the index has been updated, and the current open RCRA Remedials have been recorded on the tracking table on this form. (Initials): _______

Fire Extinguishers and Extinguishing Media

Item	Location	Equipment	Requirements	Requirements Met? (Circle one)
1.	Room 503 West wall	A-B-C fire extinguisher	Accessible, free of physical damages, seal is in place, gauge indicates green (if equipped) or red pop-up button down (if equipped).	Yes / No
2.	Corridor 501 North wall	A-B-C fire extinguisher	Accessible, free of physical damages, seal is in place, gauge indicates green (if equipped) or red pop-up button down (if equipped).	Yes / No
3.	Room 417 East wall	A-B-C fire extinguisher	Accessible, free of physical damages, seal is in place, gauge indicates green (if equipped) or red pop-up button down (if equipped).	Yes / No
4.	Room 417 East wall	Combustible Metals fire extinguisher	Accessible, free of physical damages, seal is in place, gauge indicates green (if equipped).	Yes / No
5.	Room 415 North wall	A-B-C fire extinguisher	Accessible, free of physical damages, seal is in place, gauge indicates green (if equipped) or red pop-up button down (if equipped).	Yes / No
6.	Room 418 Southwest wall	A-B-C fire extinguisher	Accessible, free of physical damages, seal is in place, gauge indicates green (if equipped) or red pop-up button down (if equipped).	Yes / No
7.	Room 418 Southwest wall	Combustible Metals fire extinguisher	Accessible, free of physical damages, seal is in place, gauge indicates green (if equipped).	Yes / No
8.	Room 418 SSB Southeast corner	A-B-C fire extinguisher	Accessible, free of physical damages, seal is in place, gauge indicates green (if equipped) or red pop-up button down (if equipped).	Yes / No
9.	Room 418 SSB Southeast corner	Combustible Metals fire extinguisher	Accessible, free of physical damages, seal is in place, gauge indicates green (if equipped).	Yes / No
10.	Room 418 North wall	A-B-C fire extinguisher	Accessible, free of physical damages, seal is in place, gauge indicates green (if equipped) or red pop-up button down (if equipped).	Yes / No
11.	Room 442 Northeast wall	A-B-C fire extinguisher	Accessible, free of physical damages, seal is in place, gauge indicates green (if equipped) or red pop-up button down (if equipped).	Yes / No
12.	Room 442 Northeast wall	Combustible Metals fire extinguisher	Accessible, free of physical damages, seal is in place, gauge indicates green (if equipped).	Yes / No
13.	Room 442 South wall	A-B-C fire extinguisher	Accessible, free of physical damages, seal is in place, gauge indicates green (if equipped) or red pop-up button down (if equipped).	Yes / No
14.	Room 427 West wall (outside dock)	A-B-C fire extinguisher	Accessible, free of physical damages, seal is in place, gauge indicates green (if equipped) or red pop-up button down (if equipped).	Yes / No
15.	Room 428 East wall	A-B-C fire extinguisher	Accessible, free of physical damages, seal is in place, gauge indicates green (if equipped) or red pop-up button down (if equipped).	Yes / No
16.	Room 428 South wall	Combustible Metals fire extinguisher	Accessible, free of physical damages, seal is in place, gauge indicates green (if equipped).	Yes / No

RCRA CPP-659 DECON FACILITY MONTHLY EMERGENCY EQUIPMENT CHECKS

Item	Location	Equipment	Requirements	Requirements Met? (Circle one)
17.	Room 428 Northwest corner	A-B-C fire extinguisher	Accessible, free of physical damages, seal is in place, gauge indicates green (if equipped) or red pop-up button down (if equipped).	Yes / No
18.	Room 428 Northwest corner	Combustible Metals fire extinguisher	Accessible, free of physical damages, seal is in place, gauge indicates green (if equipped).	Yes / No
19.	Room 428 Southwest corner	Combustible Metals fire extinguisher	Accessible, free of physical damages, seal is in place, gauge indicates green (if equipped).	Yes / No
20.	Room 441 North wall	A-B-C fire extinguisher	Accessible, free of physical damages, seal is in place, gauge indicates green (if equipped) or red pop-up button down (if equipped).	Yes / No
21.	Room 411 West wall	A-B-C fire extinguisher	Accessible, free of physical damages, seal is in place, gauge indicates green (if equipped) or red pop-up button down (if equipped).	Yes / No
22.	Room 303 Southwest wall	A-B-C fire extinguisher	Accessible, free of physical damages, seal is in place, gauge indicates green (if equipped) or red pop-up button down (if equipped).	Yes / No
23.	Room 303 West wall	A-B-C fire extinguisher	Accessible, free of physical damages, seal is in place, gauge indicates green (if equipped) or red pop-up button down (if equipped).	Yes / No
24.	Room 308 Sorting Table	Bulk Combustible Metals extinguishing media	Access not obstructed. Container of MET-L-X with a remotely- operated scoop[a]	Yes / No / NA
25.	Room 303 Northeast wall	A-B-C fire extinguisher	Accessible, free of physical damages, seal is in place, gauge indicates green (if equipped) or red pop-up button down (if equipped).	Yes / No

[a] If no waste is present in cell then MET-L-X is not required, if No waste is present in cell and MET-L-X is not present then circle NA.

Decon Facility Safety Showers/Eyewash Fountains

Check for leaks, accessibility, supply valve open, and that PM tag is current for the month being inspected.

Level	Location	Equipment No.	Requirements Met?	Problem(s) Found
First	Room 415	SSW-NWCF-2 EFN-NWCF-2	Yes/No	
	Room 501	SSW-NWCF-3 EFN-NWCF-3	Yes/No	
	Room 418	SSW-NWCF-5 EFN-NWCF-5	Yes/No	
	Room 442	SSW-NWCF-13 EFN-NWCF-13	Yes/No	
Second	Room 303	SSW-NWCF-6 EFN-NWCF-6	Yes/No	

Decon Facility Stretcher

Level	Location	Stretcher in Location?	Problem(s) Found
First	Room 411 – Northwest wall	Yes/No	

RCRA CPP-659 DECON FACILITY MONTHLY EMERGENCY EQUIPMENT CHECKS

Decon Facility Spill Control Cabinets

Place "√" if minimum quantity (or greater) is present. Notify supervision of any usage so that cabinet can be restocked.
If seal no. is the same as recorded in the previous inspection and the seal has not been broken, an inventory need not be taken.

Item	Minimum Quantity Required	Room 415	Room 303
Non-rad acid suits (green) (1) (These are reusable)	6 pair		
Acid Boots (1)	6 pair (2> size 12)		
Rad Acid Suits (1)	6		
Acid Gloves (neoprene) (1)	12 pair		
Splash Goggles	4		
Plastic Buckets	2		
Spill Control Pillows	24		
Hazardous Material Pigs	12		
Hazardous Material Bags (1)	12		
Mop Handles	1		
Mop Heads	3		
Safety Rope	25 ft		
Signs (5 total)	4 "Danger-Acid Spill" 1 "Chemical Spill"		
pH Paper	2 boxes		
Duct Tape (white) (2)	2 rolls		
Shovel (flat head)	1		
Smear Paper and Envelopes	1 box		
Pencils, Grease Pencils	2 each		
Radiological Tags, Signs	5 each		
Acid Neutralizer	5 gallon bucket		
Caustic Neutralizer	5 gallon bucket		
Radiation Rope or Ribbon	25 feet		
Previous Inspections Seal Number for Cabinet			
Seal Number for Cabinet			

(1) Inspect the integrity of these items every July. Replace if degraded.
(2) Replace this item every July.

Equipment/Item Inspected	Types of Problems/Inspection Items	Observations	Nature of Any Repairs or Other Remedial Actions	Completion Date for Repairs/Remedial Actions
Safety showers/ eyewashes	Leaks, accessibility, supply valve open, PM tag current			
Spill control cabinets	Equipment inventory			

RCRA CPP-659 DECON FACILITY MONTHLY EMERGENCY EQUIPMENT CHECKS

Fire Extinguisher Inspection Deficiency Corrective Actions:

Item No.	Action(s) Taken to Correct Problem(s) Found	Action Date	Completion Date

Comments: ______________________________

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Open RCRA Remedials on this form:

Footnote Letter	Tracking Number	Date Remedial was Identified	Deficiency Description/Comments

Inspector's Name (Print): ______________________________

Inspector's Signature: ______________________________ Date ______________

Inspection Completed; Shift Supervisor's Signature: ______________________________

Remedial Actions (Circle One) Completed or Not Required;

Supervision Signature: ______________________________ Date ______________

CPP-666 RCRA FDP AREA CELL ENTRY INSPECTION

This form is the current revision per EDMS.

____
Signature/Date

Reviewed last completed form INTEC-4026 for the cell to be inspected (Initials): ________ Date: ____________ Time: ________

Cell inspected: ☐ FDP Cell ☐ Waste Loadout Cell (Room B-4) ☐ Waste Loadout Room (Room B-5) ☐ Room SB-8

The Open RCRA Remedials Tracking Book Index for this form has been compared to the last completed form INTEC-4026 for the cell to be inspected, the index has been updated, and the current open RCRA Remedials have been recorded on the tracking table on this form. (Initials): __________

A full inspection of the cell will be conducted when the cell is initially entered. If the cell remains open for more than one day (24 hours), and cell conditions have not changed, a cell inspection will be performed using either this form or Form INTEC-4026A, "CPP-666 RCRA Abbreviated FDP Area Cell Entry Inspection," each day the cell is reentered. If the cell remains open for 7 days or longer, then perform a full cell inspection every 7 days when entering the cell.

Contact RCT and Industrial Hygiene for evaluation of hazards in area to be inspected. If any cell area cannot be entered to perform the listed inspections (see MCP-2076, "RCRA Requirements for the Waste Management Repackaging Facility (CPP-666)"), then circle "N/A" and explain in the comments.

A circled **Yes** indicates requirements are met.

Item	Equipment	Requirements	Requirements Met? (Circle One)
1.	Stainless steel lined floor	Free of cracks, gaps, deterioration, uneven settling, and hazardous waste spills.	Yes / No / N/A
2.	Stainless steel lined walls	Free of cracks, gaps, deterioration, and settlement.	Yes / No / N/A
3.	Epoxy-painted concrete floor	Free of cracks, gaps, uneven settling, and hazardous waste spills.	Yes / No / N/A
4.	Epoxy-painted concrete walls	Free of cracks, gaps, and uneven settling.	Yes / No / N/A
5.	Tank exterior surfaces	Free of corrosion, leaks, cracks, gaps, discoloration, buckles and bulges.	Yes / No / N/A
6.	Piping	Free of corrosion, leaks, cracks, gaps, loose or corroded connections.	Yes / No / N/A
7.	Valves	Free of external leaks and corrosion.	Yes / No / N/A
8.	Cell door	Free of deterioration and corrosion. The door will close.	Yes / No / N/A
9.	Waste containers[1]	Free of corrosion, deterioration, leaks, cracks and gaps. Closed when in stored condition.	Yes / No / N/A
10.	Sump	Free of cracks and debris.	Yes / No / N/A
11.	Sump jet	Free of steam leaks, cracks, and debris.	Yes / No / N/A

1. Circle "N/A" if containerized hazardous waste is not stored at location. Inspection is required on a weekly basis if containerized hazardous waste is stored at location.

Comments: ____

CPP-666 RCRA FDP AREA CELL ENTRY INSPECTION

Open RCRA Remedials on this form:

Footnote Letter	Tracking Number	Date Remedial was Identified	Deficiency Description/Comments

Inspector's Name (Print): ______________________________

Inspector's Signature: ______________________________ Date: ______________

Inspection Completed; Supervision Signature: ______________________________ Date: ______________

Nature of Any Repairs or Other Remedial Actions: ______________________________

System Engineer Notified of Any Repairs or Other Remedial Actions (Supervision Initials): ______________

Remedial Actions Completed or Not Required; Supervision Signature: ______________ Date: ______________

CPP-666 RCRA ABBREVIATED FDP AREA CELL ENTRY INSPECTION

This form is the current revision per EDMS.

____
Signature/Date

Reviewed the last form INTEC-4026A completed for the cell to be inspected
(Initials): ________ Date: ________ Time: ________

The Open RCRA Remedials Tracking Book Index for this form has been compared to the last form INTEC-4026A completed for the cell to be inspected now, the index has been updated, and the current open RCRA Remedials have been recorded on the tracking table on this form. (Initials): ________

Cell inspected: ☐ FDP Cell ☐ Waste Loadout Cell (Room B-4) ☐ Waste Loadout Room (Room B-5) ☐ Room SB-8

An abbreviated cell inspection may be performed when the cell is entered and a full cell inspection is not required. Refer to MCP-2076, "RCRA Requirements for the Waste Management Repackaging Facility (CPP-666)."

Contact RCT and Industrial Hygiene for evaluation of hazards in areas to be inspected. If any cell areas cannot be entered to perform the listed inspections, then circle "NA" and explain in the comments.

A circled **Yes** indicates requirements are met.

Item	Equipment	Requirements	Requirements Met? (Circle One)
1.	Sump, Floor, Walls, Exterior Tank Surfaces, Piping, and Valves that are visible[1]	Free of cracks, gaps, deterioration of stainless steel liner (where equipped), corrosion, settling, leaks, hazardous waste spills, and uncontainerized debris.	Yes / No / N/A
2.	Waste Containers[2]	Free of corrosion, deterioration, leaks, cracks, and gaps. Closed during storage.	Yes / No / N/A

1. Abbreviated inspections may be performed by several means (e.g., cameras, observing the area through the cell entryway, walkthroughs, etc.). Walkthrough inspections completed by personnel performing work within the cell will be limited to those areas encountered while traversing between the cell entrance and the specific work location.
2. Circle N/A if containerized hazardous waste is not stored at location. Inspection is required on a weekly basis if containerized hazardous waste is stored at location

Comments: ____________________

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Open RCRA Remedials on this form:

Footnote Letter	Tracking Number	Date Remedial was Identified	Deficiency Description/Comments

Inspector's Name (Print): ____________________

Inspector's Signature: ____________________ Date: ____________

Inspection Completed; Supervision Signature: ____________________ Date: ____________

Nature of Any Repairs or Other Remedial Actions: ____________________

System Engineer Notified of Any Repairs or Other Remedial Actions (Supervision Initials): ____________

Remedial Actions Completed or Not Required; Supervision Signature: ____________________ Date: ____________

CPP-666 MONTHLY RCRA INSPECTION VOICE PAGING AND EVACUATION SYSTEM

This form is the current revision per EDMS.

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Signature / Date

Inspection Began:

Reviewed the last form INTEC-9131 completed (Initials): __________ Date: ______________ Time: ________

The Open RCRA Remedials Tracking Book Index for this form has been compared to the last form INTEC-9131 completed, the index has been updated, and the current open RCRA Remedials have been recorded on the tracking table on this form. (Initials): ____________

Item No.	Building and Area	Rooms	Equipment	Requirements	Requirements Met? (Circle One)
1.	CPP-666 FDP Operating Corridors[1]	301	Voice Paging	Words are heard and understood. Although individual speakers may not be inspected, any speaker found not to be operating properly must be listed in the "Open RCRA Remedials" table below.	Yes / No
		113	Voice Paging		Yes / No
		114C	Voice Paging		Yes / No
		115	Voice Paging		Yes / No
		B-6	Voice Paging		Yes / No
		SB-4	Voice Paging		Yes / No
2.	CPP-666 FDP Operating Corridors[1]	301	Evacuation System	Alarms are heard and distinguishable. Although individual speakers may not be inspected, any speaker found not to be operating properly must be listed in the "Open RCRA Remedials" table below.	Yes / No
		113	Evacuation System		Yes / No
		114C	Evacuation System		Yes / No
		115	Evacuation System		Yes / No
		B-6	Evacuation System		Yes / No
		SB-4	Evacuation System		Yes / No

1. Notify the BOP Shift Supervisor (521-1892) at the completion of all inspections on this form.

Open RCRA Remedials on this form:

Footnote Letter	Tracking Number	Date Remedial was Identified	Deficiency Description/Comments

Comments: ____

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Inspector's Name (Print): ____

Inspector's Signature: ______________________________ Date: ______________

Inspection Completed; Supervision Signature: ______________________________

Nature of Any Repairs or Other Remedial Actions: ______________________________

Remedial Actions (Circle One) Completed or Not Required; Supervision Signature: ______________ Date: ________

Form INTEC-9135
10/20/09
Rev. 6
Page 1 of 1
Used with MCP-2076

CPP-666 RCRA SPILL CONTROL CABINET INVENTORY

This form is the current revision per EDMS.

____
Signature/Date

Inspection Began:

Date: ________________ Time: ____________

This form is used in conjunction with FRM-1030, "CPP-666 Monthly RCRA Inspections," which provides further inspection instructions.

If performing the January inventory, obtain the appropriate number of replacement items for the materials marked with an ∗ then restock the cabinets.

1. Check if the minimum quantity (or greater) of materials is present. Restock missing items.
2. A "√" in the appropriate block indicates the minimum quantity (or greater) of materials is present.
3. When the minimum quantity (or greater) of materials is present, attach a new seal.
4. Record the new seal number in the appropriate block below.

Materials	Minimum Quantity Required	CPP-666 Room B-6
Non-rad acid suits (green) ∗	2 pair	
Acid boots ∗	2 pair	
Rad acid suits ∗	2 pair	
Acid gloves (neoprene) ∗	2 pair	
Face shields	2 each	
Plastic buckets	2 each	
Spill control pillows	2 each	
Hazardous material pigs	2 each	
Hazardous waste bags ∗	2 each	
Safety rope	25 feet	
Danger signs	2 each	
pH paper	1 box	
Duct tape (white) ∗	1 roll	
Shovel (flat head)	1 each	
Smear paper and envelopes	1 box	
Standard pencils and grease pencils	2 each	
Radiological tags, signs	2 each	
Radiation rope or ribbon	25 feet	
Adsorbent/absorbent (dolomite)	5-gallon bucket	
Mops	2 each	
Acid/caustic neutralizer (Spill-X-A and Spill-X-C)	1 each	
Splash goggles	2 each	

Seal Number for Cabinet ______________________________________

Inspector's Name (Print)	Inspector's Signature	Date

Signature certifies completion of the inventory.

FRM-1028
06/10/14
Rev. 4

Used with MCP-2076

CPP-666 RCRA DAILY INSPECTIONS

This form is the current revision per EDMS.

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Signature / Date

Reviewed last completed form FRM-1028 (Initials): __________

The Open RCRA Remedials Tracking Book Index for this form has been compared to the last completed form FRM-1028, the index has been updated, and the current open RCRA Remedials have been recorded on the tracking table on this form. (Initials): __________

Dates: _____/_____/_____ through _____/_____/_____		Time:							
			REQUIREMENTS MET? (Circle one or record data)						
Loc.	**Equipment**	**Requirement**	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**	**Sunday**
Room 118	Test MCRP-4 Alarm	Alarm annunciates and lights illuminate	**Yes / No**	**Yes / No**	**Yes / No**	**Yes / No**	**Yes / No**	**Yes / No**	**Yes / No**
Room 118	FDP Cell Sump Level (L-FC-076-1, FDCS)	Less than or equal to 15.5 inches WC							
Room 118	Slab Tank Level (L-FC-184-2, FDCS)	Less than or equal to 64 inches WC							
Room 118	FDP Cell Sump Level High Alarm (LAH-FC-076-1, MCRP-4)	Level High alarm not actuated	**Yes / No**	**Yes / No**	**Yes / No**	**Yes / No**	**Yes / No**	**Yes / No**	**Yes / No**
Room 118	Slab Tank Level High Alarm (LAH-FC-184-2, MCRP-4)	Level High alarm not actuated	**Yes / No**	**Yes / No**	**Yes / No**	**Yes / No**	**Yes / No**	**Yes / No**	**Yes / No**
Room 180	Loading/ Unloading Area[1]	Floor in good condition, no hazardous waste spills	**Yes / No / NA**	**Yes / No / NA**	**Yes / No / NA**	**Yes / No / NA**	**Yes / No / NA**	**Yes / No / NA**	**Yes / No / NA**
Room 114C	Loading/ Unloading Area[1]	Floor in good condition, no hazardous waste spills	**Yes / No / NA**	**Yes / No / NA**	**Yes / No / NA**	**Yes / No / NA**	**Yes / No / NA**	**Yes / No / NA**	**Yes / No / NA**
Room 115	Loading/ Unloading Area[1]	Floor in good condition, no hazardous waste spills	**Yes / No / NA**	**Yes / No / NA**	**Yes / No / NA**	**Yes / No / NA**	**Yes / No / NA**	**Yes / No / NA**	**Yes / No / NA**
Room SB-8	Sodium Distillation Unit[2]	No leaks from system/vessels, no hazardous waste spills	**Yes / No**	**Yes / No**	**Yes / No**	**Yes / No**	**Yes / No**	**Yes / No**	**Yes / No**

1. Inspections of the Loading/Unloading Areas are required only when mixed waste containers are being staged in or moved through the area. Inspect floor areas that are visible without moving equipment or materials stored on the floor. Circle “N/A” if no waste containers are in the area.
2. Inspections of the sodium distillation unit may be conducted by video camera when Room SB-8 is inaccessible to personnel.

Form Review	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**	**Sunday**
Supervision initials:							

CPP-666 RCRA DAILY INSPECTIONS

Day	Inspector's Name (Print)	Inspector's Signature	Inspection Completed Date	Nature of Any Repairs or Other Remedial Actions	Repairs / Remedial Actions Complete or Not Required. Supervision Signature / Date
Monday					
Tuesday					
Wednesday					
Thursday					
Friday					
Saturday					
Sunday					

Comments: ____

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Open RCRA Remedials on this form:

Footnote Letter	Tracking Number	Date Remedial was Identified	Deficiency Description/Comments

CPP-666 WEEKLY RCRA INSPECTIONS

This form is the current revision per EDMS.

____
Signature / Date

Date: ______________________ Time: ____________ Reviewed last completed form FRM-1029 (Initials): __________

The Open RCRA Remedials Tracking Book Index for this form has been compared to the last completed FRM-1029, the index has been updated, and the current open RCRA Remedials have been recorded on the tracking table on this form. (Initials): __________

Item No.	Location	Equipment	Requirements	Requirements Met? (Circle one)
1.	FDPA [0 ft 0 in. level]	Door 033-A into FDPA	• "No Smoking" sign posted on entrance	Yes / No / NA
2.	Room 113 [0 ft level]	Telephone – RCRA designated	• Tested to verify that clear two-way communication can be established	Yes / No
3.	Room 113 [0 ft level]	Building paging system	• Tested to verify that system is functional and announcements are understandable throughout the room	Yes / No
4.	Air Lock 112 [0 ft level] (SE corner)	Door 040 into CMA	• "DANGER Unauthorized Personnel Keep Out" sign is in place	Yes / No
5.	FDP Cell viewed from Room 113 [0 ft level]	FDP Cell containment system	• Free of deterioration (cracks, gaps, or corrosion), visible liquids, or leaks when viewed through the shielded glass windows	Yes / No
6.	FDP Cell [0 ft level]	ARS 1.0 sodium deactivation treatment by water immersion, misting or wetting	• The ARS and immersion/ spritz pan/ sieve are free of deterioration (cracks, gaps, or corrosion) and the ARS is free of visible liquids or leaks. • The ARS secondary containment is free of deterioration and no liquids are present	Yes / No Yes / No
7.	FDP Cell [0 ft level]	ARS 1.0 sodium deactivation treatment by air exposure	• Pan/sieve is free of deterioration	Yes / No
8.	FDP Cell [0 ft level]	ARS 2.0 sodium deactivation treatment by water immersion misting or wetting	• The ARS and immersion/spritz pan/ sieve are free of deterioration (cracks, gaps, or corrosion) and the ARS is free of visible liquids or leaks. • The ARS secondary containment is free of deterioration and no liquids are present •	Yes / No Yes / No
9.	FDP Cell [0 ft level]	ARS 2.0 sodium deactivation treatment by air exposure	• Pan/sieve is free of deterioration	Yes / No

a. Inspections may be performed through shielded glass windows and/or by video cameras.

CPP-666 WEEKLY RCRA INSPECTIONS

Item No.	Location	Equipment	Requirements	Requirements Met? (Circle one)
10.	Room 180 [0 ft level]	Container of mixed waste, if present	• No physical damage, no deterioration, no discoloration • No leaks, closed during storage • Containers not stacked	Yes / No / NA
11.	FDP Cell at 0 ft-0 in. level	Containers of mixed waste, if present[a]	• No physical damage, no deterioration, no discoloration • No leaks, closed during storage • Containers not stacked	Yes / No / NA
12.	Room 114C [0 ft level]	Containers of mixed waste, if present	• No physical damage, no deterioration, no discoloration • No leaks, closed during storage • Minimum access space of 3 ft on one side and 1 ft on the other sides of the container • Containers not stacked • Have secondary containment, with containers elevated, if waste has liquids	Yes / No / NA
13.	Room 115 [0 ft level]	Containers of mixed waste, if present	• No physical damage, no deterioration, no discoloration • No leaks, closed during storage • Minimum access space of 3 ft on one side and 1 ft on the other sides of the container • Containers not stacked • Have secondary containment, with containers elevated, if waste has liquids	Yes / No / NA
14.	Room 301 [+28 ft level]	Telephone – RCRA designated	• Tested to verify that clear two-way communication can be established	Yes / No
15.	Room 301 [+28 ft level]	Containers of mixed waste, if present	• No physical damage, no deterioration, no discoloration • No leaks, closed during storage • Minimum access space of 3 ft on one side and 1 ft on the other sides of the container • Containers not stacked • Have secondary containment, with containers elevated, if waste has liquids	Yes / No / NA
16.	Room B-4 [-13 ft level]	Container of mixed waste, if present[a]	• Inspect all sides for no physical damage, no deterioration, no discoloration, no leaks • Closed during storage • Containers not stacked.	Yes / No / NA

a. Inspections may be performed through shielded glass windows and/or by video cameras.

CPP-666 WEEKLY RCRA INSPECTIONS

Item No.	Location	Equipment	Requirements	Requirements Met? (Circle one)
17.	Room B-5 [-13 ft level]	Container of mixed waste, if present[a]	• No physical damage, no deterioration, no discoloration • No leaks, closed during storage • Containers not stacked	Yes / No / NA
18.	FDP Cell viewed from Room B-6 [-13 ft level]	FDP Cell containment system	• Free of deterioration (cracks, gaps, or corrosion), visible liquids, or leaks when viewed through the shielded glass windows	Yes / No
19.	FDP Cell at -13 ft-0 in. level	Containers of mixed waste, if present[a]	• No physical damage, no deterioration, no discoloration, no leaks • No leaks, closed during storage • Containers not stacked	Yes / No / NA
20.	FDP Cell at -13 ft-0 in. level	Equipment[a]	• Equipment is still present in the cell at -13 ft level	Yes / No
21.	Room B-6 [-13 ft level]	Door B3 into Waste Loadout Room B-5	• “DANGER Unauthorized Personnel Keep Out” sign is in place	Yes / No
22.	Room B-6 [-13 ft level]	Telephone – RCRA designated	• Tested to verify that clear two-way communication can be established	Yes / No
23.	Room SB-4 [-31 ft level]	Door 53 into FDP Cell entry	• “DANGER Unauthorized Personnel Keep Out” sign is in place	Yes / No
24.	Room SB-4 [-31 ft level]	Telephone – RCRA designated	• Tested to verify that clear two-way communication can be established	Yes / No
25.	Room SB-8 [-31 ft level]	Sodium Distillation System secondary containment[a]	• Free of deterioration (cracks, gaps, or corrosion), visible liquids, or leaks	Yes / No
26.	Room SB-8 [-31 ft level]	Containers of mixed waste, if present[a]	• No physical damage, no deterioration, no discoloration • No leaks, closed during storage • No containers of liquid waste are stored in the area • Containers not stacked	Yes / No / NA

a. Inspections may be performed through shielded glass windows and/or by video cameras.

CPP-666 WEEKLY RCRA INSPECTIONS

Comments: ______________________________

Open RCRA Remedials on this form:

Footnote Letter	Tracking Number	Date Remedial Was Identified	Deficiency Description/Comments

Inspector's Name (Print): ______________________________

Inspector's Signature: ______________________________ Date ______________

Inspection Completed Supervision Signature: ______________________________

Nature of any Repairs or Other Remedial Actions: ______________________________

Remedial Actions (Circle One) Completed or Not Required Supervision Signature: ______________ Date ______________

CPP-666 MONTHLY RCRA INSPECTIONS

This form is the current revision per EDMS.

____
Signature / Date

Date: ____________________ Time: __________

Reviewed last completed form FRM-1030 (Initials): ____________

The Open RCRA Remedials Tracking Book Index for this form has been compared to the last completed form FRM-1030, the index has been updated, and the current open RCRA Remedials have been recorded on the tracking table on this form. (Initials): ______________

Item No.	Location	Equipment	Requirements	Requirements Met? (Circle one)
1.	Room 113 [0 ft level] (SW corner)	Fire Extinguisher	Accessible (hanging on wall), free of visible damages, seal is in place, gauge indicates green (if equipped) or button is not popped up (if equipped)	Yes / No
2.	Room 113 [0 ft level] (SE corner)	Fire Extinguisher	Accessible (hanging on wall), free of visible damages, seal is in place, gauge indicates green (if equipped) or button is not popped up (if equipped)	Yes / No
3.	Room 113 [0' level] (East corridor)	Combustible Metals Fire Extinguisher	Accessible (hanging on wall), free of visible damages, seal is in place, gauge indicates green (if equipped).	Yes / No
4.	FDP Cell	Fire Extinguishers	Two (2) accessible remotely-Operable ABC Type Fire Extinguishers.	Yes / No
5.	FDP Cell	Fire Extinguishing Media	Two (2) containers of MET-L-X with remotely-operated scoops.	Yes / No
6.	Room 113 [0 ft level] (NE corner)	Fire Extinguisher	Accessible (hanging on wall), free of visible damages, seal is in place, gauge indicates green (if equipped) or button is not popped up (if equipped)	Yes / No
7.	Stairwell #1 (0 ft level)	Fire Extinguisher	Accessible (hanging on wall), free of visible damages, seal is in place, gauge indicates green (if equipped) or button is not popped up (if equipped)	Yes / No
8.	Room 114C [0' level] (SE corner)	Combustible Metals Fire Extinguisher	Accessible (hanging on wall), free of visible damages, seal is in place, gauge indicates green (if equipped).	Yes / No
9.	Room 115 [0 ft level] (South wall)	Fire Extinguisher	Accessible (hanging on wall), free of visible damages, seal is in place, gauge indicates green (if equipped) or button is not popped up (if equipped)	Yes / No
10.	Room 115 [0' level] (South wall)	Combustible Metals Fire Extinguisher	Accessible (hanging on wall), free of visible damages, seal is in place, gauge indicates green (if equipped).	Yes / No
11.	Room 301 [+28 ft level] (NE corner)	Fire Extinguisher	Accessible (hanging on wall), free of visible damages, seal is in place, gauge indicates green (if equipped) or button is not popped up (if equipped)	Yes / No

CPP-666 MONTHLY RCRA INSPECTIONS

<table>
<tr><th>Item No.</th><th>Location</th><th>Equipment</th><th>Requirements</th><th>Requirements Met? (Circle one)</th></tr>
<tr><td>12.</td><td>Room 301 [+28’ level]
(NE corner)</td><td>Combustible Metals Fire Extinguisher</td><td>Accessible (hanging on wall), free of visible damages, seal is in place, gauge indicates green (if equipped).</td><td>Yes / No</td></tr>
<tr><td>13.</td><td>Room 301 [+28’ level]
(SE corner)</td><td>Combustible Metals Fire Extinguisher</td><td>Accessible (hanging on wall), free of visible damages, seal is in place, gauge indicates green (if equipped).</td><td>Yes / No</td></tr>
<tr><td>14.</td><td>Room 301 [+28 ft level]
(SW corner)</td><td>Fire Extinguisher</td><td>Accessible (hanging on wall), free of visible damages, seal is in place, gauge indicates green (if equipped) or button is not popped up (if equipped)</td><td>Yes / No</td></tr>
<tr><td>15.</td><td>Room B-6 [-13 ft level]
(NE corner)</td><td>Fire Extinguisher</td><td>Accessible (hanging on wall), free of visible damages, seal is in place, gauge indicates green (if equipped) or button is not popped up (if equipped)</td><td>Yes / No</td></tr>
<tr><td>16.</td><td>Room B-6 [-13 ft level]
(SW corner)</td><td>Fire Extinguisher</td><td>Accessible (hanging on wall), free of visible damages, seal is in place, gauge indicates green (if equipped) or button is not popped up (if equipped)</td><td>Yes / No</td></tr>
<tr><td>17.</td><td>Room B-6 [-13’ level]
(SE corner)</td><td>Combustible Metals Fire Extinguisher</td><td>Accessible (hanging on wall), free of visible damages, seal is in place, gauge indicates green (if equipped).</td><td>Yes / No</td></tr>
<tr><td>18.</td><td>Room B-6 [-13 ft level]</td><td>Spill Control Cabinet</td><td>1. If this inspection is for January, inventory spill control cabinet using Form INTEC-9135, “CPP-666 RCRA Spill Control Cabinet Inventory.”
2. If this inspection is not for January, perform the following:
2.1. Copy the seal number from the most recent inventory (INTEC-9135) in Column 1.
2.2. Record the current seal number in Column 2.
<table><tr><th>Column 1—Previous Seal Number</th><th>Column 2—Current Seal Number</th></tr><tr><td></td><td></td></tr></table>2.3. If the seal is intact and the seal numbers are the same, then circle ”Yes”.
2.4. If the seal is not intact or if the seal numbers do not match, then circle “No”. Open a RCRA Remedial and complete an inventory using Form INTEC-9135.</td><td>Yes / No</td></tr>
</table>

CPP-666 MONTHLY RCRA INSPECTIONS

Item No.	Location	Equipment	Requirements	Requirements Met? (Circle one)
19.	Room SB-4 [-31 ft level] (NE corner)	Fire Extinguisher (8668)	Accessible (hanging on wall), free of visible damages, seal is in place, gauge indicates green (if equipped) or button is not popped up (if equipped)	Yes / No
20.	Room SB-4 [-31 ft level] (SW corner)	Fire Extinguisher (8700)	Accessible (hanging on wall), free of visible damages, seal is in place, gauge indicates green (if equipped) or button is not popped up (if equipped)	Yes / No
21.	Room SB-4 [-31 ft level] (SW corner)	Combustible Metals Fire Extinguisher	Accessible (hanging on wall), free of visible damages, seal is in place, gauge indicates green (if equipped).	Yes / No
22.	Room 121 (NE entry hallway)	FACP0666-01 (Fire Alarm Control Panel)	1. Green “AC Power ON” light is illuminated.	Yes / No
			2. The alarms from the FDP Cell Fire Cameras to the Fire Department are required to be enabled when no activities are taking place in the FDP Cell. When activities are taking place in the FDP Cell, and the controls of the Fire Protection Equivalency are in effect, then the alarms to the Fire Department should be disabled. Circle the required status of the camera alarms: “Enabled” or “Disabled”.	Enabled / Disabled
			3. If the “Normal Condition” message IS displayed, and the FDP Cell Fire Cameras should be enabled, circle “Yes”. 3.1 If the FDP Cell Fire Cameras (L1M71 and L1M74) are required to be disabled and they are not, circle “No”. 3.2 If the “Normal Condition” message IS NOT displayed, circle “NA” and go to Requirement 4 for Item 22.	Yes / No / NA

CPP-666 MONTHLY RCRA INSPECTIONS

Item No.	Location	Equipment	Requirements	Requirements Met? (Circle one)
22.	Room 121 (continued)	FACP0666-01 (continued)	4. If the "Normal Condition" message IS displayed, circle "NA" for inspection steps 4.2 and 4.3 and exit item 22 inspections. 4.1 If the "Normal Condition" message IS NOT displayed, circle "On" in the table below for all alarms displayed. Disregard alarms that are not listed in the table. Then continue to Requirement 4.2.	

Alarm Message Display on FACP0666-01		Circle if Displayed
L1M1	Water Flow – Zone #1 – 100 level – FDP area	On
L1M4	Water Flow – Zone #4 – 200 level – FDP area	On
L1M5	Water Flow – Zone #5 – Basement and Sub-basement – FDP area	On
L1M6	Water Flow – Zone #6 – 300 Level and 400 Level – FDP area	On
L1M10	Duct Heat Detector – 200 Level – Exhaust Equipment Room 208 – Air Cooling System	On
L1M11	Manual Fire Alarm - #14 East Wall Room 208 by Stairwell #2	On
L1M14	Manual Fire Alarm - #16 West Wall Bottom of Stairwell #2 Northeast side of Building	On
L1M16	Manual Fire Alarm - #20 East Wall Room B-6 by Stairwell #1 Northeast side of Building	On
L1M17	Manual Fire Alarm - #22 East Wall Room 301 by Stairwell #1 Northeast side of Building	On
L1M19	Manual Fire Alarm - #26 North Wall Room 114C Between Roll Up Doors Northeast side of Building	On
L1M31	Manual Fire Alarm - #50 East Wall Room 208 Between Room 205 and Stairwell #5 North side of Building	On
L1M33	Manual Fire Alarm - #15 West Wall Room 201 by Stairwell #2	On

CPP-666 MONTHLY RCRA INSPECTIONS

Item No.	Location	Equipment	Requirements	Requirements Met? (Circle one)
22.	Room 121 (continued)	FACP0666-01 (continued)	(see alarm table below)	
			4.2 NO alarms, other than the FDP Cell Fire Cameras (L1M71 and L1M74), are displayed.	Yes / No / NA
			4.3 The FDP Cell Fire Cameras (L1M71 and L1M74) are required to be disabled and they are.	Yes / No / NA

	Alarm Message Display on FACP0666-01	Circle if Displayed
L1M34	Manual Fire Alarm - #17 West Wall by Outside Entrance FDP Cell Exit Room	On
L1M35	Manual Fire Alarm - #19 East Wall Room B-4 by Stairwell #1 Northeast side of Building	On
L1M36	Manual Fire Alarm - #21 East Wall Room 201 by Airlock 214 Northeast side of Building	On
L1M37	Manual Fire Alarm - #23 North Wall Room 402 by Door to Stairwell #1 Northeast side of Building	On
L1M41	Manual Fire Alarm - #25 North Wall Stairwell #1 Northeast Side of Building	On
L1M42	Manual Fire Alarm - #27 South Wall Room 114B by Door to Room 113 Northeast Side of Building	On
L1M46	Water Flow – Common Alarm – FDP Side	On
L1M61	All Area Evacuation Alarm System Activated	On
L1M62	All Area Take Shelter System Activated	On
L1M67	Manual Fire Alarm - #49 East Wall Room 208 By Stairs to Room 207	On
L1M71	FDP Cell North Fire Camera (Flame)	On
L1M74	FDP Cell South Fire Camera (Flame)	On
L2M81	Manual Fire Alarm - #18 West Wall Room B-4 by Ladder #1 Northeast side of Building	On
L2S82	Smoke Detector - West Ceiling Room SB-8	On
L2S83	Smoke Detector - East Ceiling Room SB-8	On

CPP-666 MONTHLY RCRA INSPECTIONS

Comments: ______________________________

Open RCRA Remedials on this form:

Footnote Letter	Tracking Number	Date Remedial was Identified	Deficiency Description/Comments

Inspector's Name (Print): ______________________________

Inspector's Signature: ______________________________ Date ______________

Inspection Completed; Supervision Signature: ______________________________

Nature of Any Repairs or Other Remedial Actions: ______________________________

Remedial Actions (Circle One) Completed or Not Required; Supervision Signature: ______________ Date ______________

RCRA DECON FACILITY DAILY INSPECTIONS

This form is the current revision per EDMS.

____
Signature/Date

Reviewed the last form INTEC-4043 completed (Initials): ______________

The Open RCRA Remedials Tracking Book Index for this form has been compared to the last form INTEC-4043 completed, the index has been updated, and the current open RCRA Remedials have been recorded on the tracking table on this form. (Initials): ______________

Date: ______________ Through _______________

Level Recorders and Control Panel

Instrument	Normal Range	Off Spec. Condition	Thu	Fri	Sat	Sun	Mon	Tue	Wed
		Time:							
L-NC-123-1(1)	Operating (Yes)	Not Operating (No)	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
L-NC-129-1(1)	Operating (Yes)	Not Operating (No)	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Verify control panel CP-NCD-989 alarms(2)	Alarms activate (Yes)	Alarms don't activate (No)	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No

(1) Check level recorder to ensure that the recorder contains chart paper, the chart motor is working, the chart pens contain ink, and that there are no anomalous readings.
(2) CP-NCD-989 alarms also activate DCS alarm in NWCF control room.

Hold-Up Tank, Collection Tank, and HEPA Filter Leach System

Vessel	Instrument	Normal Range	Off Spec. Condition	Thu	Fri	Sat	Sun	Mon	Tue	Wed
VES-NCD-123(3)	L-NC-123-1	0 to 67%	>67%							
VES-NCD-129(3)	L-NC-129-1	0 to 65%	>65%							
VES-NCD-141(4)	LSH-141-2	OFF (Yes)	HH Indicator (No)	Yes/No/NA	Yes/No/NA	Yes/No/NA	Yes/No/NA	Yes/No/NA	Yes/No/NA	Yes/No/NA
VES-NCD-142(4)	TIC-142-3	≤350°F (Yes)	>350°F (No)	Yes/No/NA	Yes/No/NA	Yes/No/NA	Yes/No/NA	Yes/No/NA	Yes/No/NA	Yes/No/NA

(3) Enter the instrument reading in the appropriate section of the table.
(4) Inspections are required daily when waste is being treated in the HEPA Filter Leach System. Circle NA if waste is not being treated in the HEPA Filter Leach System.

Filter Handling/Decon Cell	Normal Condition	Off Spec. Condition	Thu	Fri	Sat	Sun	Mon	Tue	Wed
Hazardous liquids on floor/in drain trenches?	No	Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes
Cell leaks visible?	No	Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes
Deterioration visible? (5)	No	Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes	No/Yes

(5) Inspect floors and tank systems (including overflow and drain lines) visible through shield window for cracks, gaps, corrosion, and external deterioration.

RCRA DECON FACILITY DAILY INSPECTIONS

Sink Hood Area

SH-NCD-933, SH-NCD-934 and UC-NCD-921(6)	Normal Condition	Off Spec. Condition	Thu	Fri	Sat	Sun	Mon	Tue	Wed
Hazardous Liquids on floor?	No	Yes	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA
Leaks visible?	No	Yes	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA
Deterioration visible?(7)	No	Yes	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA

(6) Inspect area daily when waste is being treated in either sink hood or the ultrasonic cleaner. Circle NA when waste is not being treated in any of these units.
(7) Inspect floors and tank systems (including overflow and drain lines) for cracks, gaps, corrosion, and external deterioration.

Soak Tank Treatment Units

TK-NCO-137(8)	Normal Condition	Off Spec. Condition	Tank Not in Use	Thu	Fri	Sat	Sun	Mon	Tue	Wed
Hazardous liquids on floor?	No	Yes	NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes
Leaks visible?	No	Yes	NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes
Deterioration visible?(9)	No	Yes	NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes
VES-NCD-138(8)										
Hazardous liquids on floor?	No	Yes	NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes
Leaks visible?	No	Yes	NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes
Deterioration visible?(9)	No	Yes	NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes
TK-NCD-139(8)										
Hazardous liquids on floor?	No	Yes	NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes
Leaks visible?	No	Yes	NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes
Deterioration visible?(9)	No	Yes	NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes

(8) Soak tanks are to be inspected daily when in use and weekly when not in use.
(9) Inspect floors and tank systems (including overflow, drain lines and trenches) visible through window for cracks, gaps, corrosion, and external deterioration

RCRA DECON FACILITY DAILY INSPECTIONS

Steam Booth/Glovebox Area

Area/Item	Normal Condition	Off Spec. Condition	Area Not in Use)	Thu	Fri	Sat	Sun	Mon	Tue	Wed
Stainless steel floor between the Glovebox and the booth wall(10)	No leaks, cracks, gaps, deterioration or spills (No)	Leaks, cracks, gaps, deterioration or spills (Yes)	NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes
Steam Booth Floor(10)	No leaks, cracks, gaps, deterioration or spills (No)	Leaks, cracks, gaps, deterioration or spills (Yes)	NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes
Glovebox Shell(10)	No leaks, cracks, gaps, deterioration or spills (No)	Leaks, cracks, gaps, deterioration or spills (Yes)	NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes

(10) Inspections are required daily when waste is being treated in the Steam Booth/Glovebox Area and weekly when not in use.

Area/Item	Normal Condition	Off Spec. Condition	Thu	Fri	Sat	Sun	Mon	Tue	Wed
Telephone in Chemical Mezzanine	Telephone works (Yes)	Telephone does not work (No)	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Designated telephone and building paging on the first level in the Decon Facility	Telephone and building paging work (Yes)	Telephone or building paging does not work (No)	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Designated telephone and building paging on the second level in the Decon Facility	Telephone and building paging work (Yes)	Telephone or building paging does not work (No)	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No

Decon Facility Loading and Unloading Area (RM. 417-Vehicle Entry)

Area/Item	Normal Condition	Off Spec. Condition	Thu	Fri	Sat	Sun	Mon	Tue	Wed
Presence of hazardous solid or liquid waste spills? (11)	No	Yes	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA

(11) This inspection is required daily only when loading/unloading is occurring. Circle NA if loading/unloading is not occurring.

RCRA DECON FACILITY DAILY INSPECTIONS

Macroencapsulation and Storage (RM. 428 Crane Maintenance Area)

Area/Item	Normal Condition	Off Spec. Condition	Thu	Fri	Sat	Sun	Mon	Tue	Wed
Macroencapsulation areas are free of leaks and spills and no damage, deterioration or functional issues are present with the equipment or containers? (12)	Yes	No	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA
Ensure macroencapsulated containers are not stacked.	No	Yes	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA	No/Yes/NA

(12) Macroencapsulation areas must be inspected daily when in use. Circle NA if these areas were not used on this day. Loading and unloading areas must be inspected daily when in use.

Form Review	Thu	Fri	Sat	Sun	Mon	Tue	Wed
Supervision initials:							

Day	Inspector's Name (Print)	Inspector's Signature	Inspection Completed Date	Nature of Any Repairs or Other Remedial Actions	Repairs/Remedial Actions Complete or Not Required Supervision Signature/Date
Thu					
Fri					
Sat					
Sun					
Mon					
Tue					
Wed					

Comments: ____________________

RCRA DECON FACILITY DAILY INSPECTIONS

Open RCRA Remedials on this form:

Footnote Letter	Tracking Number	Date Remedial was Identified	Deficiency Description/Comments

CPP-1617
OPERATING AREA LOG SHEET

This data sheet is the current revision date per the current Form Index:

Signature / Date

Date

Log Sheet Reviewed (Foreman Initials)		
Supervision Review of Log		
Initials	**Time**	**Narrative Log**

Containers Received at INTEC-1617:

WASTE RECEIVED:

Container Type(1)	Waste ID No.	Waste Type(2)	Storage Location	Container Type(1)	Waste ID No.	Waste Type(2)	Storage Location

(1) Indicate the type of container in which the waste was packaged, i.e. drum, bag, box.
(2) Indicate the waste type, i.e. , Low Level Waste (LLW), hazardous (HW), Mixed Low-Level Waste (MLLW), Transuranic (T), Recyclable (R),other (O).

Individuals Making Log Entries
Name (Printed) **Initials**

_______________ / _______________
_______________ / _______________
_______________ / _______________
_______________ / _______________
_______________ / _______________
_______________ / _______________
_______________ / _______________

CPP-1617 MONTHLY RCRA INSPECTION SPILL CONTROL CABINET AND FIRE EXTINGUISHERS

Inspection Began:
Reviewed the last form INTEC-5410 completed (Initials): __________ Date: _______________ Time: _________

The Open RCRA Remedials Tracking Book Index for this form has been compared to the last form INTEC-5410 completed, the index has been updated, and the current open RCRA Remedials have been recorded on the tracking table on this form. (Initials): _____________

Fire Extinguishers

Item No.	Equipment	Requirements	Requirements Met? (Circle One)
1.	Class A-B-C Fire Extinguishers	1. Accessible (hanging on the wall). 2. Free of visible damage. 3. Seal is unbroken. 4. Pressure gauge (if equipped) indicates in the green zone or button (if equipped) is not popped up.	Yes / No
2.	Class D Combustible Metals Portable Fire Extinguisher	1. Accessible (at fence by northeast gate). 2. Free of visible damage. 3. Seals are unbroken. 4. Button is not popped up.	Yes / No

Spill Control Cabinet Inspection

Item No.	Equipment	Requirements	Requirements Met? (Circle One)
3.	Spill Control Cabinet	Cabinet is unobstructed and easily accessible.	Yes / No
4.	Spill Control Cabinet	4.1 Inventory spill control materials that are not sealed inside the Spill Control Cabinet on Table 1 below.	Yes / No
		4.2 If this inspection is for October, inventory the spill control cabinet contents, and the spill control materials that are not sealed inside the Spill Control Cabinet, using Table 1 and Table 2 below. 4.2.1 Inspect the integrity of materials identified by an asterisk (*) and replace if degraded. 4.2.2 Apply a new seal following the inventory and record the new seal number at the end of the inventory table.	Yes / No / NA
		4.3 If this inspection is not for October, perform the following: 4.3.1 Copy the as-left seal number from the previous monthly inspection in Column 1 below. 4.3.2 Record the current seal number in Column 2 below.	Yes / No / NA

Column 1 Previous Seal Number	Column 2 Current Seal Number

CPP-1617 MONTHLY RCRA INSPECTION SPILL CONTROL CABINET AND FIRE EXTINGUISHERS

		4.3.3 If the seal is intact and the seal numbers are the same, then circle "Yes". No inventory of the Spill Control Cabinet contents is required. 4.3.4 If the seal is not intact or if the seal numbers do not match, then circle "No". Complete an inventory of the Spill Control Cabinet contents using Table 2 below. 4.3.5 Apply a new seal following the inventory and record the seal number at the end of Table 2.	

Table 1 – Inventory of Spill Control Materials Not Sealed Inside the Spill Control Cabinet

Item No.	Materials	Minimum Quantity Required	Requirements Met?		Comments
5.	Dolomite clay, or Spill-X products (with scoop for application) (staged beside Spill Control Cabinet)	200 lb	Yes	No	
6.	Solvent cleanup material (staged beside Spill Control Cabinet)	5 gal container	Yes	No	

Table 2 – Spill Control Cabinet Inventory

Item No.	Materials	Minimum Quantity Required	Requirements Met?		Comments
7.	Acid boots (neoprene) *	3 pair	Yes	No	
8.	Disposable acid suits *	3	Yes	No	
9.	Acid gloves (neoprene) *	2 dozen	Yes	No	
10.	Face shields	3	Yes	No	
11.	Plastic bucket	1	Yes	No	
12.	Spill control pillows or absorbent socks	1 dozen	Yes	No	
13.	HF spill control pillows	1 dozen	Yes	No	
14.	Radioactive waste bags *	1 case	Yes	No	
15.	Safety rope	1 spool	Yes	No	
16.	Signs (such as CAUTION Acid or CAUTION Chemical Spill)	5	Yes	No	
17.	pH indicator	1 box	Yes	No	
18.	Shovel (flat head)	1	Yes	No	
19.	Smear paper and envelopes	1 box	Yes	No	
20.	Standard pencils and grease pencils	2 each	Yes	No	
21.	Paper	1 pad	Yes	No	
22.	Radiological tags or signs	5 each	Yes	No	
23.	Radiation rope or ribbon	1 spool	Yes	No	
			Seal Number after Inventory		

CPP-1617 MONTHLY RCRA INSPECTION SPILL CONTROL CABINET AND FIRE EXTINGUISHERS

Comments: ______________________________

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____

____

____

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Open RCRA Remedials on this form:

Footnote Letter	Tracking Number	Date Remedial was Identified	Deficiency Description/Comments

Inspector's Name (Print): ______________________________

Inspector's Signature: ______________________________ Date __________

Inspection Completed; Supervision Signature: ______________________________

Nature of any Repairs or Other Remedial Actions: ______________________________

Remedial Actions (Circle One) Completed or Not Required;
Supervision Signature: ______________________________ Date __________

This data sheet is the current revision per EDMS.

INTEC-1617 RCRA DAILY INSPECTION

____
Signature/Date

Dates: _____/_____/_____ through _____/_____/_____

Reviewed the last form INTEC-9181 completed (Initials): ________

The Open RCRA Remedials Tracking Book Index for this form has been compared to the last form INTEC-9181 completed, the index has been updated, and the current open RCRA Remedials have been recorded on the tracking table on this form. (Initials): ________

Day	Time	Requirements	Requirements Met? (Circle One)
Monday		• Loading and unloading areas must be inspected daily when in use. Circle NA if loading and unloading areas were not used. • Loading and unloading areas are free of leaks and spills. • Macroencapsulation areas must be inspected daily when in use. Circle NA if these areas were not used on this day. • Macroencapsulation areas are free of leaks and spills and no damage, deterioration, or functional issues are present with the equipment or containers. • Ensure macroencapsulated containers are not stacked.	Yes / No / NA Yes / No / NA Yes / No / NA Yes / No / NA Yes / No / NA
Tuesday		• Loading and unloading areas must be inspected daily when in use. Circle NA if loading and unloading areas were not used. • Loading and unloading areas are free of leaks and spills. • Macroencapsulation areas must be inspected daily when in use. Circle NA if these areas were not used on this day. • Macroencapsulation areas are free of leaks and spills and no damage, deterioration, or functional issues are present with the equipment or containers. • Ensure macroencapsulated containers are not stacked.	Yes / No / NA Yes / No / NA Yes / No / NA Yes / No / NA Yes / No / NA
Wednesday		• Loading and unloading areas must be inspected daily when in use. Circle NA if loading and unloading areas were not used. • Loading and unloading areas are free of leaks and spills. • Macroencapsulation areas must be inspected daily when in use. Circle NA if these areas were not used on this day. • Macroencapsulation areas are free of leaks and spills and no damage, deterioration, or functional issues are present with the equipment or containers. • Ensure macroencapsulated containers are not stacked.	Yes / No / NA Yes / No / NA Yes / No / NA Yes / No / NA Yes / No / NA
Thursday		• Loading and unloading areas must be inspected daily when in use. Circle NA if loading and unloading areas were not used. • Loading and unloading areas are free of leaks and spills. • Macroencapsulation areas must be inspected daily when in use. Circle NA if these areas were not used on this day • Macroencapsulation areas are free of leaks and spills and no damage, deterioration, or functional issues are present with the equipment or containers. • Ensure macroencapsulation containers are not stacked.	Yes / No / NA Yes / No / NA Yes / No / NA Yes / No / NA Yes / No / NA

INTEC-1617 RCRA DAILY INSPECTION

Day	Time	Requirements	Requirements Met? (Circle One)
Friday		• Loading and unloading areas must be inspected daily when in use. Circle NA if loading and unloading areas were not used. • Loading and unloading areas are free of leaks and spills. • Macroencapsulation areas must be inspected daily when in use. Circle NA if these areas were not used on this day. • Macroencapsulation areas are free of leaks and spills and no damage, deterioration, or functional issues are present with the equipment or containers. • Ensure macroencapsulation cotainers are not stacked.	Yes / No / NA Yes / No / NA Yes / No / NA Yes / No / NA Yes / No / NA
Saturday		• Loading and unloading areas must be inspected daily when in use. Circle NA if loading and unloading areas were not used. • Loading and unloading areas are free of leaks and spills. • Macroencapsulation areas must be inspected daily when in use. Circle NA if these areas were not used on this day. • Macroencapsulation areas are free of leaks and spills and no damage, deterioration, or functional issues are present with the equipment or containers. • Ensure macroencapsulation containers are not stacked.	Yes / No / NA Yes / No / NA Yes / No / NA Yes / No / NA Yes / No / NA
Sunday		• Loading and unloading areas must be inspected daily when in use. Circle NA if loading and unloading areas were not used. • Loading and unloading areas are free of leaks and spills. • Macroencapsulation areas must be inspected daily when in use. Circle NA if these areas were not used on this day. • Macroencapsulation areas are free of leaks and spills and no damage, deterioration, or functional issues are present with the equipment or containers. • Ensure macroencapsulation containers are not stacked.	Yes / No / NA Yes / No / NA Yes / No / NA Yes / No / NA Yes / No / NA

Comments: ______________________________

Open RCRA Remedials on this form:

Footnote Letter	Tracking Number	Date Remedial was Identified	Deficiency Description/Comments

INTEC-1617 RCRA DAILY INSPECTION

Day	Inspector's Name (Print)	Inspector's Signature	Inspection Completed Date	Nature of Any Repairs or Other Remedial Actions	Repairs / Remedial Actions Complete or Not Required. Supervision Signature / Date
Monday					
Tuesday					
Wednesday					
Thursday					
Friday					
Saturday					
Sunday					

INTEC-1617 WEEKLY RCRA INSPECTIONS

This form is the current revision per EDMS.

____
Signature/Date

Date: ____________________ Time: ____________

Reviewed the last form INTEC-9182 completed (Initials): __________

The Open RCRA Remedials Tracking Index for this form has been compared to the last form INTEC-9182 completed, the index has been updated, and the current open RCRA remedials have been recorded on the tracking table on this form.
(Initials): _________

Item	Equipment	Requirements	Requirements Met? (Circle One)
1.	Containers (1)	1. No damage, deterioration, or discoloration 2. No leaks 3. Labeled with “Hazardous Waste” or “Mixed Hazardous Waste” 4. Labeled with an IWTS barcode number 5. Containers spaced per instructions on page 2. 6. Incompatible wastes segregated according to waste compatibility groups (Refer to Waste Compatibility Guidelines in TPR-7318)	Yes / No
2.	Secondary containment (includes spill pans) (2)	1. Free of liquid 2. In good condition 3. Capacity to contain 10% of volume of containers or volume of largest container	Yes / No
3.	Telephone	Communication system is operable (2-way communication established)	Yes / No
4.	Doors & gates	Locked when authorized personnel are not present	Yes / No
5.	Signs posted at each entrance	“Danger-Unauthorized Personnel Keep Out” and “No Smoking” signs are posted, legible, and not damaged or obstructed.	Yes / No
6.	Cargo container (3)	Elevated support timbers have not settled more than 2 in. If the timbers settle more than 2 in. for the length of the timber, the cargo containers and timbers will be removed, the area will be re-graded, and the cargo containers and timbers will be repositioned.	Yes / No

(1) Interim storage containers and shielded overpack containers that contain waste containers with less than 5% liquid volume do not have to be opened for this inspection.
(2) Secondary containment is required for all RCRA waste containers with free liquids except interim storage containers with elevating grids that contain RCRA waste containers with less than 5% liquid volume.
(3) Applies only to cargo containers that have been elevated with timbers.

Comments: ____

Open RCRA remedials on this form:

Footnote Letter	Tracking Number	Date Remedial was Identified	Deficiency Description/Comments

INTEC-1617 WEEKLY RCRA INSPECTIONS

Inspector's Name (Print): ____________________

Inspector's Signature: ____________________ Date ________

Inspection Completed; Supervision Signature: ____________________

Nature of any Repairs or Other Remedial Actions: ____________________

Remedial Actions (Circle One): Completed or Not Required;
Supervision Signature: ____________________ Date ________

CPP-1617 Container Spacing Requirements

(RCRA)

Waste containers must have a minimum 6 in. maintained between containers in a row and a minimum aisle space of 24 in. to support inspection of the containers.

Shielded Overpacks (SOs): Shielded overpacks will be stored on individual pallets. These containers will not be opened for inspection of the actual waste drums stored within.

Spacing between containers shall be maintained such that the line of sight viewing angle for inspection is not less than 30 degrees (between containers) and there is adequate illumination. For containers that are in tighter storage configuration than 30 degrees along the entire length, the inspection may be performed by accessing multiple sides of the container to complete the inspection and/or use of aids (mirrors, magnifying lens, light sources).

Cargo Container Aisle Spacing Requirements:

NOTE: *Containers with the longest dimension of 4 ft or less are considered small containers, while containers with the longest dimension greater than 4 ft are considered large containers.*

- Space will be maintained around cargo containers to facilitate inspections.
- Cargo containers that require interior inspections will have a minimum of 6 ft aisle space outside the end of the container.
- At least 1 ft aisle space is maintained throughout the entire length of the cargo container (does not have to be in a straight line, but can shift across the cargo container as required).
- No containers touch the side of the cargo container.
- At least 1 in. is maintained between containers and the wall of the cargo container.
- Large containers that are positioned laterally are separated with at least 6 in. between containers.
- Large containers that are positioned longitudinally are separated with at least 2 in. between the ends of each container.
- Large containers are separated from other containers by at least 2 in. unless stored on pallets.
- Small containers are separated from other containers by at least 2 in. unless stored on pallets.

MACRO BAG PACKAGE USE AND CLOSURE CHECKLIST
Includes metal boxes and drums
(Use with MCP-1390 and -1396)

IWTS Container Barcode-requiring Macro treatment:		**Container Size/Type:**	
IWTS Container Barcode for Waste Container treated using Macro Bag:			
Macro Bag QA/PO number:		**Macro Bag Serial # (if applicable):**	
IP-1 _____ or IP-2 _____ Macro Bag			

	Yes/No or N/A	Date	Initials	Comments (Answer questions and provide data in this column.)
1. Macro Bag Pre-use Evaluation				
1.1 Was the Macro Bag procured at the proper Quality Level for the waste material (i.e., QL-3 for hazardous waste)?				
1.2 Does the package have a unique QA/PO number or green acceptance tag that is clearly marked on the package?				
1.3 Are the Macro Bags (each of 3 layers) in good condition?				
1.3.1 If Macro Bag package and/or closure hardware has been damaged, ensure it has been properly repaired and inspected per the manufacturer's instructions and requirements prior to shipment. Contact P&T for quality program plan requirements and recommendations. Refer to MCP-3775.				
1.4 Is the Macro Bag appropriate size for waste container?				
1.5 Have the package closure instructions been obtained?				
2. Placement of Waste container for Macro Bag Treatment				
2.1 Has the untreated mixed waste container closure documentation (FRM-435.79 series) been completed and attached?				
2.2 Is the untreated mixed waste package properly marked/labeled (i.e., IWTS barcodes, Hazardous Waste, CERCLA Waste, Be, As, etc.) per MCP-1390?				
2.3 Has the package to be treated using a Macro Bag been filled with waste or another filler material approved by WDS/PC and/or WCO/AWCO such as vermiculite as required to obtain a minimum 100% fill factor?				
2.4 Is the gross weight of the loaded package below the maximum weight limit allowed for the package?				
3. Macro Bag Package Closure	**Instructions provided by P&T (also see the P&T website)**			
3.1 Has the inner Macro Bag been filled as required to obtain a minimum 90% fill factor? Vermiculite as required between the inner waste container and first layer of Macro Bag				
3.2 Are all 3 layers of the Macro Bag system closed according to manufacturer's instructions?				
3.3 Has the middle layer seal been secured using the supplied PacTec industrial tape in accordance with the appropriate Ziplock or T-Handle closure instructions?				
3.4 Has the top and bottom pallets been secured (e.g. banded) using appropriate softeners as necessary to prevent damage to the packaging?				
3.5 Is the Outer Macro Bag package properly marked/labeled (i.e., IWTS barcodes, Hazardous Waste, CERCLA Waste, Be, As, etc.) per MCP-1390?				
4. Treated Macro Bag Package Storage				
4.1 Is the Macro package stored out of the sunlight? The Macro Bag package needs to be properly closed and, if necessary, covered to prevent UV exposure from deteriorating the package.				
5. Pre-shipment				
5.1 Is the package free of leaks?				
5.2 Is the IP package (outer layer) free of any damage (i.e., cuts, tears, or holes) or other signs of possible integrity failure?				
5.3 IF the IP package has minor damage, was the repair completed using industrial tape provided by PACTEC over the damaged area?				

Note: Use the "Comments" column to provide identification numbers, additional waste information, expiration and calibration dates, etc. The "Comments" column should also be used to identify any container use issues and to document the corrective actions for the identified container issues.

HMWA/RCRA PART B PERMIT

FOR THE

IDAHO NATIONAL LABORATORY

Volume 18 – Idaho Nuclear Technology and Engineering Center

ATTACHMENT 5

Debris Treatment Processes
Holdup and Collection Tanks
CPP-659/-1659 Storage
CPP-666 FDP Cell Container Storage and Slab Tanks Storage
Other Miscellaneous Treatment Processes
Radioactive Mixed Waste Staging Facility (CPP-1617)

Section H

Personnel Training

Revision Date: February 12, 2016

CONTENTS

TABLES

H. PERSONNEL TRAINING

This section outlines and describes the training program for personnel involved in the management of hazardous and mixed waste at treatment, storage, and disposal (TSD) units at the Idaho Nuclear Technology and Engineering Center (INTEC), including units addressed in this permit.

A training program has been implemented to ensure that personnel involved in the management of hazardous and mixed waste at INTEC TSD units receive training consistent with the requirements of the Idaho Administrative Procedures Act (IDAPA) 58.01.05.008 and 58.01.05.012 [Title 40 Code of Federal Regulations (CFR) Part 264.16 and 270.14]. The training program is designed to ensure that personnel are trained to hazardous waste management procedures including, but not limited to, inspections, normal operations, emergency procedures, equipment, systems, and contingency plan implementation. Duties performed at the TSD units will be performed in a safe, disciplined, and professional manner.

H-1. Outline of Training Program [IDAPA 58.01.05.008; 40 CFR 264.16(a)(1)]

Training programs are developed using a systematic approach to training (SAT). The SAT process involves:

- Analyzing tasks to determine the training requirements
- Designing a plan to satisfy the training requirements
- Developing plans and all supporting training materials
- Implementing the training plans
- Evaluating the effectiveness of the training and making recommendations for changes.

The SAT process is used to determine the training requirement for each task listed in Table H-1. The training program for TSD unit personnel involves a combination of formal [classroom, group instruction, on-the-job training (OJT), etc.] and informal training sessions (one-on-one instruction, required reading, etc.). The training requirements for each position are identified in Table H-1. Lesson plans and OJT guides are developed to support tasks identified in Table H-1.

Programs prepared by the TSD training organization provide the requirements to be completed by the individual during training. As the program is satisfactorily completed, it is verified and documented in their training records.

The training program is upgraded as needed in response to changes in job descriptions, job reassignment, process or procedural changes, technological changes, or implementation of new regulatory requirements that affect TSD unit operations. Revisions to the training program are approved by the training manager and the TSD unit manager (training director) for the specific TSD unit and the job analysis data is updated to reflect the changes in the training requirements.

TSD unit management works with subject matter experts to identify personnel training requirements. The TSD unit training organization (1) schedules and/or provides the training, (2) revises and updates training material as needed, and (3) maintains training documentation. The TSD unit training organization maintains individual training records for TSD unit employees.

H-1a. Job Tasks [IDAPA 58.01.05.008; 40 CFR 264.16(d)(1), 264.16(d)(2)]

The job tasks for personnel involved with hazardous waste management at INTEC TSD units are included in Table H-1 “Minimum Training Matrix for TSD unit Personnel” Personnel are trained to those sections of the permit, which are pertinent to their specific job assignments.

<u>Security Guards</u> – The Security personnel are not stationed at the permitted units nor are they involved in the management or handling of the waste. Security personnel receive training from the security organization relative to their positions and the facilities they serve. Therefore, training of security personnel is not discussed further in this section.

<u>On Scene Commander</u> – is the Idaho National Laboratory (INL) Fire Department Chief. The INL Firefighters serve the INL Site in fighting fires and containing major spills, including spills of waste from waste management units. The INL Fire Department conducts a self-contained training program for their personnel, which includes procedures for handling fires and spill emergencies involving hazardous

materials and hazardous mixed waste at the INL Site. Therefore, training of fire fighters is not discussed further in this section.

Emergency Director (ED) – is trained on the INL (Site-wide) and Idaho Completion Project (ICP) Emergency Plan (EP)/Resource Conservation and Recovery Act (RCRA) Contingency Plan (CP) or Industrial Safety and Hygiene Program as part of his/her duties. The ED will be informed by the Emergency Action Manager (EAM) or facility personnel at INTEC. Therefore, training of ED is not discussed further in this section.

H-1b. Training Content, Frequency, and Techniques [IDAPA 58.01.05.008; 40 CFR 264.16 and (d)(3)]

The TSD unit training program consists of a combination of classroom instruction and OJT. Additionally, TSD unit employees receive new employee orientation and training. [All employees working at or assigned as part-time/frequent visitor to Site facilities are required to complete annual facility access training and general employee radiation training (GERT) unless they are currently trained as radiation workers.]

The initial training includes a general orientation of INL and TSD unit procedures including evacuation and alert procedures, training requirements, and emergency equipment locations. The initial training provides TSD unit personnel with training commensurate with their job assignments in the following areas:

- General description of the INTEC
- Job-related procedures, policies, and instructions
- Radiological health and safety program
- Fire protection program
- Hazards associated with the TSD unit.

RCRA training is conducted annually for INTEC TSD unit employees to address changes that have occurred which include such topics as permit status, permit requirements, contingency and inspection plan implementation, and hazardous waste management procedures for the TSD unit(s) to which they are assigned.

The following major knowledge areas are included and evaluated based on job position and formal criteria identified in the job analysis:

- RCRA requirements as they relate to INTEC unit operations
- Hazardous materials
- INTEC TSD unit systems and components (including waste treatment processes and operations)
- Normal operating procedures and shutdown procedures
- Emergency or off-normal operating procedures
- Inspections and equipment maintenance
- Occupational Safety and Health Administration (OSHA) and related health and safety requirements
- INTEC TSD unit and operational/administrative procedures.

TSD unit work and maintenance is performed by appropriate personnel whose qualifications have been verified before beginning work.

Employees may be given written and/or oral examinations, operational evaluations, and reviews to ensure that they are adequately trained relative to their job tasks. Results of examinations, written or oral evaluations, and reviews are documented. All completed qualification standards, checklists, examinations, written evaluations, and documented oral evaluations are maintained in each individual's training record.

Table H-1 shows the task training requirements for TSD unit personnel involved in hazardous/mixed waste operations at INTEC TSD units addressed in this permit. TSD unit personnel may receive additional training beyond that shown in Table H-1. This training is documented and included in employee training records.

Occasionally, TSD unit personnel attend training classes conducted external to the INL or conducted at the INL Site by non-INL subcontract personnel. In order to verify an employee's attendance at these training courses, a copy of the class certification or other documentation is maintained in the individual's training record.

H-1c. Training Director [IDAPA 58.01.05.008; 40 CFR 264.16(a)(2)]

For all TSD units, the facility manager (training director) functions in conjunction with his/her designee(s) to insure that all segments and responsibilities associated with the training program are accomplished. The training director provides overall leadership and management direction to the TSD unit training organization. The director's duties include the following:

- Provide direction to the TSD unit training organization

- Ensure that performance of training personnel is evaluated

- Approve TSD unit training program

- Ensure that all program objectives and requirements are satisfied and that the training program meets the requirements of IDAPA 58.01.05.008 (40 CFR 264.16) and 29 CFR 1910.120.

The training director or his/her designee(s) is responsible for ensuring that TSD unit personnel are trained in waste management and contingency plan implementation, including emergency procedures, and for ensuring that TSD unit personnel receive training appropriate to their tasks. The training director also reviews documentation, including feedback from audits, operating logs, emergency exercise critiques, and employee recommendations, for possible inclusion into the TSD unit training programs.

Table H-1. Minimum Training Matrix for TSD Unit Personnel.

TASK	AUDIENCE	INITIAL EMPLOYEE TRAINING	RAD TRAINING[1]	24-HOUR OSHA[1]	ANNUAL TRAINING	APPLICABLE SECTIONS OF RCRA PERMIT[2]
INTEC operations personnel that perform treatment, storage, and disposal facility (TSDF) operations and inspections, or supervise those operations, and are exposed to the hazards of the TSDF. These employees have duties that may bring them into contact with hazardous/ mixed waste. These employees are required to obtain 24-hr HAZWOPER TSDF Qualification.	INTEC RCRA Worker	X	X	X	X	C, D, F, G
Personnel who enter TSDF areas unescorted and provide support functions that may require them to interface with systems, structures, or components referenced within the facility RCRA Permit, or may bring them into contact with hazards of the facility to include the potential for exposure to hazardous/mixed waste at the TSDF. These employees are required to obtain 24-hour HAZWOPER TSDF Qualification. Examples of work activities include radiological surveys, inspections, waste characterization, performing waste shipments or waste movement, repairing or replacing facility emergency/monitoring equipment, life safety systems support, equipment calibrations, and surveillance. Examples of work that may be included are Quality Inspectors, Quality Engineers, System Engineers (assigned to TSDFs), Life Safety System Engineers, Environmental Engineers, Industrial Hygienists, Safety Engineers, Packaging and Transportation representatives, Waste Technical Specialists, Crafts (instrument technician, pipefitter, mechanic, welder, painter, etc.) and Radiological Control Technicians.	INTEC RCRA Technical Support Worker-HAZWOPER	X	X	X	X	F, G

Table H-1. (continued)

TASK	AUDIENCE	INITIAL EMPLOYEE TRAINING	RAD TRAINING[1]	24-HOUR OSHA[1]	ANNUAL TRAINING	APPLICABLE SECTIONS OF RCRA PERMIT[2]
Personnel who enter TSDF areas unescorted and provide support functions that may require the individual to interface with systems, structures, or components referenced within the facility RCRA Permit. Personnel in this category generally do not have the potential to for exposure to the hazardous or mixed waste (for instance, these employees are not required to wear PPE and are not required to complete 24-hour HAZWOPER training). Examples of workers that may be included are System Engineers (not assigned to TSDFs), and other personnel who perform the activities listed above.	INTEC RCRA Technical Support Worker	X	X		X	F, G
Personnel who enter TSDF areas unescorted and provide only incidental support to facility operations. These individuals are not directly exposed to the hazards of the TSDF but must be cognizant of the RCRA-related requirements for access. Additionally, these personnel are not required to complete 24-hour HAZWOPER training. Examples of positions within this level include Maintenance Planners, Radiological Engineers, RCT Supervision, personnel assigned as Senior Supervisory Watch, Training Specialists, Waste Disposition Specialists, D&D Workers and administrative support personnel.	INTEC RCRA General Employee	X			X	F, G
INTEC EAM conducts operations-related response; coordinates protective actions or protective action recommendations; authorizes response resources; satisfies federal, state, and local requirements and declares the INTEC Emergency Control Center operational.	INTEC Emergency Action Managers	X	X	X	X	G

[1]. Personnel who are not exposed to the hazards of the regulated units may not require this training.

[2]. Personnel receive training related to the permit section as appropriate to their job function.

Section C – Waste Characterization	Section F – Procedures to Prevent Hazards
Section D – Process Information	Section G – Preparedness, Prevention, and Contingency Plan

H-1d. Relevance of Training to Job Tasks [IDAPA 58.01.05.008; 40 CFR 264.16(a)(2)]

Individual training program profiles are prepared for each TSD unit position that requires a formal training program.

At a minimum, each individual training program profile identifies the following:

- Job description
- Qualifications
- Training requirements.

Profiles typically identify qualification requirements. Occasionally, a position may require specialized training. Special-case training is documented in individual training records. Profiles include requirements for hazardous/mixed waste management or handling and emergency response training.

Supervisors have the responsibility for evaluating training requirements for TSD employees. These supervisors receive additional training in how to conduct and evaluate OJT.

Individuals who demonstrate an equivalency for specific requirements or prerequisites identified in the training profile may be exempted from requirements in accordance with established procedures. Exemptions/equivalencies must be approved by the training director. Each exemption/equivalency is granted in writing and documented in the individual's training record.

H-1e. Training for Emergency Response [IDAPA 58.01.05.008; 40 CFR 264.16(a)(3)]

Emergency response training is provided to all personnel assigned to or associated with TSD units, including specialized training for employees with specific emergency action responsibilities, such as the EAM and Emergency Response Organization (ERO) personnel. The following presents an overview of the emergency response training.

General emergency response training of TSD unit ERO personnel includes training on the ICP EP/RCRA CP which covers the following topics:

- Spill Control Plan
- Evacuation/accountability
- Emergency drill/exercise
- RCRA
- Emergency Plan Implementing Procedures
- Emergency preparedness
- Incident command system
- Inspection and repair of facility emergency monitoring equipment.

ERO members respond to emergency events. ERO members receive initial training and annual requalification training, in addition to training provided to general employees. Training of ERO members is outlined by position in company procedures. All INTEC employees receive general employee emergency response action training.

H-2. Implementation of Training Program [IDAPA 58.01.05.008; 40 CFR 264.16(b), 264.16(d)(4), 264.16(e)]

After completion of new employee orientation, designated employees enter a training program specific to their job assignment. Persons holding qualifications are retrained and reevaluated as mandated by procedures. Job assignments which are required for the completion of a training program have time and performance limitations that must be satisfied to meet program qualification criteria.

RCRA training is completed within the first six months of the individual's employment or assignment, and at least annually thereafter, for positions involving TSD unit operations. Throughout the training program and until completion, employees do not perform their job duties unsupervised.

H-3. Training Records [IDAPA 58.01.05.008; 40 CFR 264.16(d)(4) and (e)]

Individual training records are maintained for personnel assigned to TSD units. Training records include documentation of completed training, such as class rosters, signed checklists, completed exams, data base printouts from additional training classes attended, and other documents verifying training. The original training records are maintained by the presenting organizations, which enter course completion information into a database. A hard copy of this information is also entered into the individual's training record.

The training records include the names of employees filling each TSD unit position. Job tasks and associated training requirements for each TSD unit are found in Table H-1.

Individual training records include, as a minimum, the following:

- Initial training and retraining programs
- Attendance records of training received
- Results of exams, walk through, and job performance assessments related to certification.

Training records for current employees at each TSD unit are maintained until closure of the unit or the employee terminates or transfers to a non-TSD unit position. The training records of terminating employees are maintained at the TSD unit for a minimum of three years from the date the employee last worked at a TSD unit. The training records for TSD unit employees who transfer to a non-TSD unit position within the company are forwarded to the employee's new organization where they continue to be available for at least three years.

HWMA/RCRA PART B PERMIT

FOR THE

IDAHO NATIONAL LABORATORY

Volume 18 – Idaho Nuclear Technology and Engineering Center

ATTACHMENT 6

Debris Treatment Processes
Holdup and Collection Tanks
CPP-659/-1659 Storage
CPP-666 FDP Cell and FDP Area Container Storage and Slab Tank Storage
Other Miscellaneous Treatment Processes
Radioactive Mixed Waste Staging Facility (CPP-1617)

Sections F-3 through F-5

Procedures to Prevent Hazards

Revision Date: February 12, 2016

CONTENTS

TABLES

F-3. Waiver or Documentation of Preparedness and Prevention Requirements

F-3a. Equipment Requirements [IDAPA 58.01.05.012 and 58.01.05.008; 40 CFR 270.14(b) and 264.32]

F-3a(1) Internal Communications [IDAPA 58.01.05.008; 40 CFR 264.32(a)]

Building CPP-666 FDP Cell and FDP Area

Building CPP-666 is equipped with communication devices (e.g., phones, alarm systems, etc.) capable of summoning emergency assistance. The personnel involved in the operation have immediate access to emergency communication devices. If the work requires a cell entry, a second person is stationed outside the cell to summon emergency personnel and provide assistance as required. If there is ever just one employee at the TSD while the unit is operating, that employee will be provided immediate access to a communication device for summoning emergency assistance.

NWCF

The NWCF building is equipped with communication devices (e.g., phones, alarm systems, etc.) capable of summoning emergency assistance. The personnel involved in the operation have immediate access to emergency communication devices. If the work requires a cell entry, a second person is stationed outside the cell to summon emergency personnel and provide assistance as required. If there is ever just one employee at the TSD while the unit is operating, that employee will be provided immediate access to a communication device for summoning emergency assistance.

RMWSF

The RMWSF (CPP-1617) is equipped with communication devices (e.g., telephones, alarm systems, etc.) capable of summoning emergency assistance. The personnel involved in the operation have immediate access to emergency communication devices.

F-3a(2) External Communications [IDAPA 58.01.05.008; 40 CFR 264.32(b)]

INTEC communication devices are capable of summoning emergency assistance. The INTEC EAM and the WCC use communication devices that provide direct access to external emergency response agencies.

F-3a(3) Emergency Equipment [IDAPA 58.01.05.008; 40 CFR 264.32(c)]

Exhibits G-1, G-2 and G-3 in the contingency plan, Attachment 7 Section G, of this permit, identify the evacuation routes and locations of safety equipment for the NWCF. Exhibits G-4, G-5, G-6 and G-7 in the contingency plan identify evacuation routes and locations of safety equipment for Building CPP-666. Exhibit G-8 in the contingency plan identifies evacuation routes and locations of safety equipment for the RMWSF. Examples of safety equipment available for spill control at CPP-666, NWCF, and RMWSF may include the following:

- Acid boots
- Acid suits
- Acid gloves (neoprene)
- Absorbents
- Face shields or Splash goggles
- Radiation rope or ribbon
- Plastic buckets
- mop heads/mop handles
- Spill control pillows
- Hazardous waste bags
- Safety rope
- Spill Signs
- pH paper
- Duct tape
- Shovel (flat head)
- Smear paper and envelopes
- Pencils, grease pencils
- Radiological tags/signs
- Acid/caustic neutralizers

During monthly inspections any missing equipment is replaced and safety shower or eye wash preventive maintenance status is inspected to determine if it is current. The safety and emergency equipment listed below are located in occupied areas at CPP-666, NWCF, and RMWSF:

- Fire sprinkler systems
- Portable fire extinguishers
- Safety showers and eye washes (Portable eye wash at CPP-666 and CPP-1617 when required)
- Spill control cabinets
- Plant voice paging and evacuation alarm system
- Communication devices.

Building CPP-666 and the NWCF have wet sprinkler systems for fire protection in the occupied areas of the buildings. These systems are connected to alarms at the Fire Alarm Center, located at the Central Facilities Area (CFA). Portable fire extinguishers are located throughout the buildings. The calciner cell (Room 214), decon cell (Room 308), and filter handling cell (Room 309) at the NWCF have in-cell deluge sprinkler systems and heat detection sensors. The deluge sprinkler system in CPP-659 Room 308 will be physically isolated to prevent accidental discharge during sodium handling and sodium water treatment activities. The heat detection system and associated alarms will remain in service. In addition, fire extinguishing media will be staged at/near the treatment areas for remote use for fire suppression, as needed.

In the FDP Cell fire detection cameras will be used during non-operational times and visual monitoring will be performed during operations. In addition, fire extinguishing media will be staged at/near the repackaging tables for remote use for fire suppression, as needed.

In CPP-666 Room SB-8, photoelectric smoke detection and visual monitoring via camera are used as a means of fire detection. A Met-L-X fire extinguisher is located in the corridor outside Room SB-8.

In addition, nondedicated equipment available at INTEC includes forklifts, cranes, truck tractors, trailers, pumps, generators, front end loaders, and snowplows.

The RMWSF (Building CPP-1617) has a dry-pipe sprinkler system for fire protection. The system is connected to alarms at the Fire Alarm Center located at CFA. Portable fire extinguisher(s) are located at this building.

F-3a(4) Water For Fire Control [IDAPA 58.01.05.008; 40 CFR 264.32(d)]

Two insulated fire water supply tanks with design capacities of 800,000 gallons each supply the INTEC fire water system. These tanks are maintained between 400,000 and 600,000 gallons of water for fire suppression. Diesel powered pumps move water from wells to maintain these levels. Electric jockey pumps are located on the outlet lines that keep the fire water lines pressurized. Electric pumps are located on the outlets of these tanks to supply water for hose streams and automatic sprinklers at adequate volume and pressure.

F-3b. Aisle Space Requirement [IDAPA 58.01.05.008; 40 CFR 264.35]

Normally, container storage consists of a stacking arrangement of no more than three containers high, no more than two containers wide, with adequate aisle space maintained between rows of containers in container storage areas addressed in this permit. However, in some cells (i.e., Rooms 205, 216, 306, 308, and 309 at the NWCF and the FDP cell) adequate aisle space may not be maintained, due to the configuration of the waste containers and the amount of wastes stored in these areas. ALARA concerns and other personnel safety issues associated with the handling of mixed waste and/or mixed debris within the areas without undue radiological exposure of personnel preclude the arrangement of mixed waste and/or mixed to provide adequate aisle space.

The requirement for adequate aisle space in Rooms 205, 216, and 306 is for the movement of emergency equipment in the storage area and inspection. No emergency equipment will be used in Rooms 205, 216, and 306. No liquids will be stored or introduced in Rooms 205, 216, and 306 and the containers will not be exposed to any other factors that may induce deterioration. Therefore, aisle space will be kept at a minimum to allow for the maximum of area for waste storage. Inspections using video cameras will be adequate to detect deterioration.

In CPP-659 Rooms 308 and 309, the requirement for adequate aisle space is for the movement of emergency equipment in the storage area and inspection. No emergency equipment (other than remotely used fire response chemicals) will be used in Rooms 308/309. Free liquids may be stored or introduced to the container storage areas when containers are present, however, the containers will not be exposed to any other factors that may induce deterioration. Therefore, aisle space will be kept to a minimum to allow for the maximum waste storage. Inspections from the shielded windows and cameras are adequate to detect deterioration.

In the FDP cell, containers may be stored on grating at the -13'- 0" level. Containers may also be stored at the 0'- 0" level. The requirement for adequate aisle space is for the movement of emergency equipment in the storage area and inspection. No emergency equipment (other than remotely used fire response chemicals and fire detection cameras) will be used in the FDP cell. Free liquids may be stored or introduced in the FDP cell container storage areas when containers are present, however, the containers will not be exposed to any other factors that may induce deterioration. Therefore, aisle space will be kept at a minimum to allow for the maximum of area for waste storage. Inspections from the shielded windows will be adequate to detect deterioration.

In the FDPA container storage areas in Rooms 114C, 115, and 301 a 36-inch aisle space will be maintained on one side of the container to allow for access of emergency equipment. A 1-foot space will be maintained between containers and room structures to allow for visual inspections on all sides of the container(s). Container storage areas in Rooms B-4, B-5 and 180 are for the storage of a single drum/container so the container is visible for inspection and accessible for emergency equipment. Room SB-8 is used for storage of a single collection vessel assembly that has been disconnected from the distillation system. The container is visible for inspection and accessible for emergency equipment. Additionally, containers within the FDPA will not be stacked.

Containers may be stored at the RMWSF with approximately 6 in. between containers in a row and a minimum aisle space of 24 in. (see Attachment 1a, Section B, Exhibit B-1a.). Due to the nature of the RMWSF, unobstructed movement of emergency equipment to any area of facility operation is not needed. Emergency response actions could be initiated either outside the fenced boundary and directed at the area of concern, or in the case of a leak or spill, containers would be moved to allow for appropriate response actions. The 24-in. aisle spacing was established solely to support the inspection of containers. This inspection allows for identification of an adverse condition such as a leak or degradation of containers containing hazardous and mixed waste. Recovery actions would require the movement of containers in order to appropriately manage the specific container(s) that were involved.

Also, at the RMWSF, a 1-ft space will be maintained along the entire length of the cargo containers to facilitate inspections. No containers shall touch the side of the cargo container and at least 1 in. shall be maintained between the container and the wall of the cargo container. Cargo containers with double doors for access will maintain a 6-ft aisle space outside the end to allow the doors to be opened.

At the RMWSF, containers with the longest dimension of 4 ft or less are considered small containers, while containers with the longest dimension greater than 4 ft are considered large containers. Large containers that are positioned laterally (long axis perpendicular to the length of the cargo container) shall be separated with 6 in. between each container. Large containers positioned longitudinally (lengthwise) shall be separated with 2 in. between the ends of each container. Large containers may include B-25 bins, TX-4 boxes, 4 ft X 4 ft X 8 ft boxes and macroencapsulation containers. Small containers may include 55-gallon drums, 85 gallon overpack drums, and 4 ft X 2 ft X 4 ft boxes and shall be separated from other containers by at least 2 in. unless stored on pallets.

F-4. Preventive Procedures, Structures, and Equipment

The NWCF and Building CPP-666 were designed so that process and storage area cells are maintained at a negative pressure. The HVAC systems in these buildings were designed for the air flow to originate in the areas with the least negative pressure and flow to the areas with a higher negative pressure. Thus, air flows from areas with less potential for contamination to areas with greater potential for contamination. The designs of the HVAC systems and buildings work together to contain wastes and prevent the wastes from making contact with the environment.

Storage and treatment areas may have remote capabilities, such as overhead cranes, electromechanical manipulators, and/or master/slave manipulators, for operational requirements and the movement of wastes as necessary. The NWCF and Building CPP-666 were constructed with shielding walls to limit personnel exposure to radiation and hazardous wastes.

F-4a. Unloading Operations [IDAPA 58.01.05.012; 40 CFR 270.14(b)(8)(I)]

Trucks, forklifts, or other equipment are used to deliver hazardous and/or mixed waste and debris for storage or treatment in the units addressed in this permit. In addition, some debris items to be treated will be hand-carried. Ramps and loading docks are provided for the NWCF and Building CPP-666 to facilitate the off loading of waste. At NWCF and Building CPP-666, remotely operated equipment such as overhead cranes, electromechanical manipulators, and master/slave manipulators may be used to transport the waste to the storage or treatment areas.

Containers in the RMWSF (CPP-1617) are moved on pallets, handcarts, or pallet jacks. Containers and drums are secured as needed prior to movement by forklift. Cargo containers, ISCs, and shielded overpacks are moved with forklifts or other lifting devices. Additionally, as appropriate, any container at the RMWSF can be moved using pickup trucks and portable cranes.

F-4b. Run-off [IDAPA 58.01.05.012; 40 CFR 270.14(b)(8)(ii)]

The units addressed in this permit are located within fully enclosed buildings (CPP-666, CPP-1617, and CPP-659/-1659), except for fenced area located the RMWSF. The area surrounding each building slopes away from the building, carrying any storm water toward the streets, where the water is collected and diverted away from the building as demonstrated by Exhibit B-3. The buildings addressed in this permit are outside of the 100-year flood plain boundary as postulated in the Big Lost River Flood Hazard Study, November 2005 (see Volume 3 of the INL permit application).

Additionally, the areas surrounding RMWSF (CPP-1617) are sloped away from the buildings, to direct any storm water toward the streets, where it is collected and diverted away from the building.

Skids are mounted to the bottoms of the boxes and cargo containers at the RMWSF (CPP-1617), elevating them approximately 3 inches off the ground. Additional elevation (e.g., timbers) may be used to elevate the cargo containers above the asphalt or gravel, as necessary. There is no threat of contact between storm water and waste that could potentially contaminate other areas.

F-4c. Water Supplies [IDAPA 58.01.05.012; 40 CFR 270.14(b)(8)(iii)]

Contamination of water supplies by spills of mixed waste is prevented by building features such as high-density concrete base, stainless-steel lining, epoxy-coated walls, sloped floors, trenches, drains, doubly encased piping, and liquid collection tanks, as well as various means of leak detection.

F-4d. Equipment and Power Failure [IDAPA 58.01.05.012; 40 CFR 270.14(b)(8)(iv)]

Upon loss of commercial power, activities are stopped. Standby generators are provided to assume the electrical loads of Building CPP-666 and NWCF systems that are maintained as standby circuits. Emergency lighting and the HVAC systems in both buildings resume operation to ensure personnel safety. When commercial power is restored, operations may continue.

Upon total loss of power (i.e., the standby generators fail to pick up the load), activities are stopped. Personnel evacuate the building as necessary. When commercial power is restored, operations may continue.

If commercial power fails, then cranes, hoists, and electromechanical manipulators will fail in a locked position.

At the CPP-1617 facility, upon total loss of electrical power, all activities will cease as needed and personnel will be instructed to evacuate, as necessary.

F-4e. Personnel Protection Equipment [IDAPA 58.01.05.012; 40 CFR 270.14(b)(8)(v)]

The NWCF and Building CPP-666 are designed with various features that prevent undue exposure of personnel to mixed waste. The HVAC systems of these buildings are designed to provide air flow from areas with less potential for contamination to areas with greater contamination potential. Constant air monitors, remote area monitors, and RCT surveys are used to monitor all areas and aid in the detection of contamination. Operations at the NWCF, CPP-666, and RMWSF are conducted according to written procedures. Emergency equipment is available at the RMWSF, NWCF, and CPP-666. See Section F-3a(3) of this permit for a list of equipment available for emergency use, and see Exhibits G-1 through G-8 in the contingency plan for locations of this equipment.

Items with the highest radiation levels are treated remotely in shielded cells. Workers wear personal protective equipment as necessary and dictated by procedure, when handling or treating wastes, including equipment such as respirators, gloves, boots, and acid suits.

Pre-job briefings are held, as necessary, to ensure understanding of procedures, safety hazards, and radiological concerns. Job safety analyses are completed as necessary.

F-4f. Releases to the Atmosphere [IDAPA 58.01.05.012; 40 CFR 270.14(b)(8)(vi)]

In the event of an airborne release from a waste management unit addressed in this permit, the ventilation system in the building (NWCF or CPP-666) will direct hazardous constituents to the building's HEPA filter off-gas system, which minimizes releases to the atmosphere.

At the NWCF, air from the storage and treatment units is drawn through exhaust ducts and exhaust plenums. Each exhaust air plenum is equipped with a bank of pre-filters and two banks of HEPA filters in series. The pre-filters and HEPA filters remove particles in the exhaust air. From the exhaust plenums, the filtered exhaust air is ducted through one of the two NWCF stacks to the atmosphere.

At Building CPP-666, all wastes to be stored in the FDP container storage units and FDP Area container storage units will be stored in closed containers in order to minimize the release of hazardous constituents. Wastes to be treated (by sizing, sorting, compaction, repackaging, absorbent addition and deactivation) in the FDP Cell will be kept in closed containers except during waste treatment operations. In addition, a series of HEPA filters are in use at the FDP cell to ensure that release of hazardous constituents (from either the container storage units, slab tank storage unit, or FDP Area container storage units) into the cell and subsequently to the atmosphere is minimized.

A container holding hazardous or mixed waste must always be closed during storage. Opening of containers will only be performed to add/remove waste, sort, segregate, or for sampling for verifying waste acceptance criteria. Containers of solid hazardous and/or mixed wastes may be consolidated into other DOT/UN containers for storage. Approved procedures and DOT/UN rules are used in conjunction with guidelines listed in 40 CFR 264, Appendix V, to determine compatibility or incompatibility of materials before consolidation is performed into approved containers for storage.

F-5. Prevention of Reaction of Ignitable, Reactive, and Incompatible Wastes

FDP Cell and FDP Area

Container storage of wastes in the FDP cell and FDP Area will not be limited to non-liquid, physically solid waste forms. Waste matrices will be evaluated by INL facility personnel for free liquids prior to acceptance into the container storage units, and any wastes containing free liquids will be appropriately managed.

The slab tank (VES-FC-184) storage unit in the FDP cell may be used to store liquid mixed wastes. The primary source of liquid to be stored in the tank would be liquids accumulated in the cell sump as a result of activities occurring within the cell. Acceptable knowledge, i.e., process knowledge and/or physical-chemical testing, per the waste acceptance criteria (WAC), will be used to characterize mixed waste liquids that may be stored in the FDP cell slab tank.

EPA Hazardous waste numbers (HWNs) are applied to HEPA filters and other debris through the process of acceptable knowledge, which involves both process knowledge and/or chemical, physical testing of the waste. F and U HWNs have been applied, based on knowledge of the processes. The F and U HWNs have been assigned as a result of the contained in rule, as opposed to the F or U-listed chemicals existing in a pure or concentrated form. . Since these F or U-listed chemicals do not exist in a pure or concentrated form, the characteristics of ignitability or reactivity would not arise from these chemicals/codes.

In some cases, due to high radiation fields associated with the wastes, the generator has assigned various characteristic HWNs in lieu of physical testing of the waste.

Individually the D, F, and U HWNs have the potential to pose an incompatible scenario, if mixed with sufficient concentration of the pure chemical and other factors such as time, mixing configuration, and containment of the chemicals. However, the HWNs have been (1) primarily assigned based on the contained in rule, (2) already have achieved chemical equilibrium and stability within the final physically solid waste form, and (3) exist in low concentrations. Any danger to (1) generate extreme heat or pressure, fire or explosion, violent reaction, (2) produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to pose a risk of fire or explosions, or (3) damage the structural integrity of the facility as a result of chemical reactions would have been eliminated by the following: (a) insufficient quantity of the chemicals in a pure, concentrated form to pose a problem, (b) lack of a medium to provide a mechanism for a high reaction and mixing rate, (c) a containment configuration that does not permit a pressure buildup and release if event “(a)” and “(b)” were simultaneously achieved, and (d) lack of an adequate ignition or energy source to initiate the reaction.

Ignitable or reactive wastes may be stored in CPP-666 FDP Cell and Rooms 301, 114C, 115, 180, B-4, B-5, and SB-8. Ignitable or reactive wastes may be treated via sorting/segregating/repackaging, sizing, compaction, or sodium deactivation in the FDP Cell, or via sodium distillation in the FDP Area, Room SB-8.

Waste characterization, verification, and treatment are conducted in FDPA to ensure that waste is appropriately packaged and acceptable for transport to the Waste Isolation Pilot Plant (WIPP) or other off-site facility for disposal. This effort consists of some or all of the following steps: removing multiple smaller waste cans from canisters, spreading the contents on the sorting tables to identify/remove/treat WIPP prohibited items (such as liquids, ignitables, reactives, etc.), and repackaging of the contents into standard-sized containers that can be processed through the necessary physical and radiological characterization equipment to demonstrate compliance with the waste acceptance criteria for WIPP or other off-site facility.

Because sodium reacts in water and air, controls are established to minimize the risk of fire. These controls include the use of the oxygen deficient environment in the ARS, use of inert gas when sizing special case components on the sizing table and having fire extinguishing media staged in the FDP Cell for use (Met-L-X, sodium carbonate, or other inert material). Thermal events are expected during treatment of ignitable and reactive waste. A controlled area around the treatment unit will be established during sizing, air treatment, and water treatment as part of the work control process. Thermal reactions within this controlled area that do not damage the operational integrity of the ARS and/or secondary containment are a planned event. Activities that may be performed to maintain a controlled thermal reaction are, stop activities that may be contributing to the thermal reaction, maximize the argon purge, monitor the event, and/or apply Met-L-X. Thermal reactions within these parameters are considered to be a part of the treatment process, and as such do not require activation of the contingency plan or reporting process.

If the thermal reaction results in a fire outside of the controlled area, or results in damaging the operational integrity of the ARS and/or secondary containment, then the RCRA Contingency Plan will be activated and a verbal notification will be provided to the DEQ, and a 15-day follow-up report will be completed.

HEPA Filter Storage

HEPA filters by design have a poor ability to retain organic chemicals other than in trace amounts, as their primary purpose is to retain larger particles. Listed hazardous waste does not exist on the HEPA filters in either a pure, concentrated form or in more than de minimis or trace quantities. Similarly, other debris lacks the quantity of chemicals necessary to provide a vehicle for reaction to create a hazard to human health or the environment.

Debris Treatment Processes

HEPA filter and other debris treatment involves treatment of a physically solid waste form. The HFLS process and other debris treatment involves treatment of HEPA filters and other debris by leaching the hazardous waste contaminants from the filters and other debris using water and nitric acid solutions. Highly concentrated nitric acid solutions are not employed in the leaching process. The use of these solutions in the treatment processes would not affect the chemical conditions existing in HEPA filters/other debris and are consistent with the logic stated above.

Waste characterization, verification, and treatment are conducted in CPP-659 Cell 308 to ensure that waste is appropriately packaged and acceptable for transport to the Waste Isolation Pilot Plant (WIPP) or other off-site facility for disposal. This effort consists of some or all of the following steps: removing multiple smaller waste cans from canisters, spreading the contents on the sorting tables to identify/remove/treat WIPP prohibited items (such as liquids, ignitables, reactives, etc.), and repackaging of the contents into standard-sized containers that can be processed through the necessary physical and radiological characterization equipment to demonstrate compliance with the waste acceptance criteria for WIPP or other off-site facility.

Because sodium reacts in water and air, controls are established to minimize the risk of fire. These controls include the use of the oxygen deficient environment in the ARS, use of inert gas when sizing special case components on the sizing table and having fire extinguishing media staged in the CPP-659 Cell 308 for use (Met-L-X, sodium carbonate, or other inert material). Thermal events are expected during treatment of ignitable and reactive waste. A controlled area around the treatment unit will be established during sizing, air treatment, and water treatment as part of the work control process. Thermal reactions within this controlled area that do not damage the operational integrity of the ARS and/or secondary containment are a planned event. Activities that may be performed to maintain a controlled thermal reaction are, stop activities that may be contributing to the thermal reaction, maximize the argon purge, monitor the event, and/or apply Met-L-X. Thermal reactions within these parameters are considered to be a part of the treatment process, and as such do not require activation of the contingency plan or reporting process.

If the thermal reaction results in a fire outside of the controlled area, or results in damaging the operational integrity of the ARS and/or secondary containment, then the RCRA Contingency Plan will be activated and a verbal notification will be provided to the DEQ, and a 15-day follow-up report will be completed.

Holdup and Collection Tanks

Table F-1 contains the most commonly used chemicals at the decontamination facility, along with their estimated monthly usage and typical concentrations. These chemicals may potentially be mixed, when successive treatment batches are received in a common tank. INL technical support personnel have reviewed all decontamination chemicals to be used during debris treatment activities. Based on this evaluation and site operating experience, technical support has determined that, in the quantities and concentrations used, significant reactions between these solutions are not likely. Any reactions that might occur would be minor and non-energetic (e.g., slight temperature increase, no violent gas evolution). Reactions are mitigated by using relatively dilute decon solutions and by rinsing between different treatment operations. Typically, large volumes of rinse water are used during cleanup activities following each treatment iteration, creating very dilute solutions in the decon holdup (VES-NCD-123) and collection (VES-NCD-129) tanks. When chemical mixing does occur, it takes place at ambient temperatures in a tank with heel volumes greater than the volumes of the chemicals drained into the tank at any given time, reducing the likelihood of heat buildup. To ensure that over pressurization does not occur, the NWCF facilities were designed to manage these wastes using vented tanks under sufficient vacuum, to allow the safe removal of gaseous products.

Table F-1. Typical Decon Chemicals.

Chemical	Typical Estimated Monthly Usage	Typical Concentration, as used
Nitric Acid	200 gal	4.3 molar
Oxalic Acid	15 lb	60 g/l (6%)
Ferlon	125 lb	60 g/l

Despite the fact that these solutions pose no significant compatibility concern, administrative controls and recordkeeping practices are employed to prevent undesirable chemical reactions and ensure adequate tank capacity. Debris treatment operations are administratively controlled. Procedures detail the treatment activity to be performed, decon solution makeup, and recordkeeping requirements. The type and concentration of the decon solution to be utilized is determined by supervision, with input from technical support personnel. Any unusual hazards posed by the debris type or the chemicals used and special precautions required to minimize hazards are established by environmental, safety, and health professionals and may be incorporated into safe work permits. Pre-job briefings include a review of safe work permit requirements as well as potential hazardous conditions and mitigation efforts. Atypical treatment activities involving uncommon debris items or modified decontamination solutions are evaluated by technical support personnel for impacts on treatment effectiveness and compatibility with existing solutions. Personnel are trained in the hazards associated with chemicals specified for use in these systems.

Decon area activities are recorded in a logbook. Personnel review the entries in the logbook each day for treatment status information including the types and quantities of decon solutions used. In addition, a formal turnover occurs at shift changes. Debris treatment and/or decon request forms, which identify chemical contaminants and applicable HWNs, are submitted for any treatment services required. These requests for services must be formally approved by decon facility management, or designee, before treatment activities can take place. Acceptable knowledge may be used to determine applicable HWNs assigned to HEPA filters and other debris. This knowledge includes both process knowledge and/or chemical/physical testing of the waste. Facility Personnel use data sheets to document chemical additions to the tanks as a result of debris treatment activities. The concentration of solutions utilized from the decon makeup tanks are also noted on the data sheet. Tanks VES-NCD-123 and VES-NCD-129 are sampled and analyzed for chemical constituents of concern prior to discharge for further treatment or storage. A record of the analytical results is maintained for reference.

RMWSF

Incompatible wastes are segregated to ensure no adverse reactions occur. Procedures direct the packaging of wastes. US Department of Transportation (DOT) rules are used in conjunction with guidelines listed in 40 CFR 264, Appendix V, to determine compatibility or incompatibility of materials before being placed in DOT/UN approved containers for storage. Additionally ignitable, corrosive or reactive wastes are not permitted to be treated via macroencapulation at the RMWSF.

At the RMWSF (CPP-1617), "No Smoking" signs are displayed at all entrances.

F-5a. Precautions to Prevent Ignition or Reaction of Ignitable or Reactive Waste [IDAPA 58.05.01.012 and 58.05.01.008; 40 CFR 270.14(b)(9) and 264.17(a)]

Individually the D, F, P, and U HWNs have the potential to pose an incompatible scenario if mixed with sufficient concentration of the pure chemical and other factors such as time, mixing configuration, and containment of the chemicals. However, the HWNs have been (1) primarily assigned based on the contained in rule, (2) already have achieved chemical equilibrium and stability within the final physically solid waste form, and (3) exist in low concentrations. Any danger to (1) generate extreme heat or pressure, fire or explosion, violent reaction, (2) produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to pose a risk of fire or explosions, or (3) damage the structural integrity of the facility as a result of chemical reactions would have been eliminated by the following: (a) insufficient quantity of the chemicals in a pure, concentrated form to pose a problem, (b) lack of a medium to provide a mechanism for a high reaction and mixing rate, (c) a containment configuration that does not permit a pressure buildup and release if event "(a)" and "(b)" were simultaneously achieved, and (d) lack of an adequate ignition or energy source to initiate the reaction.

For ignitable and reactive wastes (i.e., those assigned D001 or D003 waste codes) stored in containers in CPP-659, Rooms 308, 417, 418, 428, and CPP-1659 Contaminated Equipment Maintenance Area as well as in CPP-666 FDP Cell and FDPA, the containers will be stored in closed configuration, will be segregated and protected from ignition sources, and while being handled will be protected from open flame. Smoking is not allowed in these facilities and "No Smoking" signs are conspicuously posted. The sodium distillation buckets and sodium collection vessel are stored under an inert atmosphere to prevent ignition or reaction of the sodium.

F-5b. General Precautions for Handling Ignitable or Reactive Waste and Mixing of Incompatible Waste [IDAPA 58.05.01.012 and 58.05.01.008; 40 CFR 270.14(b)(9) and 264.17(b)]

Any danger to (1) generate extreme heat or pressure, fire or explosion, or violent reaction, (2) produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to pose a risk of fire or explosions, or (3) damage the structural integrity of the facility as a result of chemical reactions would have been eliminated by the following: (a) insufficient quantity of the chemicals in a pure, concentrated form to pose a problem, (b) lack of a medium to provide a mechanism for a high reaction and mixing rate, (c) a containment configuration that will not permit a pressure buildup and release if events "(a)" and "(b)" were simultaneously achieved, and (d) lack of an adequate ignition or energy source to initiate the reaction. Therefore, the wastes stored in the areas addressed in this permit do not have potential for ignition or reaction.

For ignitable and reactive wastes (i.e., those assigned D001 or D003 waste codes) stored in CPP-659, Rooms 308, 417, 418, 428, and CPP-1659 Contaminated Equipment Maintenance Area as well as CPP-666 FDP Cell and FDPA Rooms 301, 114C, 115, 180, B-4, B-5 and SB-8, the containers will be stored in closed configuration, will be segregated and protected from ignition sources, and while being handled will be protected from open flame. Smoking is not allowed in these facilities and "No Smoking" signs are conspicuously posted. The sodium distillation buckets and sodium collection vessel are stored under an inert atmosphere to prevent ignition or reaction of the sodium.

F-5c. Management of Ignitable or Reactive Wastes in Containers [IDAPA 58.05.01.012 and 58.05.01.008; 40 CFR 270.15 and 264.176]

As described in Section F-5, the wastes to be stored in containers are managed to prevent a threat to human health or the environment. In addition, INTEC is located more than 50 feet from the INL boundary.

F-5d. Management of Incompatible Wastes in Containers [IDAPA 58.05.01.012 and 58.05.01.008; 40 CFR 270.15(d) and 264.177]

Only compatible wastes are stored in containers. Incompatible wastes will not be placed in the same container. Incompatible waste containers may be stored in the same area, but will be segregated, to ensure no commingling of wastes will occur.

F-5e. Management of Ignitable or Reactive Wastes in Tank Systems [IDAPA 58.05.01.012 and 58.05.01.008; 40 CFR 270.16(j) and 264.198]

Hazardous and/or mixed waste and debris to be treated in tank systems contains only de minimis quantities of residual chemicals, which are insufficient to sustain an ignitable and/or reactive chemical reaction and produce an ignitable/reactive hazard. Treatment solutions going to the holdup or collection tanks are compatible with solutions that are contained in the tanks. Therefore, the wastes stored in the NWCF and FDP Cell Slab tanks addressed in this permit do not have potential for ignition or reaction.

The FDP sodium distillation system (SDS), located in CPP-666 Room SB-8, treats ignitable or reactive waste in the SDS tank system. The SDS is a vacuum distillation system, maintained/operated under an inert atmosphere, that consists of a distillation vessel (VES-FC-101) with a knife gate valve and furnace, a condenser heated and cooled by a thermal fluid system, a collection vessel (VES-FC-85A), a filter, and a vacuum pump. Once the distillation process is complete, the sodium is located in the collection vessel (VES-FC-85A), where it can be safely stored and sent for final treatment. The sodium distillation process separates sodium contamination from the waste, and allows both exiting waste streams a disposition pathway. The sodium ignitable or reactive waste will be managed in accordance with the requirements of 40 CFR 264.17 and 264.198(a)(2).

F-5f. Management of Incompatible Wastes in Tank Systems [IDAPA 58.01.05.012 and 58.01.05.008; 40 CFR 270.16(j) and 264.199]

INL technical support personnel have reviewed all decontamination chemicals to be used during debris treatment activities. Based on this evaluation and site operating experience, technical support personnel have determined that, in the quantities and concentrations used, significant reactions between decon solutions are not likely. Any reactions that might occur would be minor and non-energetic (e.g., slight temperature increase, no violent gas evolution). Reactions are mitigated by using relatively dilute decon solutions and by rinsing between different treatment operations. Typically, large volumes of rinse water are used during cleanup activities following each treatment iteration, creating very dilute solutions in the decon holdup (VES-NCD-123) and collection (VES-NCD-129) tanks. When chemical mixing does occur, it takes place at ambient temperatures in a tank with heel volumes greater than the volumes of the chemicals drained into the tank at any given time, reducing the likelihood of heat buildup. To ensure that over pressurization of the tanks does not occur, the NWCF facilities were designed to manage these wastes using vented tanks under sufficient vacuum, to allow the safe removal of gaseous products.

Despite the fact that these solutions pose no significant compatibility concerns, administrative controls and recordkeeping practices are employed to prevent undesirable chemical reactions and ensure adequate tank capacity. Debris treatment operations are administratively controlled. Procedures detail the treatment activity to be performed, decon solution makeup, and recordkeeping requirements.

The type and concentration of the decon solution to be utilized is determined by supervision, with input from technical support personnel. Any unusual hazards posed by the debris type or the chemicals used and special precautions required to minimize hazards are established by environmental, safety, and health professionals and may be incorporated into safe work permits. Pre-job briefings include a review of safe work permit requirements as well as potential hazardous conditions and mitigation efforts. Atypical treatment activities involving uncommon debris items or modified decontamination solutions are evaluated by technical support personnel for impacts on treatment effectiveness and compatibility with existing solutions. All decontamination personnel are trained in the hazards associated with chemicals specified for use.

Decon area activities are recorded in a logbook. Personnel review the entries in the logbook each day for treatment status information including the types and quantities of decon solutions used. In addition, a formal turnover occurs at shift changes. Debris treatment and/or decon request forms, which identify chemical contaminants and applicable HWNs, are submitted for any treatment services required. These requests for services must be formally approved by decon facility management, or designee, before treatment activities can take place. Acceptable knowledge may be used to determine applicable HWNs assigned to HEPA filters and other debris. This knowledge includes both process knowledge and/or chemical/physical testing of the waste. Decontamination facility technicians use data sheets to document chemical additions to the tanks as a result of debris treatment activities. The concentration of solutions utilized from the decon makeup tanks are also noted on the data sheet. Tanks VES-NCD-123 and VES-NCD-129 are sampled and analyzed, for chemical constituents of concern prior to discharge for further treatment or storage. A record of the analytical results is maintained for reference.

The slab tank (VES-FC-184) storage unit may be used to store liquid mixed wastes. The primary source of liquid that would be stored in the tank includes liquids accumulated in the cell sump as a result of activities occurring within the cell. Acceptable knowledge, i.e., process knowledge and/or physical-chemical testing, per the waste acceptance criteria (WAC), will be used to characterize mixed waste liquids that may be stored in the FDP cell slab tank to ensure that incompatible wastes are not stored in the slab tank.

F-5g. Management of Ignitable or Reactive Wastes Placed in Waste Piles [IDAPA 58.05.01.012 and 58.05.01.008; 40 CFR 270.18(f) and 264.256]

The stored waste piles, that consist of spent HEPA filters, do not have the potential for ignition or reaction. HWNs are applied to HEPA filters and other debris through the process of acceptable knowledge, which involves both process knowledge and/or chemical, physical testing of the waste. F and U HWNs have been applied based on knowledge of the processes. The F and U HWNs have been assigned as a result of the contained in rule, as opposed to the F- or U-listed chemicals existing in the matrices in a pure, concentrated form. In addition only debris containing no free liquids will be accepted; thus, the wastes will neither be reactive nor ignitable. Since these F- or U-listed chemicals do not exist in a pure, concentrated form, the characteristics of ignitability or reactivity would not from these HWNs.

In some cases, due to high radiation fields associated with the wastes, the generator has assigned various characteristic HWNs in lieu of physical testing.

Individually the D, F, and U HWNs have the potential to pose an incompatible scenario if mixed with sufficient concentration of the pure chemical and other factors such as time, mixing configuration, and containment of the chemicals. However, the waste codes have been (1) primarily assigned based on the contained in rule, (2) already have achieved chemical equilibrium and stability within the final physically solid waste form, and (3) exist in low concentrations. Any danger to (1) generate extreme heat or pressure, fire or explosion, violent reaction, (2) produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to pose a risk of fire or explosions, or (3) damage the structural integrity of the facility as a result of chemical reactions would have been eliminated by the following: (a) insufficient quantity of the chemicals in a pure, concentrated form to pose a problem, (b) lack of a medium to provide a mechanism for a high reaction and mixing rate, (c) a containment configuration that does not permit a pressure buildup and release if event “(a)” and “(b)” were simultaneously achieved, and (d) lack of an adequate ignition or energy source to initiate the reaction.

HEPA filters by design have a poor ability to retain organic chemicals other than in trace amounts, as their primary purpose is to retain larger particles. Listed hazardous waste does not exist on the HEPA filters in either a pure, concentrated form nor in more than de minimis or trace quantities. Similarly, other debris, lack the quantity of chemicals necessary to provide a vehicle for reaction to create a hazard to human health or the environment.

F-5h. Management of Incompatible Wastes Placed in Waste Piles [IDAPA 58.01.05.012 and 58.01.05.008; 40 CFR 270.18(g) and 264.257]

The stored waste piles, which consist generally of spent HEPA filters, will not be stored with incompatible wastes or materials.

HWMA/RCRA PART B PERMIT

FOR THE

IDAHO NATIONAL LABORATORY

Volume 18 – Idaho Nuclear Technology and Engineering Center

ATTACHMENT 7

Debris Treatment Processes
Holdup and Collection Tanks
CPP-659/-1659 Storage
CPP-666 FDP Cell and FDP Area Container Storage and Slab Tank Storage
Other Miscellaneous Treatment Processes
Radioactive Mixed Waste Staging Facility (CPP-1617)

Section G

Preparedness, Prevention, and Contingency Plan

Revision Date: August 19, 2016

CONTENTS

TABLES

EXHIBITS

AT KEARNEY FORMAT SECTION REGULATORY REFERENCE/CITATION	COMPLIANCE METHODOLOGY
G-1 General Information 40 CFR 264.51 Purpose and implementation of Contingency Plan. (a) Each owner or operator must have a Contingency Plan for his facility. The Contingency Plan must be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water.	**G-1 General Information** The Idaho Nuclear Technology and Engineering Center (INTEC) facility is designed, constructed, and operated to exclude or isolate hazardous incidents such as fires, explosions and/or unplanned sudden or non-sudden releases of mixed or hazardous waste or hazardous waste constituents to air, soil, or surface water. The INTEC location, operation, site plan and descriptions/information are presented in detail in Section B, Facility Description, of this permit application. This Resource Conservation and Recovery Act (RCRA) contingency plan matrix discusses emergency response at INTEC. This matrix addresses emergency actions to protect human health, the environment, and INTEC facilities and equipment in an event originating from or affecting the permitted units, comprised of the debris treatment units (DTUs), or the Radioactive Mixed Waste Staging Facility (RMWSF) at CPP-1617. The debris treatment units (DTUs) are identified as: • Debris Treatment Processes • Holdup/Collection Tanks • CPP-659/-1659 Storage • CPP-666 Fluorinel Dissolution Process (FDP) Cell and FDP Area Container Storage and Other Miscellaneous treatment The Idaho Cleanup Project (ICP) Emergency Plan/RCRA Contingency Plan (ICP EP/RCRA CP) is the implementing document for emergency response across the Idaho National Laboratory (INL) and is written to comply with requirements that are in addition to those of the Idaho Hazardous Waste Management Act (HWMA)/RCRA. This matrix provides the HWMA/RCRA contingency plan requirements that are being implemented through the ICP EP/RCRA CP.
(b) The provisions of the plan must be carried out immediately whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment.	The contingency plan is designed to provide the proper preparation and necessary response planning to prevent or minimize hazards to human health and the environment from fires, explosions, or any release of hazardous waste or hazardous waste constituents. The provisions of the contingency plan are carried out immediately whenever a fire, explosion, spill, or release of hazardous waste or hazardous waste constituents that could threaten human health or the environment occurs. Minor incidents (those that can be controlled with on-Site resources and do not threaten human health or the environment) are managed by trained facility personnel according to the provisions of this plan. Such responses are not considered activation of the contingency plan.
40 CFR 264.53 Copies of Contingency Plan A copy of the Contingency Plan and all revisions to the Contingency Plan must be:	
(a) Maintained at the facility; and	The contingency plan, with all subsequent revisions, will be maintained with the RCRA permit at the facility at various locations, including the Shift Manager's office.

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(b) Submitted to all local police departments, fire departments, hospitals, and State and local emergency response teams that may be called upon to provide emergency services.	Copies of the contingency plan are maintained on-Site, with information provided as necessary (specific to the response action needed) to the following through Memoranda of Understanding (MOUs) and Memoranda of Agreement (MOAs) with the DOE Idaho Operations Office (DOE-ID): • Bingham, Bonneville, Butte, Clark, and Jefferson County Sheriffs' Departments and City of Idaho Falls Police Department • Madison County, City of Ammon, City of Chubbuck, and City of Idaho Falls Fire Departments, South Custer Rural, Shelley/Firth Fire Districts, and Central Fire District and Teton County Protection District • Portneuf Medical Center, Eastern Idaho Regional Medical Center, and Bingham County Memorial 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 and Department of Interior • State of Idaho and Idaho Transportation Department
40 CFR 264.54 Amendment of the Contingency Plan. The Contingency Plan must be reviewed, and immediately amended, if necessary, whenever:	The contingency plan is reviewed and immediately amended, if necessary, whenever:
(a) The facility permit is revised;	The RCRA permit is modified.
(b) The plan fails in an emergency;	The contingency plan fails in an emergency.
(c) The facility changes-in its design, construction, operation, maintenance, or other circumstances-in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency;	It is determined/known that changes in the permitted units' design, construction, operation, maintenance, or other circumstances have taken place in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency.
(d) The list of emergency coordinators changes; or	The list of INTEC emergency action managers (EAMs) changes (refer to Section G-2, Emergency Coordinators).
(e) The list of emergency equipment changes.	The list of emergency equipment changes (refer to Section G-5, Emergency Equipment).

AT KEARNEY FORMAT SECTION REGULATORY REFERENCE/CITATION	COMPLIANCE METHODOLOGY
G-2 Emergency Coordinators **40 CFR 264.52(d) and 264.55** 40 CFR 264.52(d) The plan must list names, addresses, and phone numbers (office and home) of all persons qualified to act as emergency coordinator (see 264.55), and this list must be kept up to date. Where more than one person is listed, one must be named as primary emergency coordinator and the others must be listed in the order in which they will assume responsibility as alternates. For new facilities, this information must be supplied to the Regional Administrator at the time of certification, rather than the time of permit application. 40 CFR 264.55 Emergency Coordinator. At all times, there must be at least one employee either on the facility premises or on call (i.e., available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all emergency response measures. This emergency coordinator must be thoroughly familiar with all aspects of the facility's Contingency Plan, all operations and activities at the facility, the location and characteristics of the waste handled, the location of all records within the facility, and the facility layout. In addition, this person must have the authority to commit the resources needed to carry out the Contingency Plan.	**G-2 Emergency Coordinators** The Emergency Action Managers (EAMs), listed below, are the emergency coordinators (ECs) for purposes of HWMA/RCRA compliance with respect to the contingency plan. Due to the shift-work structure and remoteness of the INTEC, it is not possible or practical for one individual to assume "primary" responsibilities, rather, responsibility is best assigned through "redundant primary" EAMs, without alternates. Names, home addresses, and home phone numbers of the INTEC EAMs are as follows: • Blackner, Butch T. – 1011 James Street, Blackfoot, ID 83221 – 604-2506 (home); 360-3601 (cell); 526-3100 (work) • Casteel, Michael S. – 1331 E. 1140 N., Shelley, ID 83274 – 521-5620 (home); 419-8046 (cell); 526-3100 (work) • Klukis, Charles R. – 1194 Pendlebury, Blackfoot, ID 83221 – 390-9389 (home); 390-9389 (cell); 526-3100 (work) • Newsome, Eugene C. – 281 E. 400 N., Blackfoot, ID 83221 – 785-1658 (home); 569-0596 (cell); 526-3100 (work) The business address (1580 Sawtelle Street, Idaho Falls, Idaho 83402) is the same for all the INTEC EAMs. The EAM list above is subject to change due to changes in personnel. The current list of EAMs is maintained in Appendix I of the INTEC Addendum to the ICP EP/RCRA CP. An INTEC EAM is at the INTEC at all times or on call. All of the INTEC EAMs are thoroughly familiar with all aspects of the contingency plan, all INTEC operations/activities (including these units), the location and characteristics of waste handled, volumes of waste, the location of all records within the INTEC and layout. All of the INTEC EAMs have the authority to commit the necessary resources to carry out the contingency plan. The INTEC EAMs are responsible for: • Ensuring that the emergency procedures are implemented and completed when responding to any incident involving the units permitted herein to mitigate or eliminate any immediate or potential hazard to personnel, the public, or the environment • Serving as the primary lead in coordinating with the INL Fire Department, INL Emergency Operations Center (EOC), and the INL Warning Communications Center (WCC) for the proper support from these organizations • Delegating authority to the INTEC Emergency Response Organization (ERO), as well as the On-Scene Commander (OSC), as appropriate. If an incident overlaps more than one shift, the active INTEC EAM shall maintain the command until responsibility is officially passed to the incoming INTEC EAM.

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G-3 Implementation **40 CFR 264.52(a) and 264.56(d)**	**G-3 Implementation**
40 CFR 264.52(a) The Contingency Plan must describe the actions facility personnel must take to comply with 264.51 and 264.56 in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the facility.	The provisions of the contingency plan will be carried out immediately (activation of the contingency plan) whenever there is a fire, explosion, or unplanned release of hazardous or mixed waste or hazardous waste constituents that threaten human health or the environment. Such an occurrence (incident) may require further classification, as described below, to aid in expediting the appropriate emergency response.
40 CFR 264.51 *[The text of 40 CFR 264.51 is located in Section G-1, General Information.]*	Classification of an occurrence is done in accordance with DOE Orders. Through these orders, the DOE has established definitions for occurrence categories and emergency classes. Occurrences are categorized by severity, in order of increasing severity. Emergency occurrences categorized as operational emergencies may be further classified by severity when events occur that represent a specific threat to workers and the public due to the release or potential release of significant quantities of hazardous materials.
40 CFR 264.56 Emergency procedures. (a) *[The text of 40 CFR 264.56(a) is located in Section G-4a, Notification.]* (b) *[The text of 40 CFR 264.56(b) is located in Section G-4b, Identification of Hazardous Materials.]* (c) *[The text of 40 CFR 264.56(c) is located in Section G-4c, Assessment.]* (d) If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health, or the environment, outside the facility, he must report his findings as follows:	An operational emergency at the INTEC may require response from the INTEC ERO, or support agencies, because the occurrence involves either an actual or potential fire or explosion involving mixed waste, or an uncontrolled release or threat of an uncontrolled release of mixed waste or constituents.
(1) If his assessment indicates that evacuation of local areas may be advisable, he must immediately notify appropriate local authorities. He must be available to help appropriate officials decide whether local areas should be evacuated; and	Operational emergencies are defined as an unplanned significant event or condition that requires time-urgent response from outside the immediate/affected area of the incident. An operational emergency shall be declared when events have seriously degraded, or have the potential to degrade, the safety or security of the INTEC. Operational emergencies are classified by severity for specifying the appropriate emergency response actions and notifications, which are commensurate with the degree of hazard for the emergency. Classification aids in the rapid communication of critical information and the initiation of appropriate time-urgent emergency response action. The three classes of operational emergencies, in order of increasing severity, are:

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(2) He must immediately notify either the government official designated as the on-scene coordinator for that geographical area, (in the applicable regional contingency plan under part 1510 of this title) or the National Response Center (using their 24-hour toll free number 800/424-8802). The report must include: (i) Name and telephone number of reporter; (ii) Name and address of facility; (iii) Time and type of incident (e.g., release, fire); (iv) Name and quantity of material(s) involved, to the extent known; (v) The extent of injuries, if any; and (vi) The possible hazards to human health, or the environment, outside the facility. This space was intentionally left blank.	**ALERT.** An alert shall be declared when events are predicted, are in progress, or have occurred that result in either: • An actual or potential substantial degradation in the level of control over hazardous materials (radiological and nonradiological) OR • An actual or potential substantial degradation in the level of safety or security of a facility or process that could, with further degradation, produce a site area emergency or a general emergency. If an actual or potential substantial degradation in the level of control over hazardous materials (radiological or nonradiological) occurs, the radiation dose from any release to the environment or radioactive material or a concentration in air of other hazardous material is expected to exceed either: • The applicable Protective Action Guide (PAG) or Emergency Response Planning Guideline (ERPG) at or beyond 30 m from the point of release to the environment OR • Ten percent of the applicable PAG or ten percent of the ERPG-2 (TEEL-2) value at 100 m AND It is not expected that the applicable PAG or ERPG will be exceeded at or beyond the facility boundary or exclusion zone boundary. **SITE AREA EMERGENCY.** A site area emergency shall be declared when events are predicted, are in progress, or have occurred that result in either: • An actual or potential major failure of functions necessary for the protection of the worker or the public OR • An actual or potential major degradation in the level of safety or security of a facility or process that could, with further degradation, produce a general emergency AND The radiation dose from any release of radioactive material or concentration in air from any release of other hazardous material is not expected to exceed the applicable PAG or ERPG at or beyond the site boundary.

AT KEARNEY FORMAT SECTION REGULATORY REFERENCE/CITATION	COMPLIANCE METHODOLOGY
This space was intentionally left blank.	**GENERAL EMERGENCY.** A general site emergency shall be declared when events are predicted, are in progress, or have occurred that result in either: • Catastrophic reduction of facility safety or security systems with a potential for the release of large quantities of hazardous materials (radiological or nonradiological) to the environment actually occurring or imminent OR • The radiation dose from any release of radioactive material or a concentration in air from any release of other hazardous material is expected to exceed the applicable PAG or ERPG at or beyond the site boundary. The following is a list of personnel and organization with a general description of their actions/responsibilities in response to fires, explosions, or unplanned sudden or non-sudden releases of hazardous waste or hazardous waste constituents to air, soil, or surface water: • Operations Personnel – Ensure personal safety, inform shift manager of situation/emergency (type of emergency, location, size, material(s) involved, status of other waste materials, equipment, etc.), and, if possible and properly trained, stop waste movements, secure area, and initiate efforts to stabilize the situation • Shift Manager/EAM – Sound appropriate alarms, gather information/documents, • Responsible for conducting emergency response within the INTEC and the immediate implementation of the contingency plan • INL Fire Department – Primary responders to all fires and hazardous incidents, providing fire fighting, hazardous materials (HAZMAT) response, and emergency medical services • INTEC Emergency Response Organization – Trained facility personnel including the INTEC EAM • On-Scene Commander (OSC) – With the assistance of the INTEC EAM, assesses situation from the standpoint of tactical deployment of the INL Fire Department and overall effort to address the situation/emergency • INL Emergency Operations Center (EOC) – Provides support to the INTEC ERO, including dose assessment, off-Site notifications, public information, and other technical/tactical functions that aid in the assessment, control, and return to operations • Emergency Director (ED) – Manages the INL EOC and has jurisdiction over all INL operational emergency response activities • INL Warning Communications Center (WCC) – Serves as the central organization for coordinating efforts between INL EROs and off-Site agencies/support services • Industrial Hygienist – Assists in the assessment of hazards/risk (e.g., monitor areas with known/suspected high concentrations of hazardous vapors/gases) and appropriate response actions • Waste Technical Specialist – Assists in the identification of waste/materials, proper adsorbent/absorbent, and post-emergency collection, storage, treatment and/or disposal Specific actions which further address 40 CFR 264.52(a) and 264.56(d) are described in Section G-4, Emergency Response Procedures.

AT KEARNEY FORMAT SECTION REGULATORY REFERENCE/CITATION	COMPLIANCE METHODOLOGY
G-4 Emergency Response Procedures **G-4a Notification** **40 CFR 264.56(a)**	**G-4 Emergency Response Procedures** **G-4a Notification**
40 CFR 264.56(a) Whenever there is an imminent or actual emergency situation, the emergency coordinator (or his designee when the emergency coordinator is on call) must immediately:	In the event of a fire or explosion, fire detection equipment (smoke detectors, heat detectors, water flow alarms, or water sprinkler alarms) will automatically notify:
(1) Activate internal facility alarms or communications systems, where applicable, to notify all facility personnel; and	(1) The INTEC voice paging system, which will (through exterior and interior building speakers) alert, notify and instruct the INTEC facility personnel and INTEC ERO.
(2) Notify appropriate State or local agencies with designated response roles if their help is needed.	(2) The Fire Alarm Center (FAC), which will involve the INL Fire Department.
NOTE: Notification shall always be made to the State Communications Center even if help is not needed.	(3) The INL WCC, which will alert other INL EROs.
	In any event (fire, explosion or release), the person involved/discovering can activate the nearest manual alarms and use communication devices (e.g., cell phones, radios) to summon assistance, and make notifications to the shift manager/EAM and/or the INL Fire Department. The INTEC EAM will ensure that all facility personnel are being, or have been, notified of the imminent or actual emergency situation, including a confirmation call to the WCC, to verify the INL Fire Department is responding. All notifications shall include the following information, as appropriate:
This space was intentionally left blank.	• Name and telephone number of the caller • Location of the incident and the caller • Time and type of incident • Severity of the incident • Description of the incident • Cause of the incident, if known • Assistance needed to deal with or control the incident • Name and address of the facility • Name and quantity of material(s) involved, to the extent known • Extent of injuries, if any • Possible hazards to human health, or the environment, outside the facility.

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This space left intentionally blank.	Once the EAM is notified of a fire, explosion, or uncontrolled release at the INTEC (by either an eyewitness or an alarm), the EAM will activate the contingency plan. If necessary, the EAM will also request assistance from the INL Fire Department. The INL Fire Department is contacted by dialing 777 or 526-7777. In case of fire, the INL Fire Department will respond to the alarms. The nature of any incident potentially involving hazardous waste or hazardous materials will undergo assessment, as described in Section G-4c. The contingency plan will not be activated if the incident is considered minor and does not constitute an emergency requiring notification of regulatory agencies (e.g., a fire, explosion, or natural occurrence that does not involve or threaten hazardous or mixed wastes; a release that does not constitute a potential threat to human health or the environment; a spill contained in secondary containment; and/or a spill or release that is less than a reportable quantity specified in 40 CFR 302.4). Reportable quantities under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the Emergency Planning and Community Right-to-Know Act (EPCRA) apply to the release of any substance listed in Table 302.4 of 40 CFR Part 302. The INTEC maintains its own emergency response capabilities through the ERO. There are adequate supplies, equipment, and trained personnel available at the INTEC to mitigate expected emergencies. The INL Fire Department and security personnel operate separately, but their activities are coordinated through the EAM. DOE-ID maintains coordination and mutual aid agreements with local outside agencies who make additional emergency personnel and equipment available if outside assistance is required. In addition, as a DOE facility, the staff at the INTEC can call upon the resources of the INL EOC for additional assistance, including, but not limited to, MOU agreements with local agencies (such as outside medical facilities or state and local law enforcement agencies) and other federal agencies. (See Section G-1.) **Communication of Emergency Conditions to Facility Employees** The procedures for notifying facility personnel depend on the type and severity of emergency and may include the following: • Local Fire Alarms - In the event of a fire, these may be activated automatically or manually. • Evacuation - The evacuation signal is an alternating, siren tone, manually activated by the contract security force, or the INTEC Emergency Control Center, at the direction of the EAM. If the primary warning system consisting of alarms and signals fails to operate when activated (as in a total power outage and failure of the backup power systems), security will be directed by the EAM to use voice amplifiers to alert personnel to evacuate the area. • INTEC Voice Paging System - The INTEC voice paging system provides personnel with general and emergency information.

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This space was intentionally left blank.	**Notification of Local, State, and Federal Authorities** If it is determined that the permitted units have had a fire, explosion, spill, or release of hazardous waste or hazardous waste constituents, or an emergency resulting in a release of a hazardous substance included in 40 CFR 302.4, that could threaten human health or the environment inside or outside the INTEC, the contingency plan will be activated. The EAM will ensure that local authorities are notified by phone and/or facsimile. These notifications are made by the INL WCC, based on the initial information provided by the EAM or the ED. The agencies to be contacted include, as appropriate: **NOTE:** Notification shall always be made to the State Communications Center even if help is not needed. State of Idaho Communications Center (800) 632-8000 or (208) 846-7610 Fax Number (208) 846-7620 County Dispatch Centers: Butte County (208) 527-3585 Fax Number (208) 527-3916 Bonneville County (208) 522-1644 or (208) 529-1200 Fax Number (208) 529-1153 Bingham County (208) 785-1234 or 785-7653 Fax Number (208) 785-8067 Clark County (208) 374-5669 Fax Number (208) 374-5614 Fort Hall Police Dispatch (208) 233-7451 Public Safety (208) 237-0137 Fax Number (208) 478-4005 Jefferson County (208) 745-9207 Fax Number (208) 745-9212 DOE-HQ Emergency Operations Center (202) 586-8100 Fax Number (202) 586-8485 National Response Center 1-800-424-8802

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This space was intentionally left blank.	The first notification of regulatory agencies will include, as appropriate: • Name and address of the facility and the name and phone number of the reporter • Type of incident: fire, explosion, release, etc. • Date and time of the incident • Type and quantity of hazardous material(s) involved • Exact location of the incident • Injuries, if any • Possible hazards to human health and the environment (air, soil, water, wildlife, etc.) outside the facility • Name, address, and telephone number of the party in charge of or responsible for the facility or activity associated with the incident • Steps being taken or proposed to contain and clean up the material involved in the incident. The ED and EAM will also be available to help the appropriate local, state, or federal officials decide whether local areas should be evacuated. **Notification of the General Public** Notification of the general public through the public safety and emergency agencies listed above will be made by the INL Emergency Director or the EAM. DOE policy is to provide accurate and timely information to the public, by the most expeditious means possible, concerning emergency situations that may affect employees, off-Site personnel, public health and safety, and/or the environment.
G-4b Identification of Hazardous Materials **40 CFR 264.56(b)** 40 CFR 264.56(b) Whenever there is a release, fire, or explosion, the emergency coordinator must immediately identify the character, exact source, amount, and areal extent of any released materials. He may do this by observation or review of facility records or manifests, and, if necessary, by chemical analysis.	**G-4b Identification of Hazardous Materials** The identification of hazardous wastes or hazardous waste constituents involved in a fire, explosion, or release to the environment is a necessary part of the assessment of an incident. RCRA-regulated hazardous waste and hazardous substances and materials listed in 40 CFR 302.4 involved in any release at the permitted units will be identified. The wastes normally stored at the permitted units present no unique hazards to the waste operations personnel. The permitted units present common industrial hazards for exposures or injuries.

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This space was intentionally left blank.	The INTEC EAM will determine the identity, exact source, amount, and extent of any released materials. Sources of information include, but may not be limited to: (1) Observations of personnel involved in or discovering the situation. (2) Permitted units operating records. (3) Material Safety Data Sheets (MSDSs). (4) Monitoring performed by an Industrial Hygienist. (5) The INL Fire Department's findings/reports. Released or residual materials (residuals from a fire or explosion) that cannot be identified by labels, records, logbooks, identification numbers, or electronic databases will be sampled in accordance with a waste analysis plan (WAP), and analyzed to determine the chemical properties of the waste. The analytical results will determine the proper disposition of unidentifiable waste materials.
G-4c Assessment **40 CFR 264.56(c) and 264.56(d)**	**G-4c Assessment**
40 CFR 264.56(c) Concurrently, the emergency coordinator must assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment must consider both 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 fire and heat-induced explosions).	Once the required notifications have been made, the EAM will ensure the identity, exact source, amount, and extent of released materials spreading from the event location can be determined. Individuals entering the affected area to gather information for the assessment will wear appropriate PPE. The EAM will determine the identity of materials released, based on knowledge of the area and access to the waste identification/characterization information described in Section G-4b.
40 CFR 264.56(d) *[The text of 40 CFR 264.56(d) is located in Section G-3, Implementation.]*	After the materials involved in an emergency are identified, the specific Information on the associated hazards, appropriate PPE, decontamination method, etc., will be obtained from MSDSs or other appropriate chemical reference materials. Based on default conservative estimates of potential source terms, emergency action levels (EALs) have been developed for fires, explosions, radiological releases, and other emergency events. EALs are specific, predetermined, observable criteria used to determine the emergency classification and initial protective actions for operational emergencies. These EALs provide guidance for activating the INL EROs at the appropriate level in response to the incident. These EALs specify the initial protective actions (i.e., evacuation or take cover) to be taken in response to the event.

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This space was intentionally left blank.	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; 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; locations affected • Exposure - Magnitude of actual or potential exposure to employees, the general public, and the environment; duration of human and environmental exposure; pathways of exposure • Toxicity - Types of adverse health or environmental effects associated with exposures; the relationship between the magnitude of exposure and adverse effects • Reactivity (if applicable) - Hazardous materials or wastes involved in an incident will be assessed, through accessing the MSDSs for the affected material to determine its reactivity and the recommended 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 fire or explosions) • Uncertainties - Considerations for undeterminable or future exposures; uncertain or unknown health effects including future health effects. If the assessment indicates no real or potential threat to human health or the environment, the occurrence will be considered a minor incident. Minor incidents do not require further activation of the contingency plan. If the assessment indicates that a potential threat exists to off-Site human health or the environment due to airborne contaminants, the EAM or ED will advise the appropriate off-Site response personnel of the nature of the potential threat. Wind data for the INTEC and the nature of the wastes normally stored at the permitted units do not indicate that an airborne release is likely to occur outside the TSDF.
G-4d Control Procedures **40 CFR 264.52(a)** 40 CFR 264.52(a) The Contingency Plan must describe the actions facility personnel must take to comply with 264.51 and 264.56 in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste	**G-4d Control Procedures** **Spills that Occur While Working With a Hazardous Waste** Employees in the permitted units will evacuate the immediate area and notify the EAM. The EAM will notify the spill control team, appropriate facility personnel, and/or the INL Fire Department who will perform the following steps: (1) After donning appropriate PPE (if necessary), secure the source of the release (e.g., tip the container to stop the leak).

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constituents to air, soil, or surface water at the facility.	(2) Transfer the spill to a new receiving drum, using a suitable pump if the quantity spilled is sufficient to use a pump. (3) After pumping or if the spill is small, spread absorbent over the area of the spill and transfer the contaminated absorbent to an appropriate container. (4) Stabilize flammable solvent spills using an absorbent. (5) Stabilize other chemical spills by using a neutralizing agent or by adding absorbent. (6) Handle the stabilized material as a hazardous or mixed waste. Sweep, shovel, or pump it into an appropriate container. (7) Remove any contamination from floors, walls, and other containers with a decontaminant appropriate to the spilled material, and transfer decontaminant and cleaning materials to an appropriate container. (8) Properly label the container. (9) Handle the original spill container in the same manner as a bulging or leaking drum. (10) Decontaminate all reusable spill cleanup equipment.
This space was intentionally left blank.	After cleanup is complete, appropriate facility personnel will complete a weekly inspection log entry and include the details of the spill and cleanup in the log. **Unattended Spills that are Discovered** Employees in the permitted units will leave the immediate area of the spill and notify the EAM. The EAM will notify the INL Fire Department who will perform the following: (1) Attempt to determine the source of the spill. (2) If the spilled material can be identified from the source container, handle the spill as in the procedure for "Spills that Occur While Working With a Hazardous Waste," above. (3) If the spilled material cannot be identified, a sample will be collected. (4) Obtain a rush analysis from a laboratory. (5) The spilled material will be containerized per the Analytical Data provided. (6) After the waste has been fully characterized, it will be managed appropriately. (7) Once the material has been identified, proceed as in the procedure for "Spills that Occur While Working With a Hazardous Waste," above.

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Bulging Containers
Employees in the permitted units will notify the EAM. The EAM will notify the INL Fire Department who will:

(1) Identify the material inside the container, based on inventory records.

(2) Based on the hazardous characteristics of the material in the container, select appropriate PPE and a new receiving container.

(3) After donning appropriate PPE (if necessary) and securing emergency equipment, carefully and slowly open a vent valve (if available) to relieve the internal pressure if it is safe to do so, or vent using appropriate equipment and safety measures and overpack the container.

(4) Use a portable pump to transfer the material from the bulging container to the new receiving container. Properly mark the new receiving container.

(5) Ensure that the contents of the bulging container have been emptied into the new receiving container.

(6) If the material is an acutely hazardous waste, crush the container and dispose of it as a hazardous waste.

(7) If the material is not an acutely hazardous waste, remove or cover labels and crush the container before disposal at a sanitary landfill.

(8) Clean up any material that spilled during the transfer.

After cleanup is complete, trained facility personnel will complete a weekly inspection log entry and record the details of transfer in the log.

Natural Phenomena Emergencies
After any natural emergency (earthquake, flood, lightning strike, etc.) that may have affected the permitted units, the EAM shall ensure the following actions are performed:

(1) Inspect all containers and containment for signs of leakage or damage.

(2) Check to ensure all automatic and manual alarms in the permitted units are working if feasible.

(3) Conduct a general survey of the permitted units looking for potential problems.

(4) Take any necessary corrective measures, however temporary, to rectify potential or real problems.

Record all inspection results.
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<tr><th>AT KEARNEY FORMAT SECTION REGULATORY REFERENCE/CITATION</th><th>COMPLIANCE METHODOLOGY</th></tr>
<tr><td>This space was intentionally left blank.</td><td>Personnel Contamination
In the event of chemical material in the eye or on the skin, personnel will use the following procedure:

(1) Wash the eye(s) or skin using the permanent shower/eyewash station for an appropriate time

(2) Hold the eyelids open during washing.

(3) Notify the EAM. The EAM will notify the appropriate facility personnel, and/or the INL Fire Department who will, if possible, ascertain what chemical material was involved in the injury.

(4) Report to the appropriate INL medical facility.

In the event of irritation of the eyes, breathing passages, or skin, difficulty in breathing, and/or nausea, light-headedness, vertigo, or blurred vision, personnel will notify the INL Fire Department. The EAM will evacuate and barricade the area to prevent unauthorized entry and notify the appropriate facility personnel-and/or the INL Fire Department, who will attempt to determine what, if any, chemical exposure occurred and what corrective measures are appropriate.

Power Failure
The permitted units are equipped with a standby power source in the event of utility failure. Should total power failure occur, battery-operated lights will automatically illuminate. In the event of a power failure, personnel will secure any work in progress and leave the area until power is restored.

The utilities have backup power replacements as shown:
• Lights - Fixed battery-operated lights will operate
• Alarms - Emergency communication and fire alarm systems have battery backup
• Communication Devices – cell phone and/or radio networks will be used
• Fire sprinklers - Portable extinguishers and external hose streams.</td></tr>
<tr><td>G-4e Prevention of Recurrence or Spread of Fires, Explosions, or Releases
40 CFR 264.56(e) and (f)

40 CFR 264.56(e) During an emergency, the emergency coordinator must take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous waste at the facility. These measures must include where applicable, stopping processes and operations, collecting and containing release waste, and removing or isolating containers.</td><td>G-4e Prevention of Recurrence or Spread of Fires, Explosions, or Releases

Equipment Failure
There will be no impact to the permitted units from an equipment failure. Mechanical failures not resulting in spills will be repaired by maintenance personnel.</td></tr>
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40 CFR 264.56(f) If the facility stops operations in response to a fire, explosion, or release, the emergency coordinator must monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.	During an emergency, the EAM will ensure that reasonable measures are taken so that fires, explosions, and releases do not occur, recur, or spread to mixed waste or other hazardous materials at the facility. These measures include the following: • Stopping processes and operations. • Collecting and containing released wastes and materials. • Removing or isolating containers of waste or hazardous materials. • Ensuring wastes managed during an emergency are handled, stored, or treated with due consideration for compatibility with other wastes and materials onsite and with any containers utilized (see Section G-4g). • Restricting personnel not needed for response activities from the area of the incident. • Evacuating the area if necessary. • Curtailing nonessential activities in the area. • Conducting preliminary inspections of adjacent facilities and equipment to assess damage. • Over-packing and/or removing damaged containers/drums from affected areas. Repairing damaged equipment and facilities, as appropriate. • Constructing, monitoring, and reinforcing temporary dikes, as needed. • Maintaining the INL Fire Department and equipment on standby at the incident site in cases where ignitable liquids have been or may be released and ensuring that all ignition sources are kept out of the area. • Ensuring ignitable liquids are segregated, contained, confined, diluted, or otherwise controlled to preclude inadvertent explosion or detonation.
This space was intentionally left blank.	As described in Section G-4a above, once the EAM is notified (by either an eyewitness or alarm) of a fire, explosion, or release, the EAM will immediately report the situation to the WCC and take action to notify the INL Fire Department and ERO, as necessary. If necessary, the EAM may request other INL support. All personnel not involved in combating the emergency shall evacuate the affected area and assemble in designated locations away from the affected area as informed by the EAM by appropriate means. Emergencies originating at the permitted units will be addressed by activation of the contingency plan under the direction of the EAM. The contingency plan may be activation at any time, at the discretion of the EAM. **Fires** Fires that involve or threaten hazardous or mixed wastes are considered emergencies for the purposes of the contingency plan. Planned actions include: (1) The INL Fire Department will be contacted by pulling the fire-alarm call box or by dialing 777 or 526-7777. (2) Fire fighting personnel will don appropriate PPE. (3) If the fire is small and the fuel source is small, portable fire extinguishers may be used to put out the fire. (4) Whenever possible, flammable material will be removed from the

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. This space was intentionally left blank.	for the overall mitigation of the event until the emergency event is terminated. Selections of methods and tactics of responding to an explosion are the responsibility of the On-Scene Commander. An adsorbent/absorbent will be poured over all chemical residues resulting from a hazardous waste explosion. Once the liquid is absorbed, the waste will be swept or shoveled back into the drums, and the surface cleaned using cleaners appropriate to the identified chemicals. The EAM will ensure all operational units (e.g., process equipment, and ventilation equipment) that may be affected directly or indirectly by the explosion, are secured once the areas have been determined safe for reentry. **Releases** The EAM will implement the following procedures in the event that: (a) a hazardous or mixed waste or hazardous material spill causes an immediate health hazard; (b) a hazardous or mixed waste or hazardous material spill cannot be contained with secondary containment or application of absorbents; or (c) a threat exists for spilled material to move out of the permitted units: (1) Evacuate the immediate area. (2) Review facility records to determine the identity and chemical nature of released material. (3) Ensure personnel don appropriate PPE to prevent exposure to the material. (4) Ensure that the source of the release is secured, if possible. (5) Ensure that a dike is built to contain run-off. (6) Ensure storm drains do not receive potentially hazardous run-off or spill material. Build dikes around storm drains or close any valves controlling discharge. (7) Ensure that appropriate and trained personnel collect and contain released wastes by stabilizing or neutralizing the spilled material, as appropriate, pouring an absorbent over the spilled material, and sweeping or shoveling the absorbed material into drums or other appropriate containers. (8) Ensure that waste that may be incompatible with the released material will be managed in the affected area until cleanup procedures are complete. After collection of a released material, the incident location will be sampled and evaluated. If contamination is found to exist, contaminated materials may be collected, drummed (if appropriate), and removed from the area for disposal at a permitted disposal facility. Depending on the specific conditions, however, INTEC personnel may choose to implement an alternative decontamination method, such as surface cleaning or in situ neutralization or stabilization. Any such alternative will be discussed with the Director of the Idaho Department of Environmental Quality, before implementation.

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G-4f Storage and Treatment of Released Materials **40 CFR 264.56(g)**	**G-4f Storage and Treatment of Released Materials**
40 CFR 264.56(g) Immediately after an emergency, the emergency coordinator must provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility.	Once initial spill containment has been completed, the EAM will ensure that recovered hazardous materials and waste are properly stored, treated, and/or disposed, as required by IDAPA 58.01.05.006; 58.01.05.007; and 58.01.05.008 (40 CFR 262, 263, and 264). For spills of liquid that escaped secondary containment, the perimeter of the spill will be diked with an absorbent material, such as absorbent pillows, that is compatible with the material(s) released. Freestanding liquid will be transferred to a labeled compatible container. The remaining liquid will be absorbed with an absorbent material and swept or scooped into a labeled compatible container. Spill residue will be removed. Spills of dry material will be swept or shoveled into a labeled compatible recovery container. Material recovered from the spill will be transferred to a new or clean-washed container that held a compatible material. All containers will meet Department of Transportation (DOT) specifications for shipping the recovered wastes and materials. Hazardous waste resulting from the cleanup of a fire, explosion, or release will be contained and managed as a hazardous waste until such time that it can be determined that the waste is not hazardous, as defined in IDAPA 58.01.05.005 (40 CFR 261, Subparts C and D). In most cases, the hazardous waste inventory logs completed when containers are placed in storage at the permitted units will allow a determination of the hazardous wastes and hazardous waste constituents present in any cleanup of a release or the residues from an emergency condition. When necessary, however, samples of the waste will be collected and analyzed to determine the presence of any hazardous characteristics and/or hazardous waste constituents; this information is needed to evaluate disposal options. Approved sampling and analytical methods will be used.
This space was intentionally left blank.	If the entire permitted unit has been impacted because of a fire, explosion, or spill, pending decontamination, no hazardous or mixed waste will be accepted for storage or treatment, until it is restored to design status. All cleanup and decontamination residues will be packaged, handled, and stored according to applicable state or federal regulations, DOE orders, and permitted unit procedures. During this period, storage will occur at a less-than-90-day storage site. All liquid wastes will be provided with secondary containment. If unaffected areas of the permitted unit can be used, containers of waste from the affected area(s) will be cleaned, overpacked, placed in spill pans, or transferred to new containers and moved to the unaffected areas. The contaminated area will be decontaminated. If the release results in contamination to a permeable surface, such as soil, asphalt, or other surface, the material will be removed and placed in DOT-approved shipping containers. Contaminated surface materials, as well as materials used in the cleanup (e.g., rags and absorbent material), will be containerized and placed into storage, pending transfer to an on- or off-Site treatment or disposal facility, in accordance with applicable regulations. Clean soil or new asphalt will be placed at the spill location.

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	If the spill was contained within the secondary containment area, other containers within that area will be decontaminated with water and/or a non-hazardous detergent or another appropriate cleaning solution. Contaminated wash water or cleaning solution will be transferred to an appropriate container, labeled, and placed in storage, pending transfer to an on- or off-Site treatment or disposal facility, in accordance with applicable regulations.
G-4g Incompatible Waste **40 CFR 264.56(h)(1)**	**G-4g Incompatible Waste**
40 CFR 264.56(h) The emergency coordinator must ensure that, in the affected area(s) of the facility:	In the event of a hazardous material or hazardous waste release, the EAM will ensure that no wastes will be received, treated, or stored in the affected areas until cleanup operations have been completed. This will ensure that incompatible waste will not be present in the vicinity of the release.
(1) No waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and	If waste is generated as the result of a spill or release of hazardous materials or hazardous waste, the waste generated as a result of abatement and cleanup will be evaluated to determine its compatibility with other wastes being managed in temporary storage areas. The evaluation will identify the material or waste that was spilled or released and determine its characteristics (e.g., ignitable, reactive, corrosive, and toxic). The waste generated by the abatement and cleanup activities will be stored in that part of the temporary storage area of the permitted units that has been established to manage wastes with which it is compatible. Administrative controls, such as installing barriers and/or a cordon around the temporary storage area(s), will be implemented to ensure segregation of wastes. The EAM will not allow hazardous or mixed waste operations to resume in a building or area in which incompatible materials have been released before ensuring that necessary post-emergency cleanup operations to remove potentially incompatible materials have been completed.
G-4h Post-Emergency Equipment Maintenance **40 CFR 264.56(h)(2)**	**G-4h Post-emergency Equipment Maintenance**
40 CFR 264.56(h) The emergency coordinator must ensure that, in the affected area(s) of the facility:	The EAM will ensure that emergency equipment is cleaned and ready for its intended use before operations are resumed. Any equipment that cannot be decontaminated may be discarded as waste (i.e., hazardous, mixed, solid, as appropriate). Equipment or supplies that cannot be reused following an emergency will be replaced. After the equipment has been cleaned, repaired, or replaced, a post-emergency facility and equipment inspection will be performed, and the results will be recorded.
(2) All emergency equipment listed in the CP is cleaned and fit for its intended use before operations are resumed.	Cleaning and decontaminating 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 will be conducted in a confined area, such as a wash pad or building equipped with a floor drain and sump isolated from the environment. Care will be taken to prevent wind dispersion of particles and spray. Liquid or particulate resulting from cleaning and decontamination of equipment will be placed in clean, compatible containers. Waste resulting from decontamination operations will be analyzed for hazardous waste constituents and/or hazardous waste characteristics to determine proper management.

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	When INTEC facility personnel has completed any post-emergency cleanup of waste and hazardous residues from areas where waste management operations are ready to resume, and the EAM has ensured that all emergency equipment used in managing the emergency has been cleaned or replaced and is fit for service, the following notifications will be made, EPA Region 10 Administrator, the Director of the Department of Environmental Quality, and any relevant local authorities. This post-emergency notification complies with IDAPA 58.01.05.008 [40 CFR 264.56(i)].
G-4i Container Spills and Leakage **40 CFR 264.52, 264.171, and 264.175(b)(5)**	**G-4i Container Spills and Leakage**
40 CFR 264.52 Content of contingency plan.	40 CFR 264.52(a) is addressed in Sections G-3 (Implementation), G-4d (Control Procedures), and G-4e (Prevention of Recurrence or Spread of Fires, Explosions, or Releases)
(a) Regulation text is located in Section G-3, Implementation.	
(b) If the owner or operator has already prepared a Spill Prevention, Control, and Countermeasures (SPCC) Plan in accordance with part 112 of this chapter, or part 1510 of chapter V, or some other emergency or CP, he need only amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with the requirements of this part.	Hazardous waste management provisions are included in the contingency plan.
(c) The plan must describe arrangements agreed to by local police departments, fire departments, hospitals, contractors, and State and local emergency response teams to coordinate emergency services pursuant to 264.37.	40 CFR 264.52(c) is addressed in Sections G-1 (General Information) and G-6 (Coordination Agreements).
(d) Regulation text is located in Section G-2, Emergency Coordinators.	40 CFR 264.52(d) and 40 CFR 264.55 are addressed in Section G-2, Emergency Coordinator.
(e) The plan must include a list of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications and alarm systems (internal and external), and decontamination equipment), where this equipment is required. This list must be kept up to date. In addition, the plan must include the location and a physical description of each item on the list, and a brief outline of its capabilities.	40 CFR 264.52(e) is addressed in Section G-5, Emergency Equipment.

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(f) The plan must include an evacuation plan for facility personnel where there is a possibility that an evacuation could be necessary. This plan must describe signal(s) to be used to begin evacuation, evacuation routes, and alternate evacuation routes (in cases where the primary routes could be blocked by releases of hazardous waste or fires). 40 CFR 264.51 *[The text of 40 CFR 264.51 is located in Section G-1, General Information.]*	40 CFR 264.52(f) is addressed in Section G-7, Evacuation Plan.
40 CFR 264.171 Condition of containers. If a container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, the owner or operator must transfer the hazardous waste from this container to a container that is in good condition or manage the waste in some other way that complies with the requirements of this part. 40 CFR 175(b) A containment system must be designed and operated as follows:	Any/all containers, used for storage or treatment, found through inspection or use, not to be in good condition, will either be overpacked or the waste will be removed and the “empty container” disposed of accordingly. 40 CFR 264.171 is further addressed in Section D-1, Process Information – Containers.
(5) Spilled or leaked waste and accumulated precipitation must be removed from the sump or collection area in as timely a manner as is necessary to prevent overflow of the collection system.	When a spill or leak from a container is encountered, the shift manager/EAM will be notified and trained INTEC facility personnel and/or the INL Fire Department will don the appropriate PPE, maintain a safe distance, assess the situation, determine the proper and safe response action, gather the necessary equipment from the spill control cabinet, and respond accordingly (e.g., absorb/neutralize, shovel/mop up into a compatible container and decontaminate the area). If the spill or leak is of a nature that is not readily addressed (e.g., an industrial hygienist is required to monitor gases or vapors) the INTEC EAM may get involved and a hazardous work permit may be required before cleanup can commence. The hazardous work permit will specify the necessary PPE and spill response equipment, the roles of the responders, and the cleanup/decontamination procedures to be employed. In all cases: the proper reports will be filed in accordance with Section G-8 (e.g., inspection log sheets); the incident will be documented in the unit’s operating record; and the PPE/equipment used in the response will be decontaminated or disposed of and replaced.
G-4j Tank Spills and Leakage **40 CFR 264.194 (c)(1)** 40 CFR 264.194(c) The owner or operator must comply with 264.196 if a leak or a spill occurs in the tank system.	**G-4j Tank Spills and Leakage** In addressing this section, it is important to realize that the INTEC buildings are designed, constructed and remotely operated to exclude or isolate hazardous incidents. In the case of the permitted tank systems (tanks, ancillary equipment, and secondary containment), all are contained within a completely enclosed, self-supporting structure that is designed and constructed of man-made materials of sufficient strength and thickness to

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	support themselves, the waste contents, and personnel and heavy equipment that may operate within the building(s). CPP-1617 does not contain tank systems.
40 CFR 264.196 Response to leaks or spills and disposition of leaking or unfit-for-use tank systems. A tank system or secondary containment system from which there has been a leak or spill, or which is unfit for use, must be removed from service immediately, and the owner or operator must satisfy the following requirements:	Tank system leaks or spills can be detected by tank level measurement equipment, sump high level, and radiation alarms, as well as through inspection or operation. Upon detection of a leak or spill from a tank system, **<u>or</u>** if through inspection or use a tank system is determined to be unfit for use, the following steps will be taken, as deemed necessary.
(a) Cessation of use; prevent flow or addition of wastes. The owner or operator must immediately stop the flow of hazardous waste into the tank system or secondary containment system and inspect the system to determine the cause of the release.	When a spill or leak from a tank system is encountered, the shift manager/EAM will assess the situation, and determine the proper and safe action(s), if any, necessary to best stop the spill or leak (e.g., stop the flow of waste into or out of the tank). Additional waste will not be added to the tank.
(b) Removal of waste from tank system or secondary containment system. (1) If the release was from the tank system, the owner/operator must, within 24 hours after detection of the leak or, if the owner/operator demonstrates that it is not possible, at the earliest practicable time, remove as much of the waste as is necessary to prevent further release of hazardous waste to the environment and to allow inspection and repair of the tank system to be performed. (2) If the material released was to a secondary containment system, all released materials must be removed within 24 hours or in as timely a manner as is possible to prevent harm to human health and the environment.	All of the subject tanks are mixed waste tanks and radiological considerations will in most cases; impede efforts to remove the waste from the tank or secondary containment system within 24 hours. However, the waste will be addressed in a timely a manner as is possible to prevent harm to human health and the environment while ensuring the safety of the facility personnel responding to the spill/leak. After ensuring personnel safety, the most important task is to identify the source of the spill/leak and the actual and potential extent of the leak/spill, for example: (1) A minor leak from ancillary equipment (i.e., a pump or valve, that can be easily stopped/controlled). (2) A minor tank leak/spill that can be easily stopped. (3) A minor leak or spill to a secondary containment system or portion of INTEC that can be easily stopped. (4) A major tank leak from which total loss of contents could be realized. Upon notification of the emergency, the INL Fire Department is responsible for response and mitigation. Once the source of the leak/spill is identified and controlled, trained INTEC facility personnel will assess the extent of the spill/leak and will initiate corrective actions and cleanup activities. In the most extreme case of tank failure, the INTEC EAM will be notified and the contingency plan activated.

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(c) Containment of visible releases to the environment. The owner/operator must immediately conduct a visual inspection of the release and, based upon that inspection: (1) Prevent further migration of the leak or spill to soils or surface water; and (2) Remove, and properly dispose of, any visible contamination of the soil or surface water.	Since all tanks and ancillary equipment are contained within permanent structures, release to soils or surface water is extremely unlikely. In the event a release to the environment is detected, a visual inspection will be conducted immediately. Migration of the leak or spill toward soils or surface water will be prevented as practicable and any contaminated materials will be removed, characterized, and properly disposed.
(d) Notifications, reports. (1) Any release to the environment, except as provided in paragraph (d)(2) of this section, must be reported to the Regional Administrator within 24 hours of its detection. If the release has been reported pursuant to 40 CFR Part 302, that report will satisfy this requirement. (2) A leak or spill of hazardous waste is exempted from the requirements of this paragraph if it is: (i) Less than or equal to a quantity of one (1) pound, and (ii) Immediately contained and cleaned up. (3) Within 30 days of detection of a release to the environment, a report containing the following information must be submitted to the Reg. Admin. (i) Likely route of migration; (ii) Characteristics of the surrounding soil (composition, geology, hydrogeology, climate); (iii) Results of any monitoring or sampling conducted in connection with the release (if available). If sampling or monitoring data relating to the release are not available within 30 days, these data must be submitted to the Reg. Admin. as soon as they become available. (iv) Proximity to downgradient drinking water, surface water, and populated areas; and (v) Description of response actions taken or planned.	Any release from the tank system to the soil, groundwater, or surface water will be reported to the Director of DEQ within 24 hours of detection, unless: (1) The release has already been reported pursuant to 40 CFR Part 302, or (2) It is a spill of hazardous waste totaling less than or equal to one pound that was immediately contained and cleaned up. Within 30 days of detection of a release from the tank system to the soil, groundwater, or surface water, a report detailing the release will be submitted to the Director of DEQ. This report will, at a minimum, contain the following: (1) The likely route of migration. (2) Characteristics of the surrounding soil. (3) The results of any monitoring or sampling conducted in connection with the release, if available. (4) Proximity to downgradient drinking water, surface water, and populated areas. (5) A description of response actions taken or planned. In all cases the proper reports will be filed in accordance with Section G-8, the incident will be documented in the unit's operating record, and the PPE/equipment used in the response will be decontaminated or disposed of and replaced.
(e) Provision of secondary containment, repair, or closure. (1) Unless the owner/operator satisfies the requirements of paragraphs (e)(2) through (4) of this section, the tank system must be closed in accordance with Sec. 264.197. (2) If the cause of the release was a spill that has not damaged the integrity of the system, the owner/operator may return the system to service as soon as the released waste is removed and repairs, if necessary, are made. (3) If the cause of the release was	All tanks and ancillary equipment identified in this permit are secondarily contained and/or may be visually inspected. Once a release has been contained and cleaned up, the affected unit(s) will be inspected and returned to service, provided that: (1) The cause of the release has been identified. (2) The integrity of the tank and/or ancillary equipment has not been compromised. (3) The source of the release has been repaired, as necessary.

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a leak from the primary tank system into the secondary containment system, the system must be repaired prior to returning the tank system to service. (4) If the source of the release was a leak to the environment from a component of a tank system without secondary containment, the owner/operator must provide the component of the system from which the leak occurred with secondary containment that satisfies the requirements of Sec. 264.193 before it can be returned to service, unless the source of the leak is an aboveground portion of a tank system that can be inspected visually. If the source is an aboveground component that can be inspected visually, the component must be repaired and may be returned to service without secondary containment as long as the requirements of paragraph (f) of this section are satisfied. If a component is replaced to comply with the requirements of this subparagraph, that component must satisfy the requirements for new tank systems or components in Sections 264.192 and 264.193. Additionally, if a leak has occurred in any portion of a tank system component that is not readily accessible for visual inspection (e.g., the bottom of an inground or onground tank), the entire component must be provided with secondary containment in accordance with Sec. 264.193 prior to being returned to use.	(4) The affected area has been decontaminated. (5) Spill response equipment has been replenished or decontaminated and returned to service.

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(f) Certification of major repairs. If the owner/operator has repaired a tank system in accordance with paragraph (e) of this section, and the repair has been extensive (e.g., installation of an internal liner; repair of a ruptured primary containment or secondary containment vessel), the tank system must not be returned to service unless the owner/operator has obtained a certification by an independent, qualified, registered, professional engineer in accordance with Sec.270.11(d) that the repaired system is capable of handling hazardous wastes without release for the intended life of the system. This certification must be submitted to the Regional Administrator within seven days after returning the tank system to use.	When a tank system repair has been extensive (e.g., repair of a ruptured primary containment or secondary containment), the tank system will not be returned to service until a certification by an independent, qualified, registered, professional engineer in accordance with 40 CFR 270.11(d) has been obtained. The certification will reflect that the repaired system is capable of handling hazardous wastes without release for the intended life of the system. This certification will be submitted to the DEQ within seven days after returning the tank system to use.
G-5 Emergency Equipment **40 CFR 264.52(e)** 40 CFR 264.52(e) The plan must include a list of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications and alarm systems (internal and external), and decontamination equipment), where this equipment is required. This list must be kept up to date. In addition, the plan must include the location and a physical description of each item on the list, and a brief outline of its capabilities.	**G-5 Emergency Equipment** A variety of equipment is available at the INTEC for emergency response, containment, and cleanup operations. This includes equipment for spill control, fire control, personnel protection, monitoring and medical attention, communications, and alarms. This equipment is immediately available to emergency response personnel. A listing of available emergency equipment is shown in Tables G-1 and G-2. In the event a spill cannot be mitigated with the supplies kept at the permitted units, additional response supplies are available throughout the INTEC, and throughout the INL. Safety and emergency equipment located at the Fluorinel and Fuel Storage (FAST) facility and the New Waste Calcining Facility (NWCF) includes: • Wet-pipe/deluge fire sprinkler system • Dry horizontal side wall sprinkler system • Portable fire extinguisher • Safety showers and eye washes (NWCF only) • Portable units are available when required (FAST) • Plant voice paging and evacuation alarm system • Internal voice paging system • Communication devices Safety and emergency equipment located at CPP-1617 includes: • Fire sprinkler system • Portable fire extinguishers • Portable units are available when required • Plant voice paging and evacuation alarm system • Communication devices.

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	The following is an example list of the safety equipment available for spill control for the permitted units: • Acid suits (disposable and reusable) and acid gloves (neoprene) • Spill control pillows • Hazardous waste bags • Plastic buckets • Safety rope and signs • Radiation rope/ribbon and radiological tags/signs • Duct tape • pH paper • Shovel (flat head) • Smear paper and envelopes • Grease/standard pencils • Mops • Absorbent • Acid/caustic neutralizers • Splash goggles or face shields. Safety and emergency equipment provide adequate capabilities for trained personnel to respond to and control leaks, spills, and emergency situations until assistance arrives. The INL Fire Department has other emergency equipment including, but not limited to, self-contained breathing apparatus (SCBAs), stretchers, and first-aid kits. Other nondedicated equipment available at INTEC includes forklifts, cranes, truck tractors, trailers, pumps, generators, front end loaders, and snowplows.
G-6 Coordination Agreements **40 CFR 264.52(c) and 264.37** 40 CFR 264.52(c) The plan must describe arrangements agreed to by local police departments, fire departments, hospitals, contractors, and State and local emergency response teams to coordinate emergency services pursuant to 264.37. 40 CFR 264.37Arrangements with local authorities. (a) The owner or operator must attempt to make the following arrangements, as appropriate for the type of waste handled at his facility and the potential need for the services of these organizations: (1) Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of hazardous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes.	**G-6 Coordination Agreements** The INTEC EAM will ensure initial responders are dispatched to an emergency event originating at the INTEC. However, the level of response depends on the nature and extent of the incident. If warranted, additional INL resources are obtained, such as on-Site security, medical, and fire assistance, which are available on a 24-hour basis. Section G-1, General Information [40 CFR 264.53 (b)], contains the list of off-Site state, local and tribal agencies that are familiar with the contingency plan and may be called upon through agreements with the DOE-ID.

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(2) Where more than one police and fire department might respond to an emergency, agreements designating primary emergency authority to a specific police and a specific fire department, and agreements with any others to provide support to the primary emergency authority; (3) Agreements with State emergency response teams, emergency response contractors, and equipment suppliers; and (4) Arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility. (b) Where State or local authorities decline to enter into such arrangements, the owner or operator must document the refusal in the operating record.	
G-7 Evacuation Plan **40 CFR 264.52(f)** 40 CFR 264.52(f) The plan must include an evacuation plan for facility personnel where there is a possibility that an evacuation could be necessary. This plan must describe signal(s) to be used to begin evacuation, evacuation routes, and alternate evacuation routes (in cases where the primary routes could be blocked by releases of hazardous waste or fires).	**G-7 Evacuation Plan** The normal actions to protect non-emergency personnel are to minimize their exposure to radiation, airborne radioactivity, hazardous chemicals, and airborne hazardous chemicals, by seeking shelter, avoiding the accident area, or evacuating selected buildings or areas. In the event of an emergency, which results in high radiation, hazardous chemical levels, or a continuing release to the environment, it may become necessary to evacuate the entire INTEC area. Building and Emergency Plan Maps depicting evacuation routes are located throughout the INTEC buildings. Upon exiting a building, personnel proceed to a designated staging area not affected by the emergency. The INTEC evacuation system alerts personnel in case of an evacuation. This system is on backup power; should power fail, it will automatically switch to a battery. Evacuation sirens are strategically located throughout the INTEC to provide coverage for all occupied areas. If the evacuation alarm is out of service or fails to operate, the evacuation will be communicated over the voice paging system, by word of mouth, or by security personnel using sirens or the voice amplifiers in their vehicles. Designated personnel, known as area wardens, are assigned responsibility for ensuring that personnel are evacuated from the area warden's assigned area or building or accounted for during evacuations. The following procedure will allow for a safe, coordinated evacuation: (1) When an evacuation is announced, stop work.

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	(2) If possible and directed by the EAM, shut down predesignated operations that could contribute to further hazards, unless an "immediate" building evacuation is announced. (3) Follow the voice-paging instruction or proceed to the closest building exit, unless blocked by hazards. (4) Do not remain in the affected area, and assist injured personnel in leaving the area, if possible. (5) Exit the facility through the security access points to the designated assembly area. (6) Report to designated assembly area. (7) Be continually cognizant of wind direction (stay upwind) and emergency equipment. (8) Do not reenter the fenced area of the INTEC, until the EAM authorizes reentry.
This space was intentionally left blank.	During an evacuation, all personnel will remain in the designated assembly area, until given further instructions. The primary evacuation routes for the permitted units are depicted in Exhibits located at the end of this section. Alternative evacuation routes are through the nearest unobstructed emergency exit. **Evacuation Alarm** signal is an alternating tone-generated siren. **Fire Alarm** is announced over the INTEC voice paging system. **Take-Cover Alarm** is a steady tone-generated siren. This signal provides an emergency option to total INTEC evacuation.
G-8 Required Reports **40 CFR 264.56(j) and 40 CFR 264.56(i)**	**G-8 Required Reports**
40 CFR 264.56(j) The owner or operator must note in the operating record the time, date, and details of any incident that requires implementing the CP. Within 15 days after the incident, he must submit a written report on the incident to the Regional Administrator. The report must include:	Any fire, explosion, or unplanned release of hazardous or mixed waste or hazardous constituent requiring activation of the contingency plan will be reported by the Permittee in writing within 15 days to the Director of the Department of Environmental Quality. Such reports will include, as a minimum, the following:
(1) Name, address, and telephone number of the owner or operator;	Name, address, and telephone number of the facility owner/operator
(2) Name, address, and telephone number of the facility;	Name, address, and telephone number of the facility
(3) Date, time, and type of incident (e.g., fire, explosion);	Date, time, and type of incident (e.g., fire, explosion, release)
(4) Name and quantity of material(s)	Name and quantity of the material(s) involved

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involved;	
(5) The extent of injuries, if any;	Extent of any injuries to personnel at the facility
(6) An assessment of actual or potential hazards to human health or the environment, where this is applicable; and	An assessment of any actual or potential hazards to human health or the environment, as applicable
(7) Estimated quantity and disposition of recovered material that resulted from the incident.	Estimated quantity and disposition of material recovered from the incident (includes fire fighting materials, such as water, foam, adsorbents/absorbents, etc.).
40 CFR 264.56(i) The owner or operator must notify the Regional Administrator, and appropriate State and local authorities, that the facility is in compliance with paragraph (h) of this section before operations are resumed in the affected area(s) of the facility.	In accordance with IDAPA 58.01.05.008 [40 CFR 264.56(i)], the Permittee will notify the Director of the Department of Environmental Quality that: • The permitted units are in compliance with requirements for the cleanup of areas affected by the emergency and that the emergency equipment used in the emergency response has been cleaned or replaced and is fit for the intended use, before the resumption of waste management activities. • The permitted units have experienced a fire, explosion, spill, or release of hazardous waste or hazardous waste constituents or an emergency resulting in a release of a hazardous substance included in 40 CFR 302.4 that could threaten human health or the environment outside the INTEC. The contingency plan will be activated, and the EAM will ensure that local authorities are notified in writing.

Table G-1. Emergency response equipment available at CPP-659/1659 and CPP-666.

Emergency Equipment	Location	Capabilities
Fire Control		
Wet-pipe/deluge fire sprinkler system	Throughout CPP-659/1659 and CPP-666	Fire control / suppression
Dry horizontal sidewall fire sprinkle system	Outside loading dock to CPP-659	Fire control / suppression
Portable fire extinguisher/media (ABC, CO_2, Met-L-X, as appropriate)	See Exhibits G-1 through G-7	Use during incipient stage of fire (10-60 second discharge time)
Emergency Communication/Alarm System		
Manual fire alarm boxes	Located on each level throughout CPP-659/1659 and CPP-666	Summon INL Fire Department
Communication Devices	Located on each level throughout CPP-659/1659. CPP-666 located on the 0', -13', -31', and +28 levels	On-Site / Off-Site communications
Site-wide evacuation alarm	Alarm may be sounded throughout INTEC	Provides immediate notice of evacuation
Internal voice paging system	Located on each level throughout CPP-659/1659 and CPP-666	Provides general and emergency information
Personal Protection		
Acid suits	CPP-659 Rooms 209, 303, 317, 415, and 431. CPP-666 Room B-6.	Protection during spill response
Acid boots	CPP-659 Rooms 209, 303, 317, 415, and 431. CPP-666 Room B-6.	Protection during spill response
Acid gloves	CPP-659 Rooms 209, 303, 317, 415, and 431. CPP-666 Room B-6.	Protection during spill response
Face shields and/or safety goggles	CPP-659 Rooms 209, 303, 317, 415, and 431. CPP-666 Room B-6.	Protection against liquid splash
Spill Control, Containment, Cleanup		
Plastic buckets	CPP-659 Rooms 209, 303, 317, 415, and 431. CPP-666 Room B-6.	Clean up small spills
Spill control pillows	CPP-659 Rooms 209, 303, 317, 415, and 431. CPP-666 Room B-6.	Contain / absorb small spills
Hazardous material pigs	CPP-659 Rooms 209, 303, 317, 415, and 431. CPP-666 Room B-6.	Contain / absorb small spills
Hazardous material bags	CPP-659 Rooms 209, 303, 317, 415, and 431. CPP-666 Room B-6.	Clean up small spills
Safety rope	CPP-659 Rooms 209, 303, 317, 415, and 431. CPP-666 Room B-6.	Isolate affected area
Acid / Chemical spill warning (danger) signs	CPP-659 Rooms 209, 303, 317, 415, and 431. CPP-666 Room B-6.	Warn others
pH paper	CPP-659 Rooms 209, 303, 317, 415, and 431. CPP-666 Room B-6.	Characterize spilled material
Shovel	CPP-659 Rooms 209, 303, 317, 415, and 431. CPP-666 Room B-6.	Clean up small spills
Acid spill supplies	CPP-659 Rooms 209, 303, 317, 415, and 431. CPP-666 Room B-6.	Clean up small acid spills
Safety showers	see Exhibits G-1 through G-3.	Remove contamination
Eye wash stations	see Exhibits G-1 through G-3.	Flush eyes for chemical and particulate contamination

Table G-2. Emergency response equipment available at CPP-1617.

Equipment Type	Location	Description	Capabilities
Fire Extinguisher	CPP-1617 South Side	Portable, ABC, CO_2, Met-L-X (as applicable)	Fire control/suppression
Spill Control Cabinet	CPP-1617 Southwest corner	Cabinet containing personal protective equipment (PPE) and spill control material	PPE for personnel and equipment for small spills (inventory sheet on outside of cabinets lists types and quantities of PPE and equipment)

Exhibit G-1. NWCF First Level Evacuation Routes and Emergency Equipment.

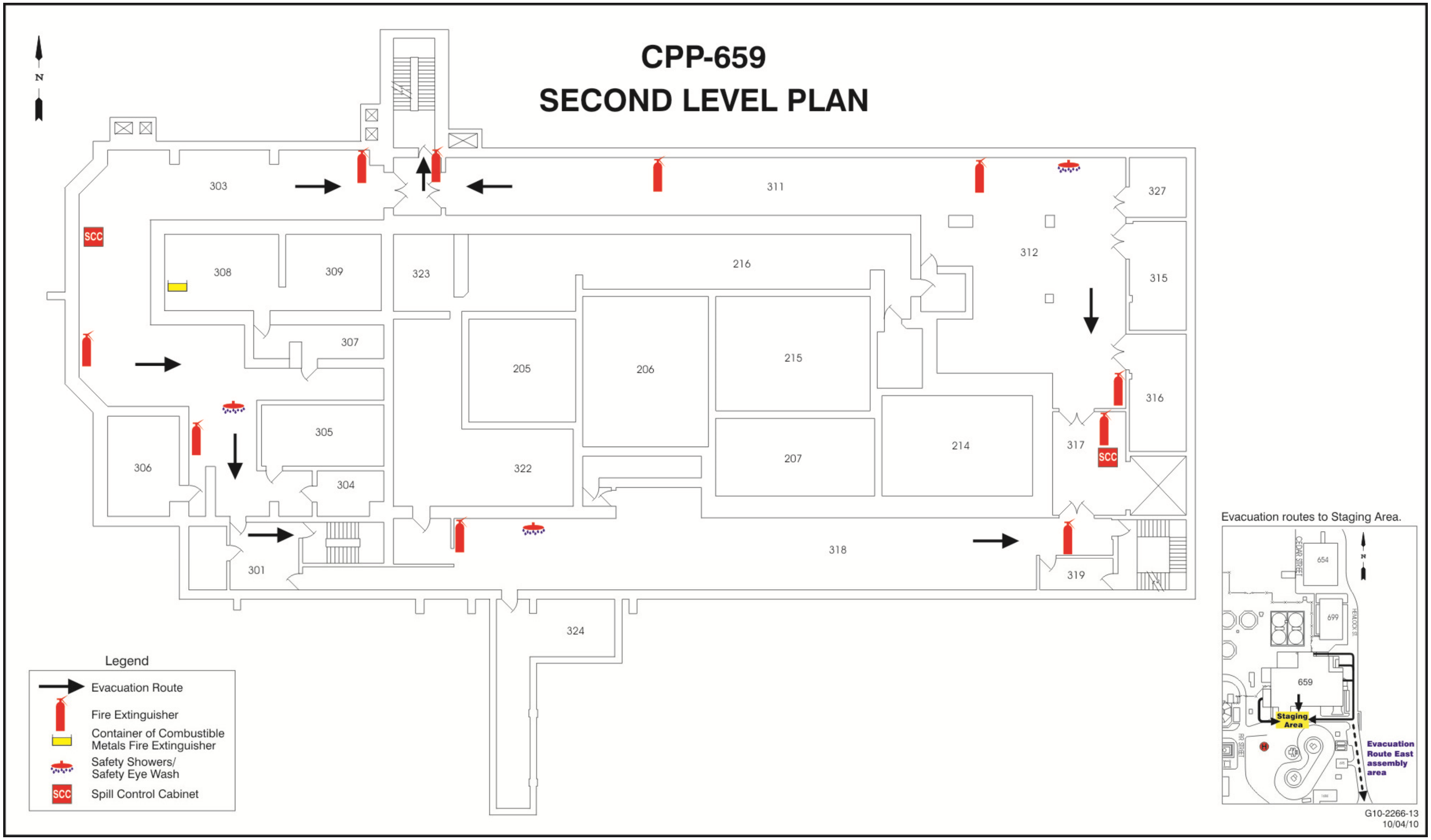

Exhibit G-2. NWCF Second Level Evacuation Routes and Emergency Equipment.

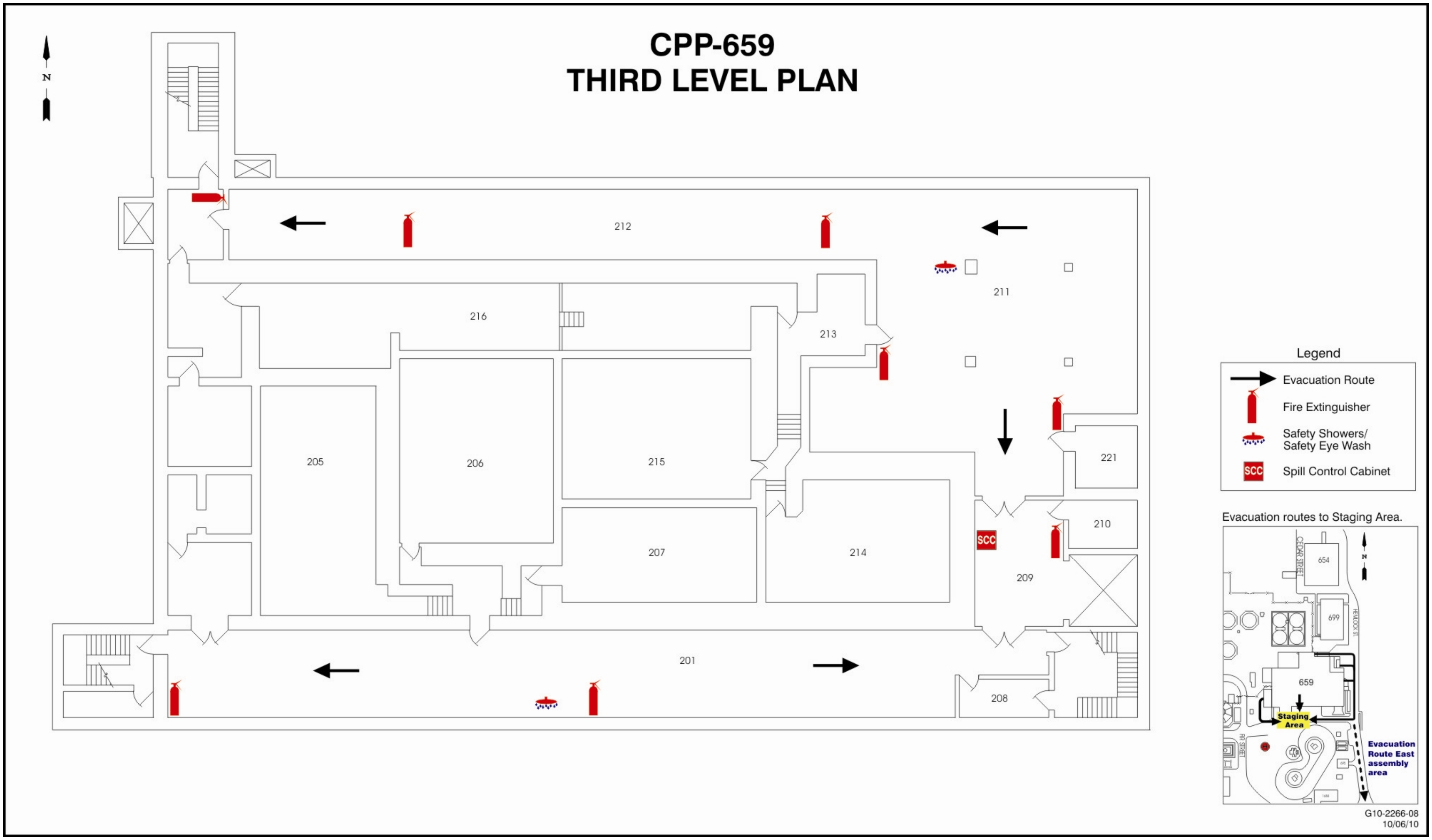

Exhibit G-3. NWCF Third Level Evacuation Routes and Emergency Equipment.

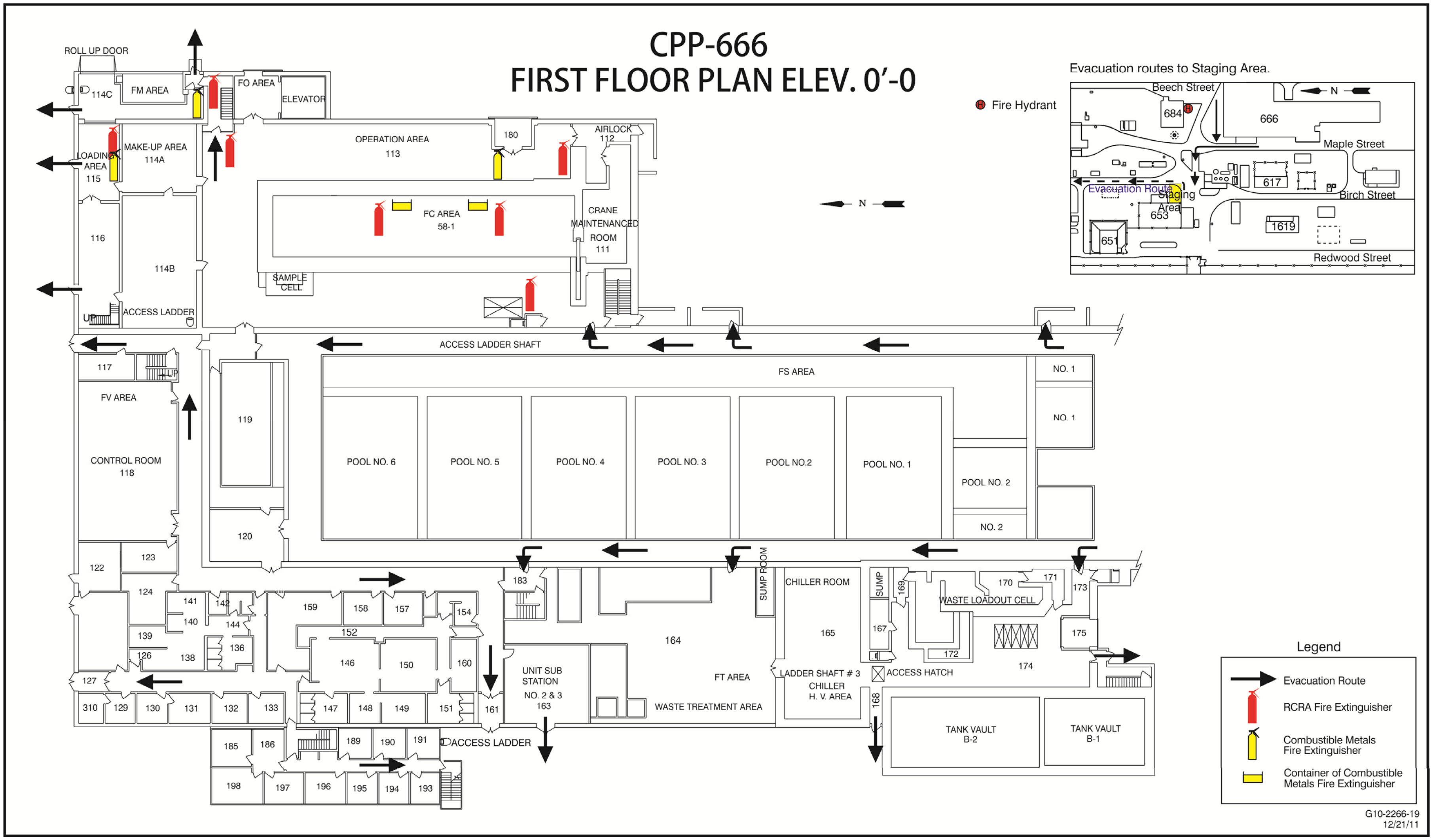

Exhibit G-4. CPP-666 0'-0" Level Evacuation Routes and Emergency Equipment.

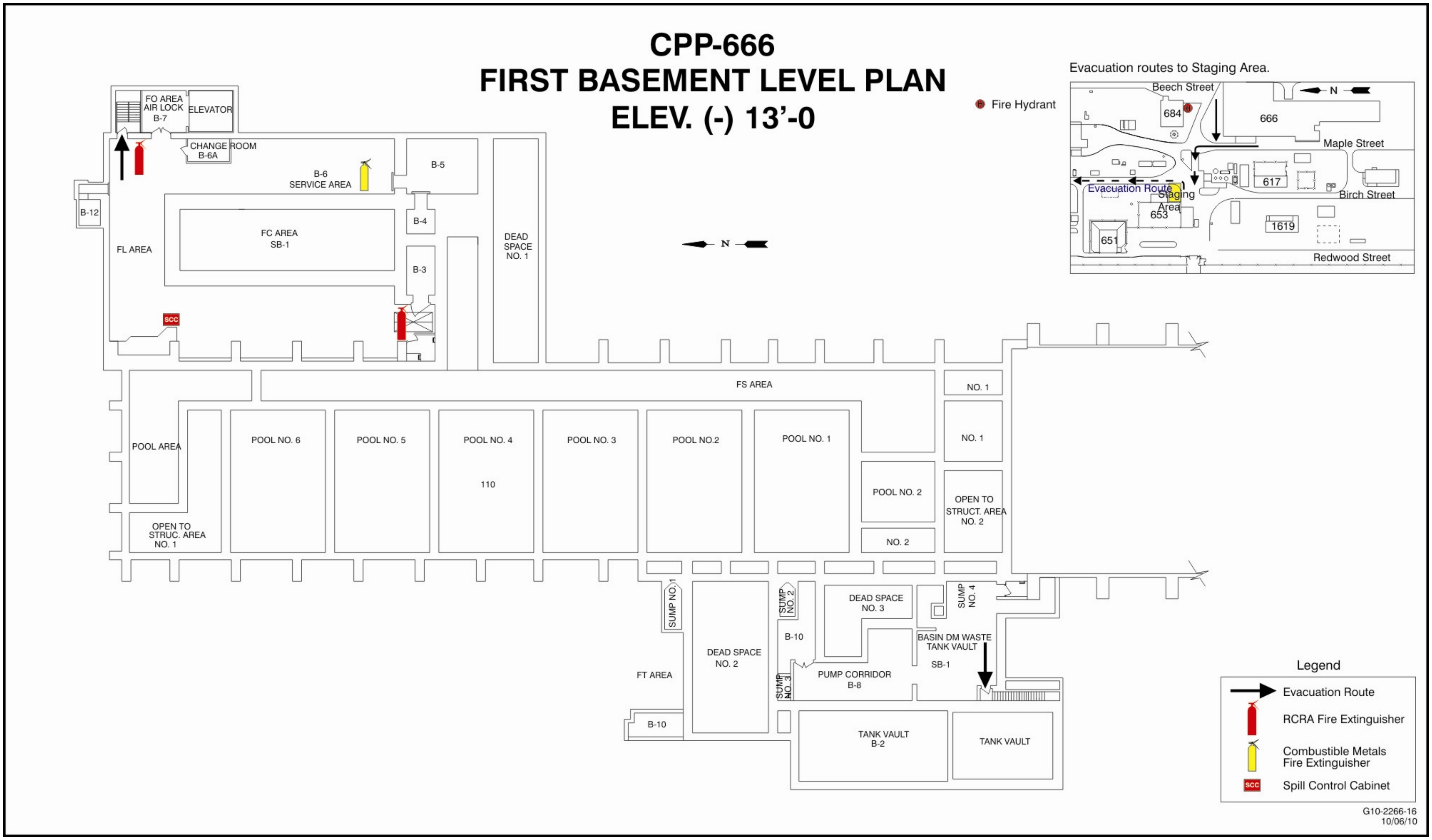

Exhibit G-5. CPP-666 -13'-0" Level Evacuation Routes and Emergency Equipment.

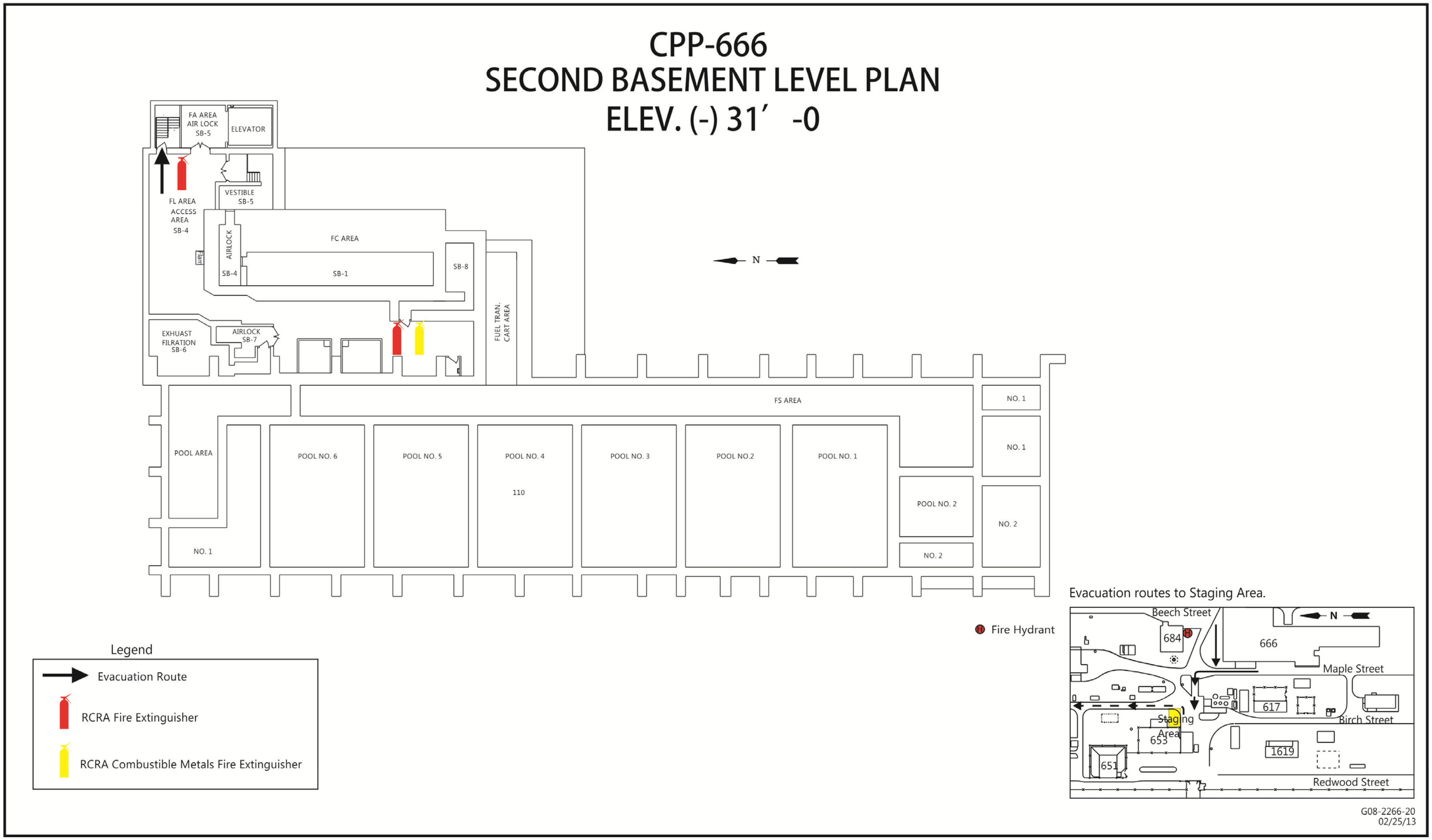

Exhibit G-6. CPP-666 -31’-0” Level Evacuation Routes and Emergency Equipment.

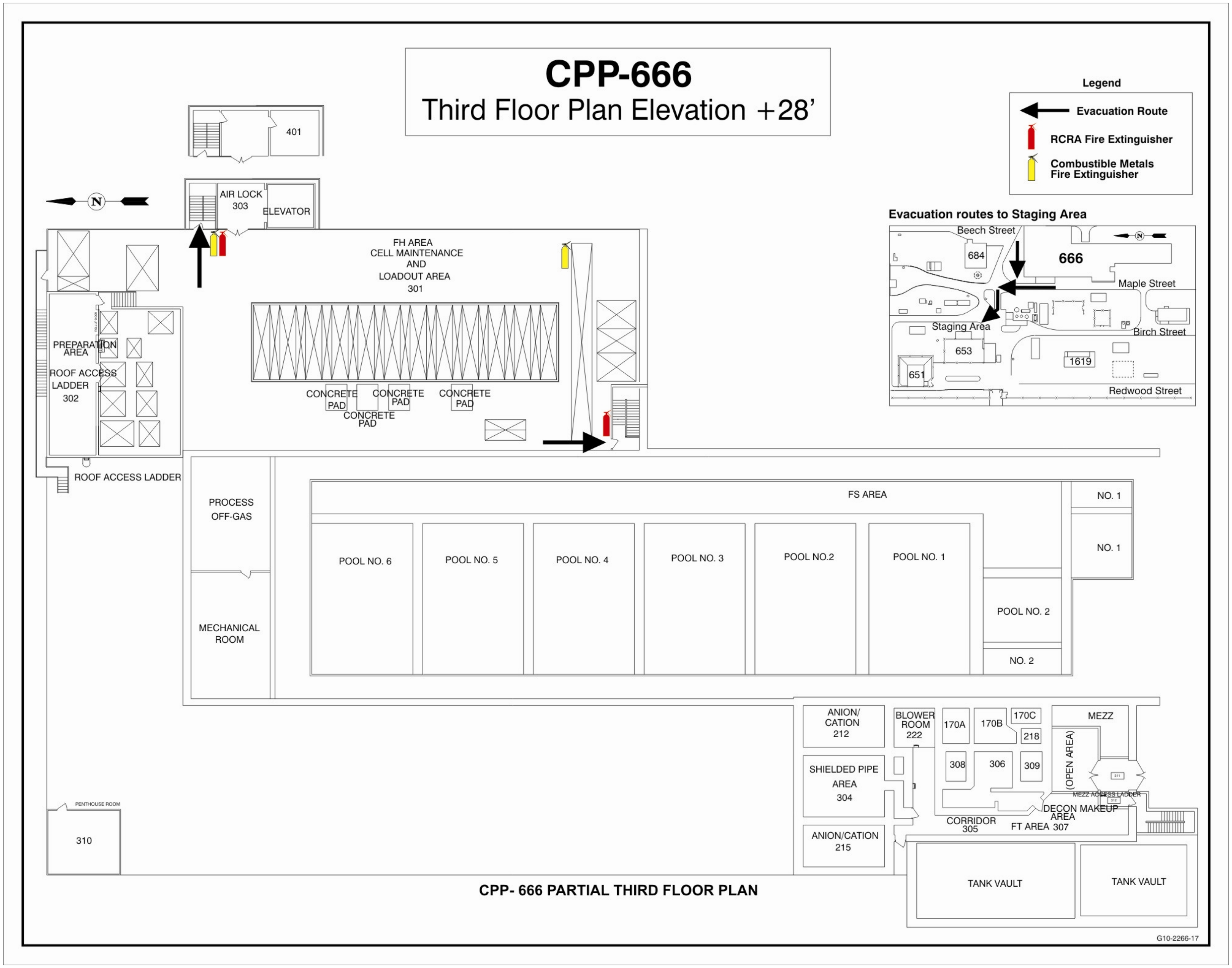

EXHIBIT G-7. CPP-666 +28' Level Evacuation Routes and Emergency Equipment

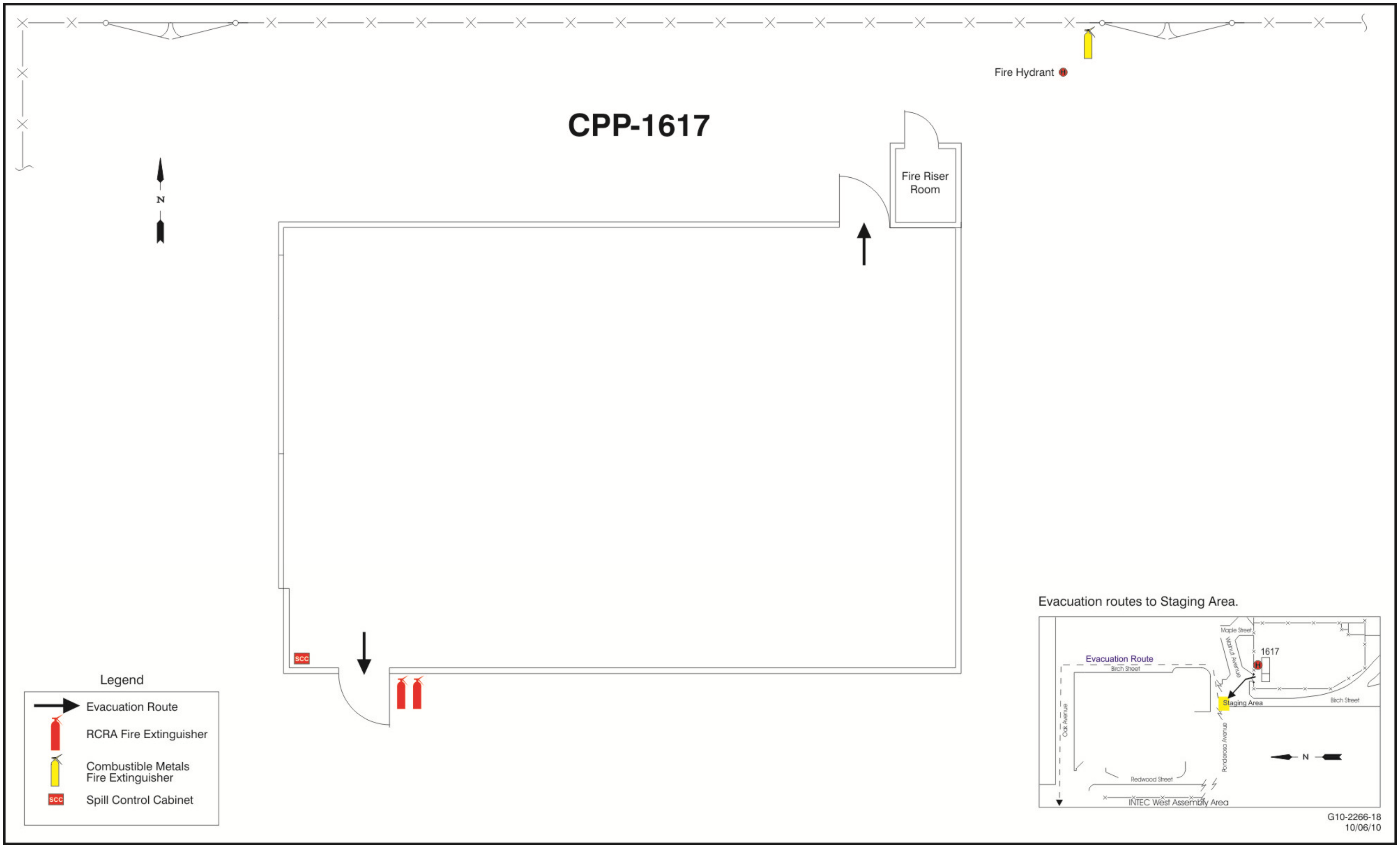

Exhibit G-8. CPP-1617 Evacuation Routes and Emergency Equipment.

HWMA/RCRA PART B PERMIT

FOR THE

IDAHO NATIONAL LABORATORY

Volume 18 – Idaho Nuclear Technology and Engineering Center

ATTACHMENT 8

Debris Treatment Processes
Holdup and Collection Tanks
CPP-659/-1659 Storage
CPP-666 FDP Cell and FDP Area Container Storage and Tank Storage
Other Miscellaneous Treatment Processes

Section I

Closure and Postclosure Requirements

Revision Date: May 19, 2015

CONTENTS

TABLES

I. CLOSURE AND POSTCLOSURE REQUIREMENTS

This closure plan specifies Idaho Nuclear Technology and Engineering Center (INTEC) performance standards and procedures for the waste management units addressed in this permit: debris treatment processes, other miscellaneous treatment processes in CPP-659 and CPP-666 FDP Cell and FDP Area, holdup and collection tanks, storage in CPP-659/-1659, and container storage and slab tank storage in the CPP-666 Fluorinel Dissolution Process (FDP) Cell and container storage and tank storage in the FDP Area. This plan addresses all units, although they may not be closed at the same time. The activities and closure performance standards described in this plan apply only to Resource Conservation and Recovery Act (RCRA)-regulated wastes. Prior to initiation of closure, all hazardous waste will be removed from the units and transferred to a RCRA interim status/permitted treatment, storage, and/or disposal (TSD) unit.

Closure of the subject units may result in process equipment and building components being dispositioned as recyclable material or reused for any number of activities other than hazardous waste management processes. Conversely, certain process equipment or building components may be declared waste and managed as such. The closure performance standards for decontaminating the debris treatment processes, other miscellaneous treatment processes in CPP-659 and CPP-666 FDP Cell and FDP Area, holdup and collection tanks, storage in CPP-659/-1659, and container storage and slab tank storage (VES-FC-184), and sodium distillation system tank storage in the CPP-666 FDP Cell and FDP Area correspond to applicable regulatory guidelines. The closure performance methods that will be employed as applicable to the closure activity are described in Section I-1d(1), -1d(2), -1d(3) and -1d(8). Specifically, closure activities will address contaminated process equipment and building components to be salvaged as scrap metal or other recyclable material; contaminated process equipment and building components to be reused for non-waste management purposes; contaminated process equipment and building components to be disposed of as hazardous waste debris; and residues/wastes resulting from decontamination activities.

The FDP was shutdown in 1988. The equipment has remained in-place except for some equipment that had been disconnected during and after processing operations. Much of this equipment was placed at the -13' level of the FDP cell prior to it being permitted. The three lids were removed from the dissolver vessels to make more room for repackaging of the RH-TRU waste. All equipment (in-place and loose) will undergo a hazardous waste determination and will be addressed during closure of the unit.

I-1. CLOSURE AND POSTCLOSURE REQUIREMENTS [IDAPA 58.01.05.008 and 58.01.05.012; 40 CFR 270.14(b)(13), 264.112(a)(1) and (2)]

This closure plan describes the procedures to be used to remove remaining waste residues and to decontaminate process equipment and building components to achieve closure performance standards specified in the Idaho Administrative Procedures Act (IDAPA) 58.01.05.008 [Title 40, Code of Federal Regulations (CFR) Part 264.111]. This closure plan does not include contingent plans for closure as a landfill and postclosure maintenance as a disposal unit. Debris treatment processes, other miscellaneous treatment processes in CPP-659 and CPP-666 FDP Cell and FDP Area, holdup and collection tanks, storage in CPP-659/-1659, container storage and slab tank storage (VES-FC-184) in the CPP-666 FDP Cell, and container storage and SDS tank storage in the FDP Area will be operated and closed, to prevent releases of contaminants outside the units. Postclosure escape of hazardous waste constituents to the ground, surface water, or atmosphere will be nonexistent. Therefore, continued maintenance activities after closure is completed will not be required. This closure plan satisfies the requirements of IDAPA 58.01.05.008 (40 CFR 264.111 through 264.115 and applicable parts in 40 CFR 264.178, 264.197, and 264.1102).

CPP-659/-1659 and CPP-666 Process Information

Section D "Process Information" of this permit presents specific design and process information for the CPP-659/-1659 and CPP-666 units. Pertinent to the activity of closure, this process equipment and information, plan views, design drawings and specifications will be utilized to implement this closure plan in a compliant and technically sound manner. Significant to implementation of this closure plan, Section D identifies which structures and equipment may potentially come into contact with hazardous waste or hazardous constituents, and therefore, will be subject to protocols set forth in this plan. The following subsection supplements Section D information with regard to CPP-659/-1659 and CPP-666 operational constraints that will minimize the spread of hazardous waste and hazardous constituents during operations and design attributes of all units that will aid decontamination efforts during closure.

CPP-659/-1659 and CPP-666 Operational Constraints and Structures That Aid Closure

Significant to final closure activities, all floor and equipment surfaces of CPP-659/-1659 and CPP-666 associated with storage and treatment activities are designed such that foreseeable decontamination efforts will be facilitated. For instance, the filter handling cell (Room 309), where the high-efficiency particulate air (HEPA) Filter Leaching System (HFLS) is located, possesses a stainless-steel cell floor and walls compatible with the waste types and constituents to be managed, as well as foreseeable decontamination media. Furthermore, facilities such as the CPP-659 Decon Area low-level decon room, equipment decon area, and the remote shielded cells possess decontamination equipment that, upon closure, will aid in the decontamination of surfaces that have come into contact with waste and waste residues. Additionally, practices will be followed such that particular debris treatment and decon equipment or components not functionally required during a given treatment campaign will be isolated from the potentially contaminated work area.

I-1a. Closure Performance Standards (IDAPA 58.01.05.008; 40 CFR 264.111)

The closure process is designed to remove and manage waste, eliminate the need for postclosure activities, and minimize generation of waste.

The closure performance standards for the CPP-659/-1659 and CPP-666 units are in accordance with applicable portions of IDAPA 58.01.05.006 through 58.01.05.012 (40 CFR 262 through 270). RCRA/Hazardous Waste Management Act (HWMA) closure activities would be considered precursor efforts to the ultimate facility deactivation and decommissioning (D&D).

Technical approaches to this ultimate facility D&D will have practical bearing on the appropriate approach to RCRA/HWMA closure. While this plan cannot necessarily foresee the ultimate U.S. Department of Energy, Idaho Operations Office (DOE-ID) facility D&D for CPP-659/-1659 and CPP-666, it can make assumptions based on past and current RCRA/HWMA closure and D&D activities at the INTEC. This integration of RCRA/HWMA closure activities with subsequent D&D activities is reflected in Number 3 below, as it relates to contaminated process equipment and building components that would remain in place and undergo subsequent facility D&D. Performance standards, probable scenarios affecting process equipment, building components, and decontamination residuals are indicated below:

1. Contaminated process equipment and building components to be salvaged as scrap metal/materials will be decontaminated as described in Section I-1d. Process equipment and building materials will be decontaminated in a manner and degree as specified by the recycle scrap metal/material vendor in conformance with their recyclable material acceptance criteria. To attain the closure performance standard, the subject process equipment and building components may be subjected to decontamination techniques such as sweeping, brushing, scraping, wiping, or rinsing. The selected means of decontamination will be material-specific and dependent on the effectiveness in attaining the contracted recyclable materials vendor acceptance criteria, minimization of the potential spread of contamination, and minimization of decontamination wastes. All decontamination media and collected dirt and other residuals generated from this closure activity will be managed as identified in Section I-1d of this closure plan.

2. The performance standard for reusable process equipment and building components will be a degree of decontamination consistent with the intended "postclosure" use of the process equipment or building components as determined by Idaho National Laboratory (INL)-accepted industrial hygiene and health physics protocols and guidelines. The need to decontaminate room, cell or equipment surfaces will be determined initially by reviewing the operating record for evidence that hazardous waste or hazardous constituents came into contact with the structure or equipment in question. This

operational record review will be supplemented by visual observation, where physical access, radiological conditions, and industrial hygiene concerns permit.

3. Other than internal surfaces of tank systems and ancillary equipment, the performance standard for contaminated process equipment and building components that would remain in place and undergo subsequent facility D&D will be a level of chemical or physical decontamination required to render the equipment or structural surfaces "clean," analogous to that specified and identified under IDAPA 58.01.05.011 (40 CFR 268.45). The degree of decontamination will be based on how extensively the equipment or structure was used in waste treatment or storage operations, and the likelihood that it came into direct contact with the hazardous waste. An assessment of the facility operating record and spill records will be conducted to determine the extent of potential waste contamination. In addition, the treatment or storage area will be visually inspected for any signs of release, e.g., waste-related staining. All equipment and structures that have documented releases, waste-related stains, or known contact with waste materials will be decontaminated, using an appropriate decontamination solution/method and/or be decontaminated using a method analogous to an alternative treatment technology identified in IDAPA 58.01.05.011 (40 CFR 268.45).

In the event that this primary performance standard is not achievable upon the initial decontamination campaign, the appropriateness of the decontamination media will be verified and a second decontamination effort will be undertaken, potentially with different and/or more aggressive chemical agents or physical removal methods. If upon completion of the second decontamination campaign, apparent waste-related stains continue to occupy greater than 5% of the equipment or structural surface area, an equipment/building surface sampling regimen will be considered. Design and implementation of this sampling regimen and corresponding data quality objectives and performance standard will be presented to the Idaho Department of Environmental Quality (DEQ), under the pretenses of an amendment to the closure plan. Depending on the timeframes involved, development, DEQ approval and implementation of this sampling regimen would likely require an extension of timeframe to complete closure pursuant to IDAPA 58.01.05.008, 40 CFR 264.113(a) and 264.113(b). It is anticipated that results from such a sampling effort would be utilized to assess the worker, nonresidential scenario risk posed by residual hazardous constituent contamination, such that a risk-based closure determination could be made and a finding reached that the facility closure performance standards have been attained.

4. <u>The performance standard for contaminated process equipment and building components to be managed as hazardous debris</u> will be the alternative treatment standards for hazardous waste debris in IDAPA 58.01.05.011 (40 CFR 268.45), <u>or</u> the equipment/components will be managed as hazardous waste, per IDAPA 58.01.05.006 through .012 (40 CFR 262 through 270). Contaminated process equipment and building components will be managed as hazardous waste debris, either at an INL or off-Site TSD unit. This may entail decontamination of the waste as summarized in Table I-1 until the standard for attaining a "clean debris surface" is achieved, as verified by visual inspection of the contaminated surface. Clean debris surface means that the surface, when viewed without magnification, shall be free of visible contaminated soil and hazardous waste except that residual staining from soil and waste, consisting of light shadows, slight streaks, or minor discoloration. Soil and waste in cracks, crevices, and pits may be present, provided that such staining and waste and soil in cracks, crevices, and pits shall be limited to no more than 5% of surface area. Table I-1 summarizes the potential physical and chemical extractive treatment technologies to be employed and the corresponding type of process equipment or building components. Following decontamination and/or equipment removal, the area will be swept clean of dirt and debris. Materials will be removed and containerized. All collected decontamination media and collected dirt and debris will be sampled, analyzed, and managed accordingly. An alternative to the described closure activities that may be exercised at the time of closure is dismantling, packaging, manifesting as hazardous waste and transport of contaminated equipment to be disposed of to an interim status/permitted TSD unit.

Table I-1. Potential CPP-659/-1659 and CPP-666 Closure Debris Treatment Technologies.

Component or Subsystem	Extractive or Immobilization Treatment Technology[1]
Container Storage, Waste Pile, Debris Treatment Unit, Other Miscellaneous Treatment Unit Surfaces	
Ancillary equipment and surfaces, secondary containment devices	High-pressure steam and water sprays[2], abrasive blasting, CO_2 blasting
Ultrasonic cleaner, portable soak (containers), steam spray booth, stainless-steel sinks	High-pressure steam and water sprays[2], CO_2 blasting
Prefilters, HEPA filters	Water washing, spraying, solvent extraction[2]
Prefilter and HEPA filter housings	CO_2 blasting, abrasive blasting, water washing, spraying[2]
Structural components (metal wall panels, floor surfaces, structural beams, ceiling materials, etc.)	CO_2 blasting, abrasive blasting, high-pressure steam and water washing, spraying[2], spalling
Miscellaneous metal ducting	CO_2 blasting, abrasive blasting, high-pressure steam and water washing, spraying[2]
Tank Storage Units and Affected Sumps	
HEPA filter leaching tanks, drying tanks, decon holdup tank, decon collection tank, FDP cell slab tank and FDP Area SDS tanks	Not classified as debris, see Section I-1d(2)
Affected ancillary equipment and surfaces, secondary containment devices, including sump surfaces	High-pressure steam and water sprays[2], abrasive blasting, CO_2 blasting

[1] From IDAPA 58.01.05.011 (40 CFR 268.45, Table 1)

[2] Would require an Equivalent Technology Approval per IDAPA 58.01.05.011 [40 CFR 268.42(b)]

5. Decontamination media, rinsates, residues, and used personal protective equipment (PPE) generated from the decontamination of recyclable scrap metal/material, reusable equipment, and hazardous waste debris will be characterized per the waste analysis plan (WAP) of this permit application. As detailed in Section C, this characterization will be determined by utilizing acceptable process knowledge or sampling and analysis. Management of mixed waste streams will, as necessary, be addressed in the INL Site Treatment Plan and may include incineration, stabilization, or other acceptable means of treatment, as necessary. All characterization activities performed in conjunction with this closure action will be in accordance with the current WAP for this permit or permit application.

I-1b. Partial Closure Activities [IDAPA 58.01.05.008; 40 CFR 264.112(a)(1)]

Many of the CPP-659/-1659 and CPP-666 units share common rooms or cells with utilities, heating, ventilation, and air conditioning (HVAC), or other aspects of miscellaneous INTEC facility operations (e.g., Room 214 shares calciner cell activities with waste storage activities addressed by this Part B permit). Because of this, it is unclear whether or not it may be desirable to close any of the CPP-659/-1659 and CPP-666 units prior to closure of the facility as a whole. Therefore, partial closure activities would be preceded by notification of the DEQ and undertaking an amendment to the closure plan pursuant to IDAPA 58.01.05.008, 40 CFR 264.113(a) and 264.113(b).

I-1c. Maximum Waste Inventory [IDAPA 58.01.05.008; 40 CFR 264.112(b)(3)]

This Part B permit includes the Part A hazardous waste permit application for CPP-659/-1659 and CPP-666 units. The Part A permit application indicates the maximum potential waste inventory for CPP-659/-1659 and CPP-666. In addition, the operating record for each unit will identify the occurrence of waste spills, if any, over the operating life, and the measures taken to mitigate the spill.

I-1d. Inventory Removal and Disposal or Decontamination of Equipment, Structures, and Soils (IDAPA 58.01.05.008; 40 CFR 264.111, 264.112, and 264.114)

Selection of specific process equipment and building components, and the degree of decontamination efforts, will be based on whether the equipment and structures have come into direct contact with waste, whether or not there is visual evidence of waste-related staining or streaking, the nature of constituents or contaminants present, and whether the equipment and structures will be managed for recycle, reuse, or disposal as hazardous debris. Due to the predominantly nonliquid-bearing physical form of the wastes to be managed in these units, as well as design and probable integrity of secondary containment at closure, releases to the environment are unlikely. As a result, disposal of contaminated soils pursuant to this closure plan is not anticipated. Section I-1a., Closure Performance Standards (IDAPA 58.01.05.008; 40 CFR 264.111), addresses the protocols for achieving the closure performance standards or management processes for the following groupings of process equipment, contaminated structures and residues:

- Contaminated process equipment and building components to be salvaged as scrap metal/materials

- Contaminated reusable process equipment and building components

- Contaminated process equipment and building components that would remain in place and undergo subsequent facility deactivation and decommissioning

- Contaminated process equipment and building components to be managed as hazardous debris

- Decontamination media, rinsate, residues, and used PPE.

The selected means of decontamination will depend on effectiveness in attaining the closure performance standard, minimization of the potential spread of contamination, and minimizing the generation of decontamination waste. Room or area surfaces contaminated during decontamination of equipment will be closed in the same fashion. If used, fluids from equipment decontamination will be contained within the work area and collected in containers using an ancillary pumping system. Spill booms, spill control pillows, swabs, or other absorbent material(s) may be used to contain the residual fluids and facilitate removal.

Process Equipment and Building Components - Selection of Potential Debris Treatment Technologies Employed

As indicated in Section I-1a, Closure Performance Standard, dismantled contaminated process equipment and building components to be disposed of as solid waste will be managed in accordance with the treatment standards for hazardous debris in IDAPA 58.01.05.011 [40 CFR 268.45(a)]. In general, hazardous debris must be treated for each "contaminant subject to treatment," as defined in IDAPA 58.01.05.011 [40 CFR 268.45(a)], using the technology or technologies specified in IDAPA 58.01.05.011 (40 CFR 268.45, Table 1). The proposed debris treatment, other miscellaneous treatment, and waste storage activities will involve prohibited listed wastes and metal-bearing characteristic wastes. Given this fact, debris treatment conducted as part of facility closure will necessarily consider prohibited listed wastes and waste constituents subject to treatment, and the corresponding treatment standards indicated under IDAPA 58.01.05.011 (40 CFR 268.45). While not all-inclusive, Table I-1 indicates the process equipment, building component or subsystem, and the probable corresponding physical and chemical extractive debris treatment technology description. Any contaminant restrictions relative to application of technologies other than the best demonstrated available technology will be presented to the DEQ for approval, prior to implementation.

Alternate Treatment Technology Selection Process

Prior to implementation of a given alternative treatment technology specified in Table I-1 or otherwise, a comprehensive engineering evaluation will be made of the given form of debris (e.g., metal versus plastic), the known hazardous constituents, radiological considerations, industrial hygiene concerns, and any other factors that may affect technology selection. If, based on this evaluation, a suitable alternative treatment technology is not clearly indicated, a treatability study of one or more technologies may be undertaken on that class of debris waste. Based on the initial engineering evaluation or the successful identification of a technology via treatability studies, an alternative treatment technology will be selected for implementation. In all cases, the performance standard for any technology implemented (specified on Table I-1) will be the clean debris surface standard under IDAPA 58.01.05.011 (40 CFR 268.45).

Room/Cell and Storage Area Surfaces

Room surfaces with contamination as indicated by the assessment will be cleaned of dirt and other residuals, as necessary. Materials will be removed and containerized, followed by decontamination to attain a level of contamination analogous to the "clean debris surface."

Transfer Areas and General Nonwaste Handling Equipment

Equipment and structures such as waste transfer areas into and out of the CPP-659 Vehicle Entry and Truck Bay (Room 417) and waste transfer areas into and out of the CPP-666 FDP cell and FDP Area that have no documented releases, visible signs of release, or no known contact with waste will be decontaminated using customary radiological decontamination practices or normal housekeeping procedures. At a minimum, equipment and structures will be wiped down or mopped with a suitable decontamination medium. Portions of the floor with no known contact with hazardous waste will be mopped or wiped down. Residues generated by this general cleaning or decontamination will undergo a hazardous waste determination in accordance with the current WAP for this permit or permit application. Environmental Protection Agency (EPA) SW-846 or equivalent methodologies will be used, matching contaminant of concern with appropriate sample type, quantity, and analyses.

Hazardous Residue Management

Process equipment and building components that undergo decontamination on-Site will be decontaminated in appropriate areas within the INTEC as necessary, or at other approved INL facilities available at the time of closure. If used, fluid resulting from decontamination activities will be contained within the work area and collected in containers using an ancillary pumping or other system as needed. Spill booms, spill control pillows, swabs, or other absorbent materials may be used to contain the residual fluids and facilitate removal. Following decontamination and/or equipment removal, the area will be swept clean of dirt and residuals. Materials will be collected and containerized. Recovered decontamination media and collected dirt and residuals will be characterized in accordance with Section C of this permit and managed according to the results of the analysis. When sampling and analysis is required, EPA SW-846 or equivalent methodologies will be used, matching contaminant of concern with appropriate sample type, quantity, and analyses. An alternative to the described closure activities that may be exercised at the time of closure is dismantling, packaging, and transport of contaminated equipment to be disposed of at an on-Site or off-Site RCRA interim status or permitted facility for required treatment and subsequent disposal.

All of the indicated waste, residue, and decontamination materials and/or rinsates will be containerized and sampled as described and stored in INL RCRA/HWMA-compliant facilities as "Unknown-Pending Sampling and Analysis." In addition, all disposable PPE, other disposable equipment, and all other wastes generated during closure activities will be containerized and characterized in accordance with the current WAP. When sampling and analysis is required, EPA SW-846 or equivalent methodologies will be used, matching contaminant of concern with appropriate sample type, quantity, and analyses. Before being moved from any areas undergoing decontamination, reusable PPE will be decontaminated by removing residual materials from booties, gloves, anti-C's, and spraying, washing, and scrubbing all outside protective clothing surfaces. Treatment and disposal of these waste streams will be addressed in the INL Site

Treatment Plan and may include incineration, stabilization, or other acceptable methods of treatment, as necessary.

I-1d(1) Closure of Containers (IDAPA 58.01.05.008; 40 CFR 264.178)

Prior to closure and decontamination activities, all hazardous waste managed in containers will be removed, transported to, and managed in an on-Site or off-Site TSD unit. Newly generated waste resulting from decontamination or waste removal efforts may be managed in and/or transported to a 90-day storage area in compliance with IDAPA 58.01.05.006 [40 CFR 262.34(a)] to undergo waste characterization for determination of final disposition. In addition, waste that can be treated within the 90-day timeframe may be sent to a 90-day storage unit for treatment under a State of Idaho-approved generator treatment plan. All hazardous waste in storage containers generated from closure activities will either be transported to TSD units or treated in IDAPA 58.01.05.006 [40 CFR 262.34(a)] 90-day storage units. All sampling and testing activities will be in accordance with the current WAP. EPA SW-846 or equivalent methodologies will be used, matching contaminant of concern with appropriate sample type, quantity, and analyses.

I-1d(2) Closure of Tanks [IDAPA 58.01.05.008; 40 CFR 264.179]

Tanks addressed by this closure plan include those listed in Table I-2.

The tank systems in Table I-2 will be considered "clean closed" when the following closure performance standards are met:

- All RCRA hazardous wastes are removed from the tanks, pipelines, ancillary equipment, and surfaces of the system

Table I-2. CPP-659 and CPP-666 Tank Systems.

Vessel Number	Total Volume in Gallons
VES-NCD-141 HFLS Leaching Tank	120
VES-NCD-142 HFLS Drying Tank	70
Decon Room Small sink (SH-NCD-934)	28
Decon Room Large sink (SH-NCD-933)	237
Low Level Decon Room Ultrasonic cleaner (UC-NCD-921)	79
VES-NCD-123	3,800
VES-NCD-129	530
FDP Cell Slab Tank (VES-FC-184)	65
FDP Area SDS Tanks: Distillation Vessel (VES-FC-101) Collection Vessel (VES-FC-85A)	 35 5
Total	4,969

- If removed from the facility and managed as (1) salvageable scrap metal/materials, or (2) reused as process equipment, the performance standard is that specified in Section I-1a above

- If left physically intact, in place and not managed as hazardous waste debris, the tanks, piping, ancillary equipment, and building interiors associated with these tank systems are decontaminated in a manner to achieve the performance standard. Probable decontamination solutions may include one or more acidic or alkaline decontamination solutions, or appropriate combinations of the two.

The SDS tanks listed in Table I-2 will be closed by removal and dispositioned in accordance with the waste characterization completed at that time. The remaining tanks indicated in Table I-2 other than VES-NCD-123 and -129 are small and bottom- draining and, as a result, will not retain any measurable sludge, sediment, or other solids at the time of closure. By virtue of the processes upstream of VES-NCD-123 and -129, these tanks will likely contain some quantity of solids at closure. Due to the radiological environment associated with these tanks, the absence or presence of this solid material at the time of closure will be verified by radiation surveys/profiles of the vessel exteriors (with higher readings at the bottom indicative of solids), and/or boroscope or similar examination of the tank interior. VES-NCD-123 and -129 possess air sparging capabilities, which will aid in suspending solid materials for transfer out of the tank system, potentially to CPP-604 Process Equipment Waste Evaporator (PEWE) Storage Tank VES-WL-132. The amount of solid materials entrained in VES-NCD-123 and -129 prior to initiating closure will likely be minimal due to the practice of sparging their contents during normal liquid waste transfers out of the systems.

In verifying the effectiveness of decontamination activities, the following measurements and determinations will be used:

(1) Levels of removable hazardous chemical constituents on swipe samples taken from decontaminated surfaces. Swipes will be premoistened with mildly acid (pH 3 to 5) solution, appropriate for solubilizing waste constituents adhering to the tank system surfaces. Closure of the tank systems will be considered successful when concentration of hazardous constituents smear samples do not exceed two times the method detection limit (as defined in the appropriate procedure of Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd edition), or

(2) Levels of hazardous chemical constituents and hazardous characteristics in spent decontamination solutions. Closure of the tank systems will be considered successful

when the concentration of hazardous constituents in spent decontamination solutions do not exceed the Toxicity Characteristic Leaching Procedure threshold for characteristic metals and organic compounds, and do not exceed the universal treatment standard (waste water) at 40 CFR 268.40, only for listed <u>constituents managed by the facility, as documented in the operating record.</u> Spent decontamination solutions may be sampled via the tank VES-NCD-123 and -129 sampling systems, or as necessary, downstream at a suitable PEWE storage tank or another appropriate collection point, and/or Radiological surveys of tank exterior walls to verify removal of the solid waste fraction, if any, and/or

(3) Boroscope or other visual determination methods for verifying removal of the solid waste fraction, if any.

I-1d(3) Closure of Waste Piles [IDAPA 58.01.05.008 & -012, 40 CFR 264.258, 270.18(h)]

Storage of waste in piles occurs in rooms indicated in Section D-3 of this. Rooms or cells functioning as totally enclosed waste piles possess stainless-steel-clad containment, and lend themselves to examination, decontamination and verification protocols similar to those specified for container storage areas, in conformance with Section I-1a. Prior to closure and decontamination activities, all hazardous waste managed in containers will be removed, transported to, and managed in an on-Site or off-Site TSD unit. Newly generated waste resulting from decontamination or waste removal efforts may be managed in and/or transported to a 90-day storage area in compliance with IDAPA 58.01.05.006 [40 CFR 262.34(a)] to undergo waste characterization for determination of final disposition. In addition, waste that can be treated within the 90-day timeframe may be sent to a 90-day storage unit for treatment under a State of Idaho-approved generator treatment plan. All hazardous waste in storage containers generated from closure activities will either be transported to TSD units or treated in IDAPA 58.01.05.006 [40 CFR 262.34(a)] 90-day storage units. All sampling and testing activities will be in accordance with the current WAP. EPA SW-846 or equivalent methodologies will be used, matching contaminant of concern with appropriate sample type, quantity, and analyses.

I-1d(8) Closure of Miscellaneous Units [IDAPA 58.01.05.012, 40 CFR 270.23(a)(2)]

Management of mixed wastes in miscellaneous units is described in Section D-8 of this permit and encompasses a variety of miscellaneous treatment activities within the Decon Cubicles and the Steam Spray Booth and other rooms/cells with CPP-659 and the CPP-666-FDP Cell and FDP Area. As indicated in Section I-1, facilities such as the CPP-659 Decon Area low-level decon room, equipment decon area, and the remote shielded cells possess decontamination equipment that upon closure will aid in the decontamination of surfaces that have come into contact with waste and waste residues. Additionally, practices will be followed such that particular debris treatment and decon equipment or components not functionally required during a given treatment campaign will be isolated from the potentially contaminated work area. It is anticipated that following closure of the decon cubicles and steam spray booth, the room or cells in question would remain intact in anticipation of decontamination and decommissioning activities. With this scenario in mind, the appropriate performance standard is that indicated in Item 3, Section I-1a, Closure Performance Standards, whereby an assessment of the facility operating record and spill records will be conducted to determine the extent of potential waste contamination. In addition, the treatment areas will be visually inspected for any signs of release, e.g., waste-related staining. All equipment and structures that have documented releases, waste-related stains, or have known contact with waste materials will be decontaminated, using an appropriate decontamination solution/method and/or be decontaminated, using a method analogous to an alternative treatment technology identified in IDAPA 58.01.05.011 (40 CFR 268.45). As indicated in Section I-1a, in the event that this primary performance standard is not achievable upon the initial decontamination campaign, the appropriateness of the decontamination media would be verified and a second decontamination effort would be undertaken, potentially with different and/or more aggressive chemical agents or physical removal methods. If upon completion of the second decontamination campaign, apparent waste-related stains continue to occupy greater than 5% of the equipment or structural surface area, an equipment/building surface sampling regimen would be considered. Design and implementation of this sampling regimen and corresponding data quality objectives and performance standard would be presented to the DEQ under the pretenses of an amendment to the closure plan. Depending on the timeframes involved, development, DEQ approval, and implementation of this sampling regimen would likely require an extension of timeframe to complete closure pursuant to IDAPA 58.01.05.008, 40 CFR 264.113(a) and 264.113(b). It is anticipated that results from such a sampling effort would be utilized to assess the worker, nonresidential scenario risk posed by residual hazardous constituent contamination, such that a risk-based closure determination could be made and a finding that the facility closure performance standards have been attained.

I-1e. Ancillary Closure Activities [IDAPA 58.01.05.008; 40 CFR 264.112(b)(5)]

No ancillary activities such as groundwater monitoring, leachate collection, or run-on/run-off control are appropriate or planned for these units.

I-1f. Schedule for Closure [IDAPA 58.01.05.008; 40 CFR 264.112(b)(6)]

The Director of the DEQ will be notified in writing at least 45 days prior to the date that closure operations are planned to begin.

The projected schedule for closure of these units is generalized as follows:

Activity	**Day Completed**
Initiate closure activities	Day 0
Complete equipment decontamination	Day 100
Complete surface decontamination	Day 140
Decontaminate tools (where applicable), complete waste assessments, remove wastes	Day 160
Complete removal of equipment/waste as necessary	Day 175

Complete all closure activities	Day 180
Submit closure certification to the State of Idaho	60 days after completion of closure

I-1g. Extension for Closure Time [IDAPA 58.01.05.008; 40 CFR 264.113(a) and 264.113(b)]

Closure of these units is scheduled for completion within the prescribed 180-day period. No variance is requested at this time.

I-1h. Certification of Closure [IDAPA 58.01.05.012 and 58.01.05.008; 40 CFR 270.11(d) and 264.115]

A certification of closure for each unit will be provided in accordance with IDAPA 58.01.05.008 (40 CFR 264.115) by a Idaho-registered professional engineer (PE), the contractor, and/or DOE-ID. The certification will state that a given unit has been clean closed in accordance with the approved closure plan. Final closure activities will be considered complete upon submittal of the certification of closure to the DEQ and written acceptance issued by the DEQ. These units will not be closed as a land disposal facility; therefore, a "Notice in Deed" and survey plat are not required.

I-2. Postclosure Plan [IDAPA 58.01.05.012; 40 CFR 270.14(b)(13)]

Since all hazardous or mixed wastes will be removed prior to closure and any residual hazardous chemical contamination will be removed during closure, a postclosure plan is not required.

I-3. Postclosure Notices [IDAPA 58.01.05.012; 40 CFR 270.14(b)(14)]

Since all hazardous and mixed wastes will be removed prior to closure and any residual hazardous chemical contamination will be removed during closure, postclosure notices are not required.

I-9. State Mechanisms

I-9a. Use of State Required Financial Mechanisms [IDAPA 58.01.05.012 and 58.01.05.008; 40 CFR 270.14(b)(18) and 264.149]

I-9b. State Assumption of Responsibility [IDAPA 58.01.05.012 and 58.01.05.008; 40 CFR 270.14(b)(18) and 264.150]

The INL is owned by the U.S. Department of Energy; therefore, the facility is exempt from providing a closure cost estimate, financial assurance mechanism, meeting liability requirements, or compliance with state mechanisms under IDAPA 58.01.05.012 and 40 CFR 270.14(b)(18) and 264.149 and 264.150.

HWMA/RCRA PART B PERMIT

FOR THE

IDAHO NATIONAL LABORATORY

Volume 18 – Idaho Nuclear Technology and Engineering Center

ATTACHMENT 8a

Radioactive Mixed Waste Staging Facility (CPP-1617)

Section I

Closure and Postclosure

Revision Date: March 10, 2015

CONTENTS

TABLES

SECTION I. CLOSURE AND POST-CLOSURE REQUIREMENTS

This closure plan has been prepared for the Radioactive Mixed Waste Staging Facility (RMWSF). The facility is a container storage and container treatment (macroencapsulation) unit located at the Idaho Nuclear Technology and Engineering Center (INTEC) at the Idaho National Laboratory (INL). The RMWSF stores hazardous and mixed wastes that may contain liquids and treats hazardous and/or mixed waste debris and radioactive lead solids via macroencapsulation.

I-1 Closure Plans [IDAPA 58.01.05.012 and .008; 40 CFR 270.14(b)(13) and 264.112(a)(1) & (2)]

The RMWSF requires closure under the Resource Conservation and Recovery Act (RCRA) in accordance with the requirements of the Idaho Administrative Procedures Act (IDAPA) 58.01.05.008, Closure and Post-Closure. This closure plan describes the procedures to be used to remove remaining waste residues and demonstrate that the unit is clean. This closure plan does not include plans for closure as a landfill and post-closure maintenance as a disposal unit (i.e., landfill).

Closure Objectives

The primary objective to be achieved by this closure plan is to close the unit in accordance with the requirements of IDAPA 58.01.05.008, Closure and Post-Closure. The closure plan addresses only the specifications and requirements for RCRA waste removal and cleaning. However, although not regulated under IDAPA 58.01.05.008, radiological activities related to the closure will be conducted in accordance with Department of Energy (DOE) Order 435.1, Radioactive Waste Management, and the INL Radiological Controls Manual. Any discussion of radionuclide contamination is provided for information purposes only, not for purposes of regulation under this closure plan.

The standards for closure of the unit in accordance with IDAPA 58.01.05.008, Subpart G are as follows:

- To minimize the need for further maintenance

- To control, minimize, or eliminate, to the extent necessary to protect human health and the environment, post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the ground or surface waters or to the atmosphere.

As closure preparations progress, additional information will be gained, and amendments to this plan may be required.

Unit Description

See Attachment 1a, Section B for a description of the RMWSF.

I-1a Closure Performance Standards (IDAPA 58.01.05.008; 40 CFR 264.111)

The Part B permit regulations for closure of container storage and container treatment areas are included in IDAPA 58.01.05.008, Subpart I, Use and Management of Containers.

The closure regulations cited above require the owner or operator to remove all hazardous wastes and hazardous waste residues from the containment system. The remaining containers, liners, bases, and soil containing or contaminated with hazardous waste or hazardous waste residues must be decontaminated or removed. The units will be considered RCRA-closed when the following requirements have been met:

- All containers have been removed from the buildings/storage areas

- The building walls, floors, exposed structural members, sumps, have been cleaned, as required, to achieve the levels specified in the Closure Performance Standards (CPSs)

- Any contaminated equipment, structures and soils have been properly decontaminated of dispositioned to an appropriate off-Site disposal facility, as required to achieve the levels specified in the CPSs

- Closure has been certified by a qualified professional engineer, the facility contractor, and the U.S. Department of Energy Idaho Operations Office (DOE-ID), and the Certification of Closure statements have been completed and signed.

Waste Description

The wastes stored at the RMWSF may contain the RCRA Environmental Protection Agency (EPA) Hazardous Waste Numbers (HWNs) listed in the Part A in Attachment 1 of this Permit.

See Attachment 2, Section C Waste Characteristics, for a description of the wastes that may be stored in the RMWSF container storage and container treatment areas.

Closure Characterization Plan

A waste determination will be performed on materials to be disposed of and on clean-up materials to ascertain whether or not they are RCRA hazardous. Tables C-1 and C-2 of Section C in Attachment 2 provide test methods for waste analysis, parameters, and rationale. Test methods are described in Attachment 2, Section C-2b. A detailed sampling plan will be prepared where required for these closure activities. Sampling and analytical methods selected for use will be based on EPA, DOE, and other guidance as appropriate. To ensure the quality and validity of the data generated during closure activities at the unit, Quality Assurance/Quality Control (QA/QC) procedures will be used. Minimum QA/QC requirements and recommendations are discussed in Attachment 2, Section C-2c(1).

For closure of the macroencapsulation unit(s), a waste determination will be performed on materials to be disposed of and on clean-up materials to ascertain whether or not they are RCRA hazardous. An assessment of the facility operating record and spill log will be conducted to determine the extent of potential waste contamination that may have occurred during macroencapsulation operations. Any macroencapsulation treatment areas will be visually inspected for any signs of a release (e.g., waste-related staining). Once these activities have been completed, all equipment and structures that have documented releases, waste related stains or have known contact with waste materials will be decontaminated using an appropriate decontamination method or dispositioned to an appropriate off-Site disposal facility.

Sampling Design

Sampling and analysis will be performed as needed to monitor the effectiveness of the cleaning. Samples of the last rinse solution batch will be collected and analyzed to verify that the CPSs have been met. Sampling methods are discussed in Section C-2c of Attachment 2, standard sampling methods are discussed in Section C-2c(1) of Attachment 2, and debris sampling is discussed in Section C-2c(1)(a) of Attachment 2.

Rinse Solution Sampling

Initial efforts will focus on decontaminating the building surfaces. If the rinse solution sample results meet the Closure Performance Standards (CPSs), the surface being cleaned will be considered to have achieved closure criteria, and no further cleaning efforts will be required. If the samples do not meet the CPSs, the appropriateness of the decontamination media will be verified and one or more subsequent decontamination efforts will be undertaken, potentially with different and/or more aggressive chemical reagents or physical removal methods. If upon completion of subsequent decontamination efforts the solution samples do not meet the CPSs, a building surface sampling regimen will be considered. Design and implementation of this sampling regimen and corresponding data quality objectives and performance standard will be presented to the Idaho Department of Environmental Quality (DEQ), as an amendment to the closure plan. Depending upon the time frames involved, development, DEQ approval and implementation of this sampling regimen would likely require an extension of time frame to complete closure pursuant to IDAPA 58.01.05.008, 40 Code of Federal Regulations (CFR) 264.113(a) and 264.113(b). It is anticipated that results from such a sampling effort would be utilized to assess the worker, nonresidential scenario risk posed by residual hazardous constituent contamination, such that a risk-based closure determination could be made and a finding reached that facility closure performance standards have been attained.

Solids Sampling

Solids generated during closure will require sampling and analysis by the Toxicity Characteristic Leaching Procedure (TCLP) to verify compliance with the CPSs for characteristic wastes, or other regulations applicable at the time of closure.

Sample Analysis

Sample analysis is discussed in Attachment 2, Section C-2b.

CPSs

The CPSs developed for toxicity characteristic wastes correspond to regulatory limits established by the Idaho Department of Environmental Quality (DEQ) and the EPA. EPA promulgated the TCLP to identify those wastes that are hazardous and thus subject to regulation under RCRA Subtitle C. The performance standards that will be used for the toxicity characteristic wastes are the regulatory levels stated in Table 1 of 40 CFR 261.24.

The CPSs that will be used for ignitable (D001) and corrosive (D002) wastes will be confirmation that the wastes do not meet the definition of ignitable waste per 40 CFR 261.21 or corrosive waste per 40 CFR 261.22.

Closure for characteristic wastes will be achieved by demonstrating compliance with these CPSs or other regulations applicable at the time of closure.

The CPSs applied to any equipment or debris contaminated with listed waste during closure activities will be achieved by application of the treatment corresponding to the standard identified in regulations applicable at the time of closure.

Data Evaluation

Minimum QC guidance is provided in Chapter 1 of SW-846. It is the responsibility of the laboratory to establish actual operating parameters and in-house QC acceptance criteria, based on its own laboratory standard operating procedures (SOPs) and in-house QC program, to demonstrate appropriate performance of the methods used in that laboratory for the RCRA analytical applications for which they are intended.

I-1b Maximum Waste Inventory [IDAPA 58.01.05.008; 40 CFR 264.112(b)(3)]

The maximum inventory of containerized waste in storage at any time during the operating life of RMWSF will be 2,244,156 gallons.

I-1c Disposal or Decontamination of Equipment, Structures, Soils [IDAPA 58.01.05.008; 40 CFR 264.111, 264.112, 264.197, 264.112(b)(4), and 264.114]

The decontamination process will include a series of cleanings, with the nature of each successive step dependent on the results of previous attempts. A variety of materials may be used, depending upon the experience and judgement of the closure team conducting the cleaning. The methods of application, as well as the number of steps in decontamination and the duration, will also be dependent on the judgement of the closure team.

The spent rinse solutions generated will be collected and sampled. If the sample results indicate that the CPSs have been met or if the debris treatment standard or other applicable treatment standard is achieved, no additional cleaning or decontamination will be necessary. If the sample results indicate otherwise, cleaning efforts will continue until the CPSs have been met or it is determined that additional cleaning efforts would be ineffective. In the latter case, a risk assessment may be performed to determine if the residual contamination poses a risk to human health and warrants the subsequent generation of additional waste.

Generally, cleaning efforts (for example, utilizing acidic, basic, or commercially available rinse solutions or dry techniques such as carbon dioxide pellet blasting or component removal with debris treatment on-site) will be conducted until the desired reduction in contamination is achieved. This phase may also include dismantling of components and removal of structural materials. Solids not considered to meet the definition of hazardous debris that are removed for disposal will be sampled and analyzed by TCLP to determine their disposition.

I-1c(1) Closure of Container Units [IDAPA 58.01.05.008; 40 CFR 264.178]

Closure activities will be considered complete upon submittal of a Certification of Closure, signed by a qualified professional engineer, the contractor, and DOE-ID, to the DEQ Director. Certification of Closure will verify that the unit has been closed in accordance with the specifications of the approved closure plan. Copies of the documentation supporting the qualified professional engineer's certification will remain at the INL in the event that this information is requested by the DEQ Director.

I-1f Schedule for Closure [IDAPA 58.01.05.008; 40 CFR 264.112(b)(6)]

Table I-1 presents the projected closure schedule. This schedule is tentative and may need to be revised as additional information becomes available.

Amendments to the Closure Plan

This closure plan has been prepared using the information currently available on conditions in the unit. As conditions change, it may be necessary to amend this closure plan as more detailed information becomes available. A request for permit modification will be submitted to the Director of the DEQ as conditions that affect closure activities are identified.

I-1g Extension for Closure Time [IDAPA 58.01.05.008; 40 CFR 264.112(c), 264.113(a) and (b)]

IDAPA 58.01.05.008, 40 CFR 264.113, requires completion of closure activities within 180 days. Due to unforeseen circumstances, longer time frames may be required for cleaning and waste removal. Thus, it may be necessary to request an extension pursuant to IDAPA 58.01.05.008, 40 CFR 264.113, as additional information becomes available and the time required to complete closure becomes more clearly defined. Subsequent amendments to this closure plan will be submitted accordingly.

I-1h Certification of Closure and Notice in Deed [IDAPA 58.01.05.008; 40 CFR 264.115]

Certification of Closure will be provided by a qualified professional engineer, the contractor, and DOE-ID, stating that the unit has been closed in accordance with the specifications of the approved closure plan. If the unit is not closed as a hazardous waste disposal unit (i.e., closed to landfill standards), a "Notice in Deed" and survey plat are not required. If the unit must be closed as a landfill, a "Notice in Deed" and survey plat will be required in addition to the other requirements under IDAPA 58.01.05.008, Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities.

Table I-1. RMWSF

Activity	Number of Days to Complete
Assemble Closure Team	-30
Initiate Closure Activities	0
Initial Decontamination	30
Intensive Decontamination	60
Removal of Existing Wastes	90
Integrity Assessment Complete	120
Physical Closure Completed	180
Certification of Closure Submitted to the Director of the Idaho Department Health and Welfare	60 days after closure

HWMA/RCRA PART B PERMIT

FOR THE IDAHO NATIONAL LABORATORY

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ATTACHMENT 9

Debris Treatment Processes
Holdup and Collection Tanks
CPP-659/-1659 Storage
CPP-666 FDP Cell Container Storage and Slab Tank Storage
Other Miscellaneous Treatment Processes
Radioactive Mixed Waste Staging Facility (CPP-1617)

Appendix D-8 Request for Waiver to Design

and Operating Requirements for Waste Piles

Effective Date: April 27, 2009

Request for Waiver to Design and Operating Requirements for Waste Piles IDAPA 58.01.05.008 [40 CFR 264.251(b)]

Title 40 Code of Federal Regulations (CFR) Part 264.251(b) states, “The owner or operator will be exempted from the requirements of paragraph (a) of this section, if the Regional Administrator finds, based on a demonstration by the owner or operator, that alternate design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituents (see section 264.93) into the ground water or surface water at any future time. In deciding whether to grant an exemption, the Regional Administrator will consider:

(1) The nature and quantity of the wastes;
(2) The proposed alternate design and operation;
(3) The hydrogeologic setting of the facility, including attenuative capacity and thickness of the liners and soils present between the pile and ground water or surface water; and
(4) All other factors which would influence the quality and mobility of the leachate produced and the potential for it to migrate to ground water or surface water.”

A waiver is hereby requested for the storage units identified in Volume 18, of the *RCRA Part B Permit the Idaho National Laboratory* (INL) per 40 CFR 264.251(b) from the requirements in 40 CFR 264 Subpart L, except as outlined in 40 CFR 264.256, 40 CFR 264.257, 40 CFR 264.258(a), and the description that follows.

Pending closure of Building CPP-659, the equipment as described in the approved HWMA/RCRA Partial Closure of the New Waste Calcining Facility (Calciner System) will be considered debris stored in waste piles. Pending treatment, spent high-efficiency particulate air (HEPA) filters and other debris may be stored in piles in the following rooms, in Building CPP-659 which is located at the Idaho Nuclear Technologies and Engineering Center (INTEC):

Adsorber Cell	Room 206
Off-Gas Cleanup Cell	Room 207
Calciner Cell	Room 214

Blend and Hold Cell	Room 215
Filter Cell/Valve Cubicle	Room 216
Decon Cell	Room 308
Filter Handling Cell	Room 309
Off-Gas Blower Cell	Room 322
Crane Maintenance and Transfer Area	Room 323
Transfer Area	Room 326
Shielded Storage Area	Room 416
Steam Spray Booth	Room 418

See Exhibits W-1 through W-5 for the location of the INTEC at the INL, the location of Building CPP-659 at the INTEC, and the locations of the rooms listed within CPP-659.

The Calciner System has been flushed and isolated to prevent introduction of liquids into the system in accordance with the approved partial closure plan. The Calciner System equipment will remain in place until the closure of the entire CPP-659 building.

HEPA filters are/were generated from the off-gas systems of various INTEC operations including the New Waste Calcining Facility (NWCF), the Fluorinel Dissolution Process (FDP), and from other INL facilities, such as the Special Power Excursion Reactor Test at the Critical Infrastructure Test Range Center, and the Materials and Fuels Complex (MFC).

A typical HEPA filter is composed of a corrugated filter medium of a mixture of fire-resistant glass fibers and special acid-resistant material strengthened with from 3 to 5% of an organic “latex” binding agent. The corrugated filter medium is folded back and forth and sealed on the edges to the metal housing with high-temperature-resistant silicone. The filter medium is 18 to 22 millimeters thick. The typical filter housing is made of 14-gauge Series 300 stainless steel. Most filters have plastic mesh on top and a stainless steel screen on the bottom to ensure the filter medium remains intact.

Other types of debris which may be stored in piles include, but are not limited to, piping, valves, pumps, and tools.

Acceptable knowledge may be used to determine applicable Environmental Protection Agency (EPA) hazardous waste numbers assigned to HEPA filters and other debris. This knowledge includes both process and/or chemical/physical testing of the waste. F, P, and U hazardous waste numbers may be applied, based on knowledge of the processes. F, P, and U hazardous waste numbers would be assigned to HEPA filters and other debris, primarily as a result of the contained in rule, as opposed to the F-, P-, or U-listed chemicals contacting the waste in a pure or concentrated form. Listed hazardous waste numbers that apply to the INTEC liquid waste system are documented in *A Regulatory Analysis and Reassessment of U.S. Environmental Agency Listed Hazardous Waste Numbers for the Applicability to the INTEC Liquid Waste System*, INEEL/EXT-98-01213, Rev 1, February 1999. The listed hazardous waste numbers and the associated waste constituents may be applicable to debris as a result of the contained in rule. Characteristic hazardous waste numbers may be applied to the waste by:

- Testing the waste according to the methods set forth in Subpart C of 40 CFR Part 261

- Testing the waste according to an equivalent method approved by the Director of the Idaho Department of Health and Welfare

- Applying knowledge of the hazard characteristic of the waste in light of the materials or the processes used.

Wastes awaiting storage will be verified as containing no free liquids prior to acceptance. This verification may be done in one of three ways: (1) visual examination of the waste, (2) testing by means of the paint filter liquids test (*SW-846* Method 9095), or (3) process knowledge of the waste.

The following process information assures no free liquids are in the FDP HEPA filters. The FDP dissolver off-gas system contained a series of fine mesh demisters, which trapped collected condensate from the vented air before it passed through the HEPA filters. The air was then subjected to a heating element, which raised the temperature to approximately 65 C and drove off the remaining moisture before it entered the filter. During the years that the FDP was operated, periodic inspections of the HEPA filter housing were conducted during filter change out to look for any signs of corrosion caused by moisture. These inspections have never shown evidence of moisture. The cell off-gas system also has a series of demisters and a preheater.

The following process information assures no free liquids are associated with the NWCF HEPA filters. Liquid droplets of scrub solution and dissolved solids are removed in a deentrainment separator and a mist eliminator. Process off-gas then passes through an adsorber superheater to ensure the off-gas temperature is above the dewpoint before the off-gas enters ruthenium absorbers. Prior to passing through the final HEPA filters, the off-gas passes through a mist collector and heater to prevent condensation of water vapor in the HEPA filter housings. Vessel off-gas (air from sparging, purging, and jet operations) joins the process off-gas just prior to the mist collector.

Additional HEPA filters received for treatment will come from processes similar to those described above. All HEPA filters are evaluated for the presence of free liquids during the receipt process.

Building CPP-659 consists of three levels. The first is at ground level. The second and third levels are both below grade, with the third being the lowest. Waste may be stored in piles in rooms at all three levels. Design features of these rooms include thick concrete walls and floors (as thick as 3 to 4 ft), steel reinforcement, stainless steel-lined floors, stainless steel wainscots, epoxy coatings, and trenches and drains.

The process area floors of CPP-659 consist of a stainless steel-lined concrete slab poured on top of the CPP-659 structural slab. The floor slab is 9 to 12 in. thick. The liner is 10-gauge, Series 300 stainless steel. The stainless steel liner plate was fabricated and installed in accordance with Specification SP-453504-20-2, "Stainless Steel Liner Plate," which references American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, American Society of Testing and Materials (ASTM), and American Welding Society (AWS) codes and standards. These specifications assure the structural integrity of the base and that the base is free of cracks and gaps. Liner seam welds were tested for leak tightness by the vacuum box method performed in accordance with Article 1 of Section V of the ASME Code and SP-453404-20-2, Appendix A, "Vacuum Box Examination of Liner Seam Welds." Leak-tested welds meet the acceptance criteria of Section III, Division 2, CC-5546 of the ASME Code.

In CPP-659, below grade walls and floors and above grade floors, where storage and treatment will occur, are constructed of steel-reinforced concrete. The above grade building structure has been designed and constructed to meet applicable seismic and tornado design criteria. The above grade structure is constructed of a combination of a structural steel post and beam frame and steel-reinforced concrete. The above grade wall material is either steel-reinforced concrete, or exterior steel sheathing over 6-in. of insulation, with steel sheathing on the interior of the wall. Shielding walls limit radiation exposure to personnel and the environment.

Exterior concrete surfaces below grade were coated with a bituminous damp-proofing hot-application method using asphalt or coal-tar pitch. A cold-application method using fibrous asphalt was used in confined spaces where the use of hot bitumen would be hazardous to personnel.

The waste stored in waste piles are dry HEPA filters and debris. The design and operating practices of these rooms provide a barrier that eliminates the possibility of migration of any hazardous constituents into the ground water or surface water at any future time. Building entry floors are elevated above grade by several feet. The CPP-659 Level 1 floors are at an elevation of approximately 4,917 ft, with the surrounding grade at elevations varying from 4,914 ft to below 4,913 ft near the bottom end of the south ramp up into the truck bay. This elevation difference of 3 to 4 ft prevents run-on from entering the building. Thus, the waste piles stored in CPP-659 will not be susceptible to run-on.

The following rooms which may contain waste piles could also offer secondary containment capacity during certain debris treatment operations:

Filter Cell/Valve Cubicle	Room 216
Decon Cell	Room 308
Filter Handling Cell	Room 309

Rooms 216 and 218 may provide secondary containment for the decon holdup tank (VES-NCD-123). Any liquids released by the decon holdup tank will drain to the decon holdup tank cell (Room 219). If a release were to continue, liquids will eventually overflow to Room 218, and ultimately, to Room 216. Room 216 is equipped with a sump to contain any liquids which might overflow from the decon holdup tank cell. Room 218 is equipped with a floor drain to VES-NCC-122. Both Rooms 216 and 218 are inspected weekly (when waste is present) for evidence of a leak. These inspections are documented.

Room 308 may provide secondary containment for portable storage tanks when used in the decon cell. The floor of the decon cell slopes toward a trench on the west side of the cell. Two drain valves are located at the southern end of the trench. Liquids can be routed through the drains valves to either the decon holdup tank (VES-NCD-123) or the decon collection tank (VES-NCD-129). Whenever portable storage tanks are used in Room 308, a flexible line, connected directly to the drain, will be used to drain liquids, in order to avoid contact between treatment solutions and any waste piles present.

Room 309 provides secondary containment for the HEPA Filter Leaching System (HFLS). The floor of the filter handling cell slopes toward a trench on the east side of the cell. Two drains are located at the southern end of the trench. Liquids can be routed through the drains valves to either VES-NCD-123 or VES-NCD-129. Whenever the HFLS is in use, a drain valve will remain open, in order to avoid contact between treatment solutions and any waste piles present.

All other rooms which may be used to store waste piles are separated from liquid sources by curbs, walls and/or liquid collection or drainage systems. Since all wastes received in these areas will contain no free liquids, leachate runoff is unlikely. In the event that process or other liquids come in contact with waste piles, the design and operating practices of these rooms provide a barrier that eliminates the possibility of migration of hazardous constituents into the ground water or surface water at any future time and ensure that any leachate is treated appropriately.

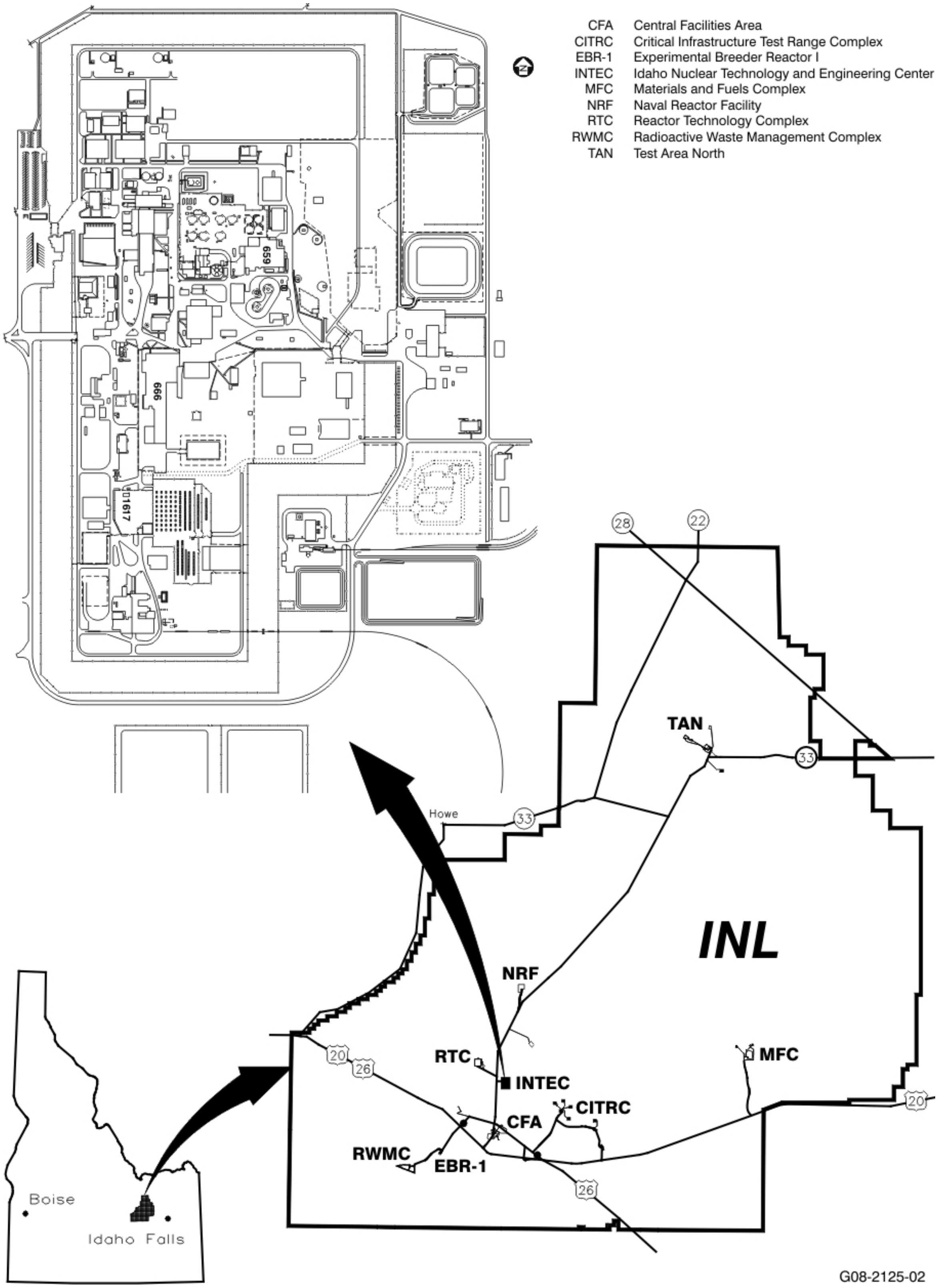

Exhibit W-1. Location of the INTEC at the INL.

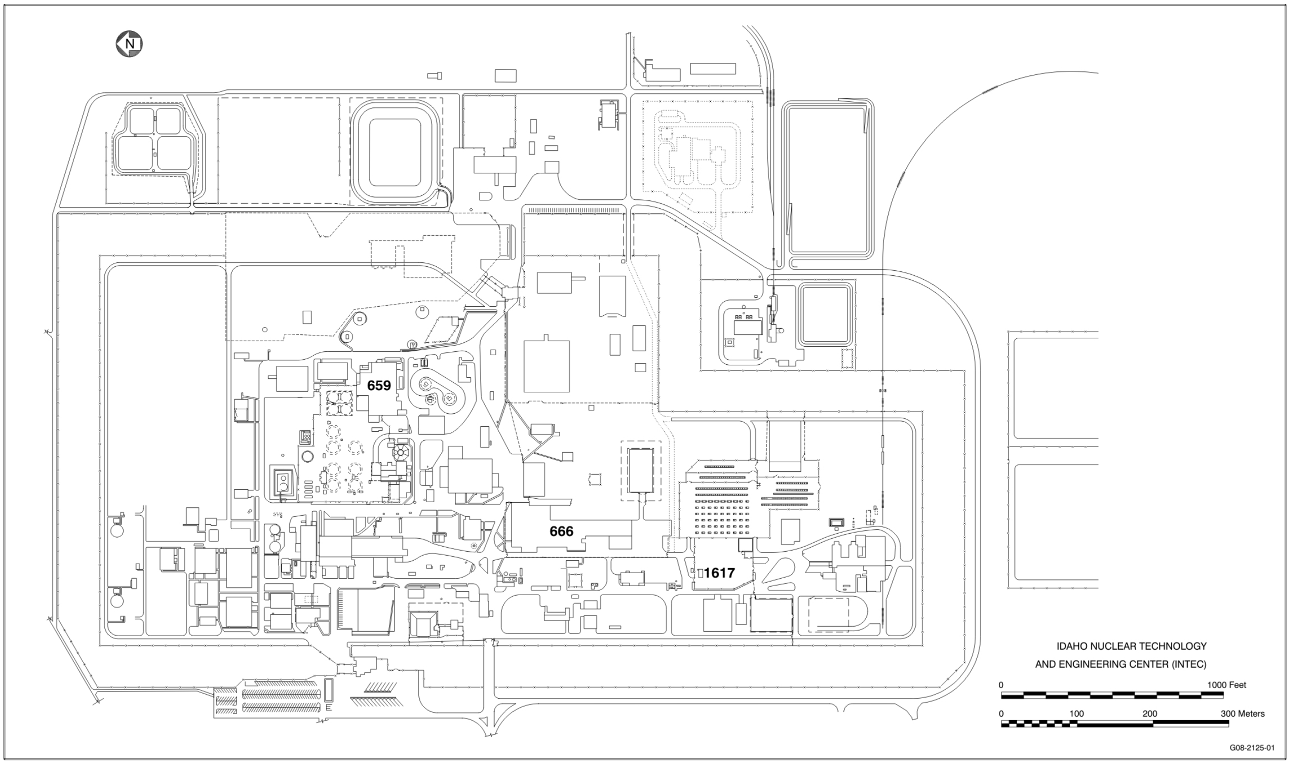

Exhibit W-2. Location of CPP-659 at the INTEC.

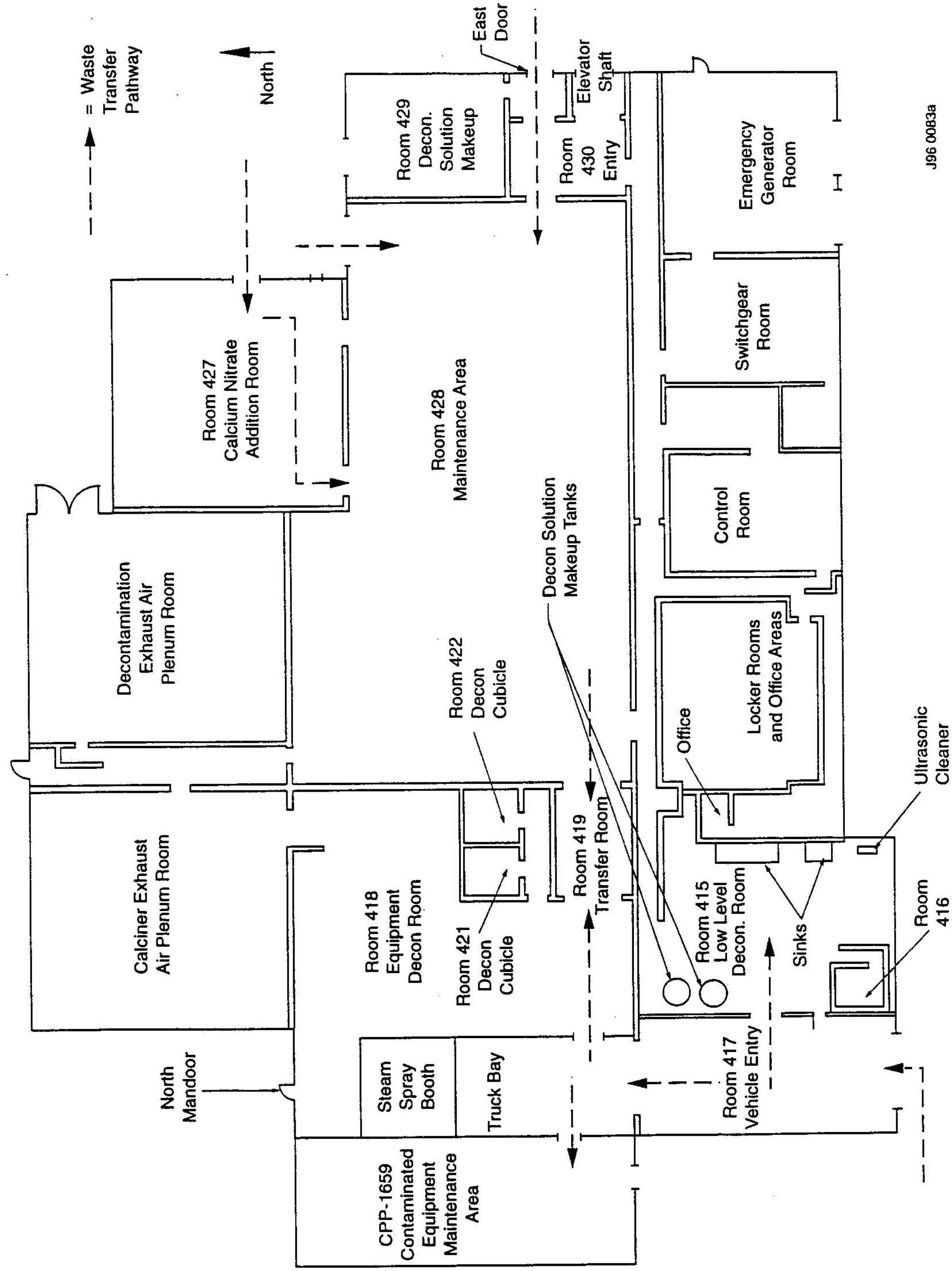

Exhibit W-3. Simplified Floor Plan for First Level of CPP-659.

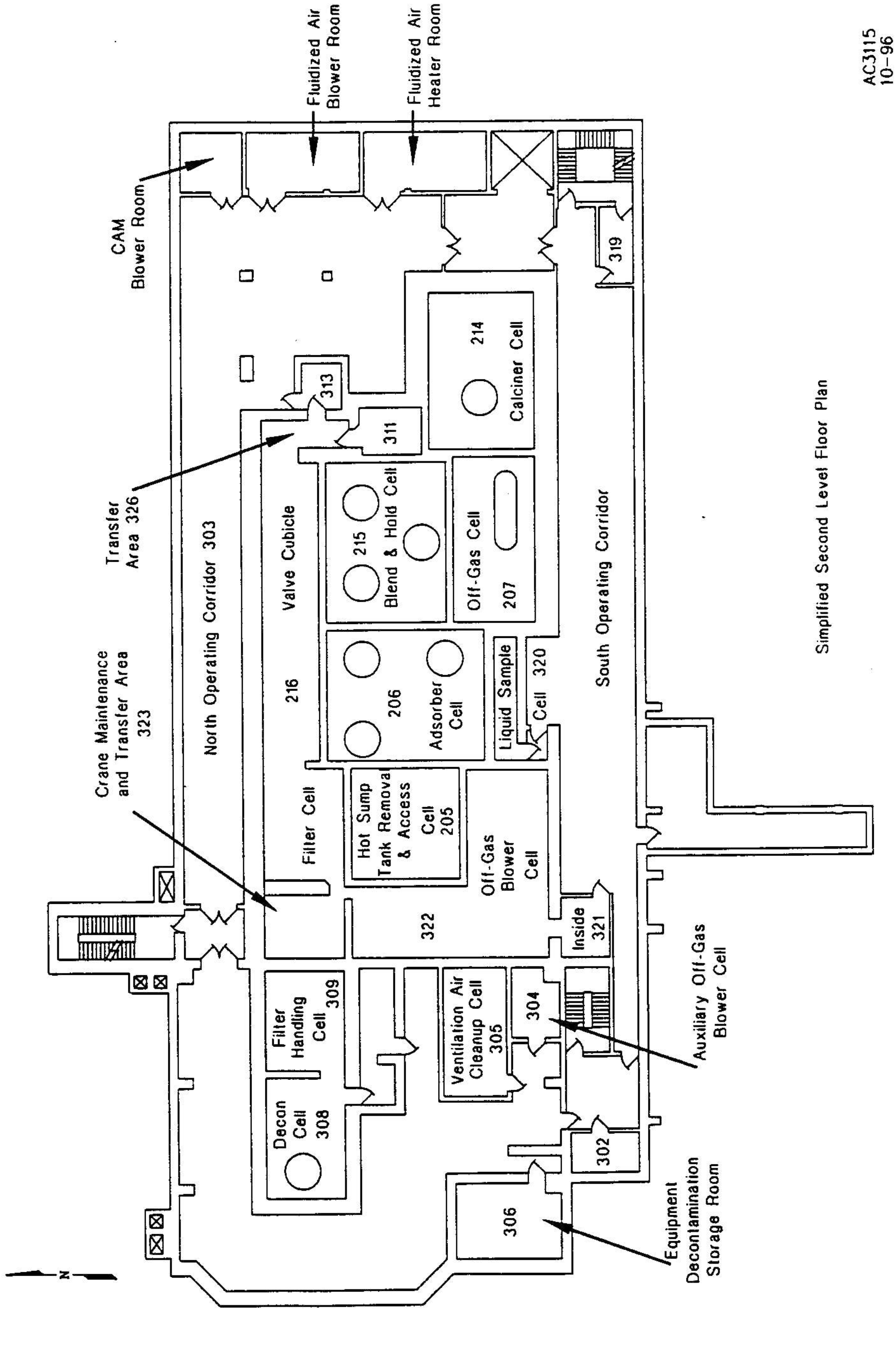

Exhibit W-4. Simplified Floor Plan for Second Level of CPP-659.

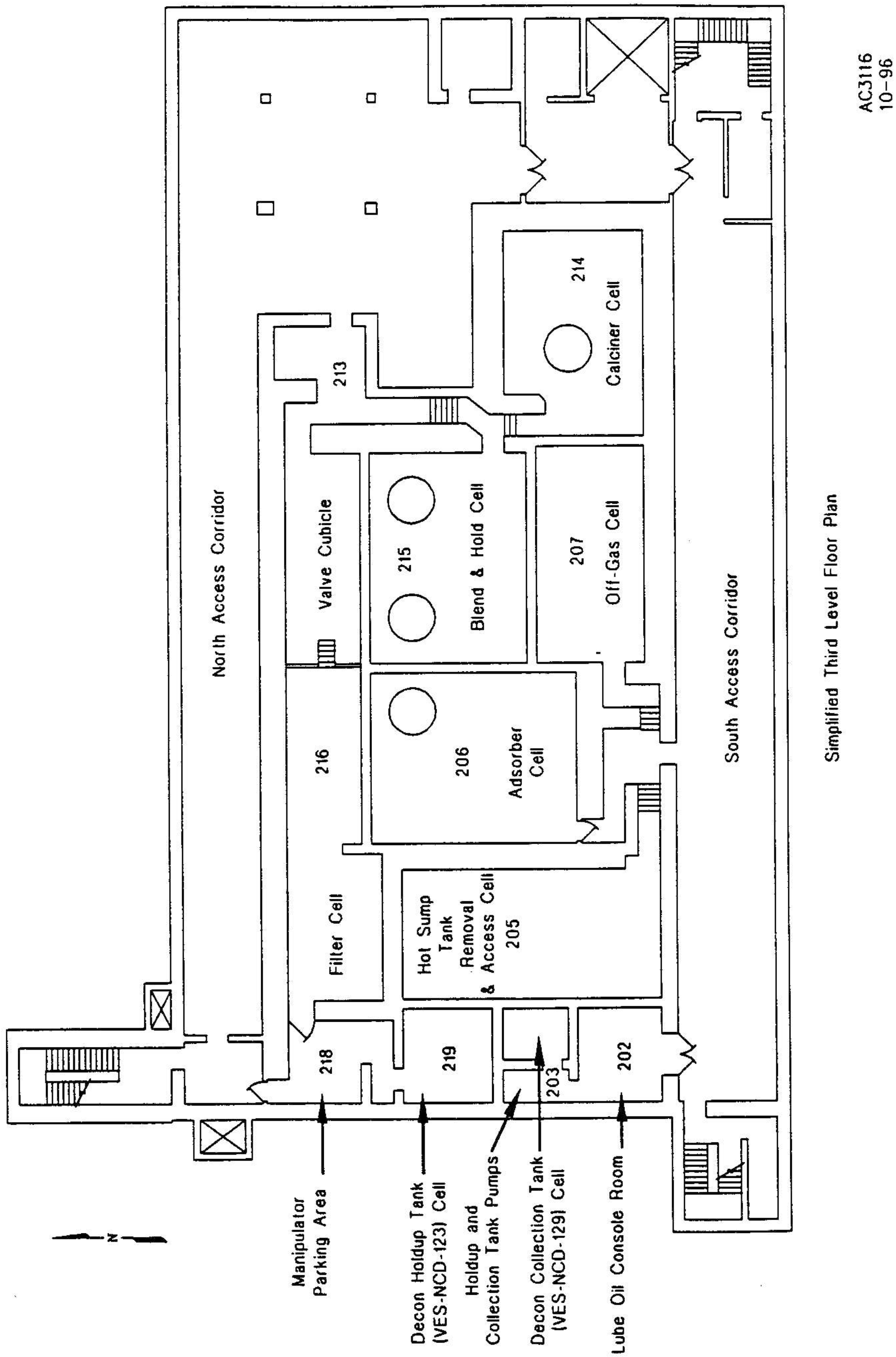

Exhibit W-5. Simplified Floor Plan for Third Level of CPP-659.

RCRA PART B PERMIT

FOR THE IDAHO NATIONAL LABORATORY

Book 1

Volume 18 – Idaho Nuclear Technology and Engineering Center

ATTACHMENT 10

Debris Treatment Processes

Holdup and Collection Tanks

CPP-659/-1659 Storage

CPP-666 FDP Cell and FDP Area Container Storage and Slab Tank Storage
Other Miscellaneous Treatment Processes
Radioactive Mixed Waste Staging Facility (CPP-1617)

Permit Revision Log

Revision Date: August 19, 2016

INTEC PARTIAL PERMIT
PERMIT MODIFICATION TRACKING

SUBMITTED	APPROVED	PMR CLASS	SUMMARY OF CHANGES
May 5, 2009	May 19, 2009	1*	- Delete Permit Condition II.M. Compliance Schedule for CPP-659 Embedded Lines Upgrade Project as this compliance schedule has been completed and approved by the DEQ and is therefore no longer applicable. - Revise Section III.B.5. Sizing and Repackaging Treatment, of the permit, to allow for other treatment processes (sorting, segregating repackaging and sizing) in CPP-666 FDP Cell. - Revise Section III.B.6. Compaction Treatment, of the permit, to allow for other treatment processes (compaction) in CPP-666 FDP Cell. - Revise the Part A Permit to allow for other treatment processes (compaction, sorting, segregating, repackaging, and sizing) in CPP-666 FDP Cell. - Revise the Part A Permit to add EPA Hazardous Waste Numbers D029, F006, F007, and F009 for CPP-659 NWCF Storage, Other Miscellaneous Treatment Processes and Absorbent Addition and for CPP-666 FDP Cell Storage and other Miscellaneous Treatment Processes. - Revise Attachment 1, Section B – Facility Description, to allow for other treatment processes (compaction, sorting, segregating, repackaging, and sizing) in CPP-666 FDP Cell. - Revise Attachment 1, Section D – Process Description, to allow for other treatment processes (compaction, sorting, segregating, repackaging, and sizing) in CPP-666 FDP Cell. - Revise Attachment 1a, Section B – Facility Description, for the RMWSF so that cargo containers may be placed upon elevated support (e.g., timbers) to elevate them above the asphalt to ensure that all doors may be opened for weekly waste inspections or waste transport.

INTEC PARTIAL PERMIT
PERMIT MODIFICATION TRACKING

SUBMITTED	APPROVED	PMR CLASS	SUMMARY OF CHANGES
May 5, 2009	May 19, 2009	1*	- Revise Attachment 1a, Section D – Process Description, for the RMWSF so that cargo containers may be placed upon elevated support (e.g., timbers) to elevate them above the asphalt to ensure that all doors may be opened for weekly waste inspections or waste transport. - Revise Attachment 2, Section C – Waste Analysis Plan, to allow for other treatment processes (compaction, sorting, segregating, repackaging, and sizing) in CPP-666 FDP Cell. - Revise Attachment 4, Section F – Inspection Schedule, to allow for other treatment processes (compaction, sorting, segregating, repackaging, and sizing) in CPP-666 FDP Cell. - Revise Attachment 7, Section G – Contingency Plan, to update the information for the Emergency Action Managers at the INTEC. - Revise Attachment 8, Section I – Closure and Post-Closure Requirements, to allow for other treatment processes (compaction, sorting, segregating, repackaging, and sizing) in CPP-666 FDP Cell. - Provide editorial changes by deleting redundant information in the Permit Section III.B.6.b. and throughout the permit and its attachments, as applicable/necessary (e.g., removing the word "reapplication"). - Provide editorial changes by revising the List of Attachments information found in the Permit so that Appendix information found in Attachment 1 will now be located in Book 2 to allow for easier use and revision of the document. - Provide editorial changes by revising information related HFEF-5 cans to clarify that HFEF-5 cans are acceptable at CPP-1617. Additionally, the dimensions of ISCs were revised to reflect that ISCs may be used to store HFEF-5 cans.

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SUBMITTED	APPROVED	PMR CLASS	SUMMARY OF CHANGES
May 5, 2009	May 19, 2009	1*	- Provide editorial changes by updating the Inspection Schedule for the CPP-666 FDP Cell Container Storage Area and for the FDP Cell Slab Tank Storage unit for consistency and to reflect revisions made and approved during the reapplication process that were inadvertently left in the Table found in Appendix F-1. - Provide updated examples of inspection forms found in Attachment 4 for the Permitted units, as applicable. - Add Attachment 10 – Permit Revision Log, to incorporate changes requested in this Class 1* PMR.
February 2010 And May 18, 2010	NOD – May 7, 2010 NOD Response & revised PMR – June 1, 2010	1*	- Allow for additional container storage (S01) in Building CPP-666 outside the FDP cell in the +28' level (in room 301 cell maintenance and loadout area), in the 0'0" level (rooms 114C, 115, and 180), and in the -13'0" level (rooms B-4 and B-5) - Allow for the container storage (S01) of liquid bearing waste at all container storage areas in building CPP-666 - Allow for absorbent addition treatment (T04) in the FDP cell of all liquid bearing wastes - Revise the Part A Permit Application to incorporate additional waste treatment methods and waste storage areas in Building CPP-666 - Describe the fire protection system in the FDP Cell for the RH TRU waste repackaging operations

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SUBMITTED	APPROVED	PMR CLASS	SUMMARY OF CHANGES
February 2010 and May 18, 2010 (Continued)	June 1, 2010	1*	- Clarify that container storage in the FDP Cell at levels 0’0” level is allowed in non-grated flooring areas - Provide clarification for use of timbers under cargo containers at CPP-1617 and provide corrective action requirements for any settled timbers - Other editorial changes – Permit Conditions II.H.5. implementing vs. activating, Permit Condition V.B. fix numbering, Attachment 2 provide correct IDAPA citation and other minor editorial changes as necessary
November 8, 2010	November 19, 2010	1*	- Allow for the addition of ignitable (D001) and reactive (D003) wastes to be stored (S01) in the container storage units in CPP-666 (FDP Cell, Rooms 301, 114C, 115, 180, B-4 and B-5) and in CPP-659 container storage areas, specifically rooms 308, 417, 418, 428, and CPP-1659 Contaminated Equipment Maintenance Area - Allow for the addition of ignitable (D001) and reactive (D003) wastes to be treated (T04) via repackaging in the CPP-659 Room 308 (Remote Decon Cell) and in the CPP-666 FDP Cell - Revise the Part A Permit Application to incorporate the ignitable (D001) and reactive (D003) EPA Hazardous Waste Numbers for the appropriate container storage/ treatment units (as discussed above) located in CPP-659/-1659 and CPP-666.

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SUBMITTED	APPROVED	PMR CLASS	SUMMARY OF CHANGES
November 8, 2010 (continued)	November 19, 2010	1*	- Other administrative, informational, and editorial changes, including: removal of the pyrophoric prohibition for waste storage areas found in Attachment 2; addition of appropriate emergency response equipment for those areas where D001/D003 waste will be stored or treated in CPP-659/-1659 and CPP-666; addition of inspection requirements for the additional emergency response equipment to the appropriate inspection checklist for those areas where D001/D003 waste will be stored or treated; the Inspection Schedule, was revised to reflect additional inspections for Met-L-X fire extinguishers/media that are being placed in areas where ignitable or reactive wastes may be stored or repackaged in CPP-659/-1659 and CPP-666; Personnel Training, Table H-1 was revised to reflect CWI's the new RCRA training qualification structure; Attachment 6 was revised to correctly reflect references to Exhibits found in Attachment 7; Tables G-1 and G-2 of Attachment 7 are being revised to include the use of Met-L-X fire extinguishers/media in CPP-659/-1659, CPP-666, and CPP-1617 as necessary when D001 or D003 waste is or may be present.
May 10, 2012	May 25, 2012	1*	- Administrative closure of Soak Tank, TK-NCD-136, container treatment unit (other treatment - T04 process code) - Revision of the Part A Permit Application to incorporate the use of EPA's newly revised forms and to remove the soak tank from the form as a designated/permitted T04 treatment unit - A weekly inspection item is being added, and clarifying language is being provided that addresses the spare equipment which remains in place and/or loose in the lower levels of the Fluorinel Dissolution Process (FDP) Cell to ensure the equipment will be properly disposed of or decontaminated, as determined necessary,

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SUBMITTED	APPROVED	PMR CLASS	SUMMARY OF CHANGES
May 10, 2012	May 25, 2012	1*	during closure activities and as addressed in the approved closure plan - Information is being provided regarding the processing of Lot 2 containers of remote-handled transuranic (RH-TRU) waste in the FDP cell using argon gas to avoid any potential of reaction of the contents of the containers when opened and to allow for immersion testing of the fuel/fuel-like pieces of waste to evaluate the waste for the characteristic of reactivity, as required by the Waste Isolation Pilot Plant (WIPP) Waste Acceptance Criteria (WAC) - Other administrative, informational, and editorial changes, as necessary.
August 22, 2012 NOD Response and Revised PMR transmitted to DEQ on October 11, 2012	DEQ issued NOD on September 19, 2012 DEQ approval letter dated October 18, 2012	2	The information contained in this PMR for the Accelerated Retrieval Project (ARP) at the Radioactive Waste Management Complex (RWMC) was submitted as a stand alone Book 3 to the Volume 18 Permit to allow for less confusion regarding the units/facility location, descriptions, etc. The PMR addressed the following modifications: - Allow for the addition of container storage (S01) in WMF-698 - Allow for the addition of container storage (S01), and miscellaneous treatment (X99 and X02) in WMF-1617 - Allow for the addition of trailer storage - container storage (S01) units in three locations (near WMF-1617, ARP VII, and ARP VIII) to allow for storage of processed drums prior to being returned to the AMWTP - Revise the Part A Permit Application to incorporate the container storage/treatment units located at WMF-698 and WMF-1617 and the trailer container storage units and incorporate updated EPA forms. - Other administrative, informational, and editorial changes, changes as necessary to support the addition of these units to the Volume 18 Permit.

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SUBMITTED	APPROVED	PMR CLASS	SUMMARY OF CHANGES
March 26, 2013 NOD Response and Revised PMR transmitted to DEQ on July 11, 2013	DEQ issued NOD on May 23, 2013 DEQ approval letter dated August 7, 2013	Class 1*	The information in this PMR provides for the following: • to provide additional information regarding the processing of containers of sodium contaminated waste/debris in the FDP cell using deactivation (immersion/misting) treatment (T04); • to allow for the distillation treatment (T04) of sodium contaminated waste within CPP-666 Room SB-8; • to allow for macroencapsulation treatment (T04) of hazardous/mixed waste debris and radioactive lead solids waste types at the RMWSF; • to update the Part A Permit Application to include these treatments; • and to provide other administrative, informational, and editorial changes, changes as necessary.
November 27, 2013	December 10, 2013	1*	The information contained in this PMR provides for the following: • Revision to Book 1 – INTEC Part A Permit Application, to add hazardous waste codes for the CPP-659/CPP-1659 facility. Hazardous waste codes D027, D030, D033, D037, D042, D043, and F004 were added to the container storage and treatment units within CPP-659/CPP-1659 (Rooms 218, 306, 308, 418, 428, and CPP-1659) to allow for the processing of RH TRU waste so that it may be subsequently shipped off-site. (NOTE: These additional waste codes were not added to any of the waste pile storage unit areas located in the CPP-659/CPP-1659 facility.)

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SUBMITTED	APPROVED	PMR CLASS	SUMMARY OF CHANGES
November 18, 2013	January 22, 2014	2	The information contained in this PMR provides for the following changes at the ARP (Book 3): • Changes to the inspection schedule frequency and content • Addition of Module VII to the Permit for Miscellaneous Treatment Units at the ARP • Changes to container storage capacities • Increase in the treatment capacity of the DPS • Addition of text describing upgrades made to units • Other administrative, informational, and editorial changes
May 15, 2014	July 21, 2014	2	The information contained in this PMR provided for the following changes at the INTEC (Books 1 and 2): – Incorporate changes made during the installation of the Sodium Distillation System (SDS) in CPP-666 Room SB-8. These changes reflect the as-built system as described in the PE certification of the SDS, and include - Reduction of the secondary containment capacity - Removal of load cell under the transfer vessel - Reduction of system operating pressure during sodium transfer - Reduction of the operating range temperature for the thermal fluid - Increase of upper operating range temperature of the system condenser - Increase of design temperature for the SDS vessels - Change the specification to use “nitrogen” and “argon” to the use of an “inert gas” - Provide as-built drawings and updated inspection forms - Update the Emergency Action Manager (EAM) information - Other administrative/informational/ typographical changes as necessary.

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SUBMITTED	APPROVED	PMR CLASS	SUMMARY OF CHANGES
June 5, 2014	August 4, 2014	2	The information contained in this PMR for the Materials and Fuels Complex (MFC) was submitted as a stand alone Book 4 to the Volume 18 Permit to allow for less confusion regarding the unit/facility location, description, etc. The PMR addressed the following modification: - Secondary Sodium System (SSS) Components located at building MFC-766 – Tank Storage (S02) to allow for completion of closure activities as detailed in the approved closure plan.
February 25, 2015	March 5, 2015	1*	This PMR was for revisions to Book 4 of 4. The PMR allows for the treatment of newly generated sodium waste from decommissioning of MFC-767 in the SSS components under closure.
February 19, 2015	March 10, 2015	1*	The information contained in this PMR provided for – Expansion of treatment (sizing) capabilities outside the ARS in the FDP Cell in CPP-666 – Addition of sodium deactivation treatment (T04) in CPP-659 Room 308 – Change to the storage configuration/aisle space requirements at the Radioactive Mixed Waste Storage Facility (CPP-1617) – Elimination of aisle space requirements in CPP-659 Rooms 308 and 309 – Other administrative changes to update information and correct typographical errors.

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SUBMITTED	APPROVED	PMR CLASS	SUMMARY OF CHANGES
April 15, 2015	May 19, 2015	1*	The information contained in this PMR provided for the incorporating design changes to the CPP-666 Sodium Distillation System (SDS) unit. Those changes include the following: – Revise SDS operations to remove the current condenser, collection, and transfer vessels due to problems identified with the existing system during treatment operations – Installation of a new shielded removable condenser/collection vessel to improve treatment operations and reduce ALARA concerns – Other administrative changes completed to update information and correction of typographical errors.
June 4, 2015	July 2, 2015	1*	The information contained in this PMR provided for the following changes at the RWMC SDA (Book 3 of 4): – Addition of drummed sludge in waste boxes to the treatment and storage descriptions to allow for the repackaging of these wastes – Increase of container Outside Storage Areas/capacity near WMF-1617 to facilitate storage pending shipment of non-liquid repackages waste and secondary waste – Change of storage configuration at WMF-698 – Administrative changes to update information and correct typographical error as necessary. Additionally, this PMR provided for the following revised/updated information for the INTEC (Books 1 & 2 of 4): – Addition of the PE-stamped engineering drawing of the CPP-666 ARS units 1 and 2 to Book 2, Appendix 2, Facility Drawings. Addition of photographs for CPP-666 ARS units 1 and 2 to Book 2, Appendix 1, Facility Photographs – Administrative changes to update information and correct typographical error as necessary.

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SUBMITTED	APPROVED	PMR CLASS	SUMMARY OF CHANGES
September 10, 2015	N/A	Class 1 PMN	The information contained in this PMN provided for the following changes at the RWMC SDA (Book 3 of 4): – Allow for the use of three additional secondary containment pans in WMF-698 and WMF-1617 – Administrative and informational changes, as necessary.
December 22, 2015 & February 4, 2016	Final DEQ approval: February 12, 2016	1*	The information contained in this PMR provides for the following changes at the INTEC as follows: (Books 1 - 2): - Allow for an additional commercial macroencapsulation treatment (T04) type (Macrobag system) at the RMWSF (CPP-1617 area) and to allow for macroencapsulation treatment (T04) at CPP-659 Room 428 - Allow for absorbent addition treatment (T04) in CPP-659 Room 418 - Addition of EPA HWNs to CPP-659 Rooms 306, 309, 417, and 428 and update of the Part A Permit to provide consistency/clarification - Update of the description/discussion of sodium treatment performed within the ARS, and allow for use of each 3 types of ARS units at both CPP-659 and CPP-666 FDP cell and provide updated drawings of the ARS units - Additional administrative and informational changes as necessary

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SUBMITTED	APPROVED	PMR CLASS	SUMMARY OF CHANGES
December 22, 2015 & February 4, 2016 (continued)	Final DEQ approval: February 12, 2016	1*	The information contained in this PMR also provided for the following changes at the RWMC as follows: (Books 3A – 3B): - WMF-1617 – Use of Soil Bags for storage of secondary waste - addition of EPA Hazardous Waste codes for necessary for treatment of additional waste stream (sludge drum processing) - WMF-1619 – Addition of Rooms 101/102/103 Service Bay Area, Room 104 Equipment Airlock, Room 105 Drum Packaging Station (DPS) Room, and Room 106 Utility Area of WMF-1619 facility as container storage units (S01), a miscellaneous storage unit (X99) in the Retrieval Area (RA), and miscellaneous treatment units (X99) in the RA, DPS, and Room 103 Service Bay. - Addition of two container storage units (S01) as a Trailer Storage Areas near the WMF-1619 and WMF-1621 facilities. - Additional administrative and informational changes as necessary
February 4, 2016	March 4, 2016	1*	The information contained in this PMR allowed for the termination of the MFC Permit (Book 4) on March 1, 2016. Book 4 was removed from the permit.
April 20, 2016	April 28, 2016	1*	Change in designated contract operator from CH2M-WG Idaho, LLC to Fluor Idaho, LLC with an effective Revision Date of June 1, 2016.

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SUBMITTED	APPROVED	PMR CLASS	SUMMARY OF CHANGES
July 21, 2016	August 19, 2016	1*	The information contained in this PMR primarily provided for the following changes at the RWMC as follows: - addition of EPA Hazardous Waste codes necessary for treatment of additional waste streams at RWMC - additional Outside Storage Area capacity near WMF-1619 (additional storage capacity for another trailer storage unit and 1 cargo container storage unit) - Change in materials of construction for decon tent at WMF-1619 to allow for operational flexibility - Additional administrative and informational changes were completed as necessary for both the INTEC and RWMC portions of the Permit.