

0078458

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Revision 0

# Hanford Site Air Operating Permit Annual Compliance Certification Report for the Period January 1, 2007 Through December 31, 2007

Prepared for the U.S. Department of Energy  
Assistant Secretary for Environmental Management



**United States  
Department of Energy**  
P.O. Box 550  
Richland, Washington 99352

**Approved for Public Release**  
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attached to: 0078457

# Hanford Site Air Operating Permit Annual Compliance Certification Report for the Period January 1, 2007 Through December 31, 2007

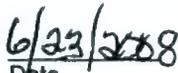
Date Published  
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Prepared for the U.S. Department of Energy  
Assistant Secretary for Environmental Management



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Release Approval

  
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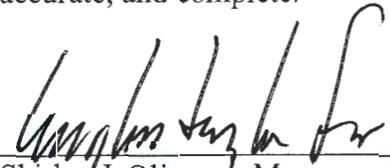
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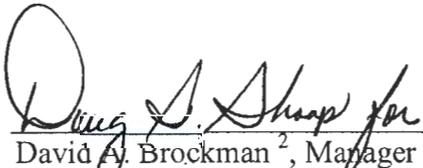
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**Certification For  
Hanford Site Air Operating Permit Number 00-05-006, Renewal 1  
Annual Compliance Certification Report  
for the Period January 1, 2007 through December 31, 2007**

**Certification:**

In accordance with WAC 173-401-200(29)(c) as the responsible official, I certify, pursuant to WAC 173-401-520, that, based on information and belief formed after reasonable inquiry, the statements and information provided in this Annual Compliance Certification Report are true, accurate, and complete.

 6/30/08  
Shirley J. Olinger, Manager                      Date  
U.S. Department of Energy  
Office of River Protection

 7/18/08  
David A. Brockman<sup>2</sup>, Manager                      Date  
U.S. Department of Energy  
Richland Operations Office

<sup>1</sup> For emission units under control of the U.S. Department of Energy, Office of River Protection.

<sup>2</sup> For emission units under control of the U.S. Department of Energy, Richland Operations Office.

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## EXECUTIVE SUMMARY

The Hanford Site Air Operating Permit (AOP) Standard Terms and General Conditions (STGC) Section 4.3.4, *Annual Compliance Certification*, requires submittal of an annual compliance certification report by July 31<sup>st</sup> of each year. The regulatory agencies will use this information to verify DOE's compliance with the AOP.

This annual compliance certification report contains information for the reporting period of January 1, 2007 through December 31, 2007.

The report contains emission unit-specific terms and conditions listed in AOP Attachments 1, 2, and 3 along with a corresponding compliance status of continuous, intermittent, or not applicable, and the method by which compliance was demonstrated.

The required information is compiled from all affected Hanford Site contractors. For this reporting period, the affected contractors are Bechtel National, Inc., CH2M HILL Hanford Group, Inc., Fluor Hanford, Inc., Johnson Controls, Inc., the Pacific Northwest National Laboratory, R. H. Smith Distributing Company, Inc., and Washington Closure Hanford.

The permittee (U.S. Department of Energy, Hanford Operations) must submit a report that is certified by a responsible official consistent with Washington Administrative Code (WAC) 173-401-520. A responsible official for a federal agency, defined under WAC 173-401-200(29)(c), is:

*"Either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a regional administrator of EPA)."*

Thus, the responsible official is represented by the managers of both RL and ORP and a joint certification is required for this submittal.

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## ACRONYMS

ABCASH	automated bar coding of air samples at Hanford
AJHA	Automated Job Hazard Analysis
ALARA	As Low As Reasonably Available
ALARACT	As Low As Reasonably Available Control Technology
ANSI	American National Standards Institute
AOP	Air Operating Permit
APQ	annual possession quantity
ASIL	acceptable source impact levels
ASME	American Society of Mechanical Engineers
BACT	best available control technology
BCAA	Benton Clean Air Agency
CAM	continuous air monitor
CERCLA	<i>Comprehensive Environmental Response, Compensation, and Liability Act of 1980</i>
CDM	compliance determination method
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
CH	contact handled
Ci	curie
cm	centimeters
CO	carbon monoxide
CSB	Canister Storage Building
CU	combustion unit
CVDF	Cold Vacuum Drying Facility
CWC	Central Waste Complex
CY	calendar year
DMS	Data Management System
DOE	U.S. Department of Energy
DOE-ORP	U.S. Department of Energy, Office of River Protection
DOE-RL	U.S. Department of Energy, Richland Operations Office
DOP	dioctyl phthalate
dpm	disintegrations per minute
DST	double-shell tank
DWP	Dangerous Waste Portion (of the Resource Conservation and Recovery Act Permit)
ECN	Engineering Change Notice
Ecology	Washington State Department of Ecology
EDP	electronic data processing
EM	Effluent Management
EPA	U.S. Environmental Protection Agency
EPR	Electronic Proposal & Risk
ESPC	Energy Savings Performance Contract
ETF	200 Areas Effluent Treatment Facility
FH	Fluor Hanford Inc.

FMP	Facility Management Plan
GCMP	gas cylinder management process
GCP	good combustion practices
GED	gaseous emissions database
HEGA	high-efficiency gas absorber
HEME	high-efficiency mist eliminator
HEPA	high-efficiency particulate air
HIHTL	hose-in-hose transfer line
HLRF	High-Level Radiochemical Facility
HLW	high-level waste
Hp	horsepower
HPT	health physics technician
HWTU	325 Hazardous Waste Treatment Unit
IDF	Integrated Disposal Facility
IH	industrial hygiene
JCS	job control system
LAW	low-activity waste
LERF	Liquid Effluent Retention Facility
LLCE	long-length contaminated equipment
LLMW	low-level mixed waste
LLW	low-level waste
MACT	maximum achievable control technology
MCO	multicanister overpack
MEI	maximally exposed individual
mrem/year	millirem per year
N/A	not applicable
NDA	nondestructive assay
NDE	nondestructive examination
NDMA	N-Nitrosodimethylamine
NESHAP	National Emission Standards for Hazardous Air Pollutants
NMHC	non-methane hydrocarbon
NOC	notice of construction
NOCA	notice of construction application
NO <sub>x</sub>	nitrogen oxide
NRA	NOC revision approval
NSR	new source review
OGTS	Off-Gas Treatment System
OVA	Organic Vapor Analyzer
PAH	polyaromatic hydrocarbon
PCB	polychlorinated biphenyls
PCM	periodic confirmatory measurement
PFP	Plutonium Finishing Plant
PHMC	Project Hanford Management Contractor

PID	photoionization detector
PM	particulate matter
PNNL	Pacific Northwest National Laboratory
PORTEX	portable exhauster
ppm	parts per million
PSTF	Purgewater Storage Tank Facility
PTE	potential-to-emit
PTRAEU	portable/temporary radioactive air emission unit
QA	quality assurance
QC	quality control
RACT	reasonably achievable control technology
RCT	radiological control technician
RH	remote handled
RIDS	Records Inventory and Disposal Schedule
RMP	risk management plan
RPL	Radiochemical Processing Laboratory
RWL	Remote Water Lance
RWM	restricted waste management
SAL	Shielded Analytical Laboratory
SAP	sampling and analysis plan
SBMS	Standards Based Management System
SNF	spent nuclear fuel
SO <sub>2</sub>	sulfur dioxide
SOW	statement of work
SQER	Small Quantity Emission Rate
STGC	Standard Term and General Conditions
STU	Secondary Treatment Unit
SWITS	Solid Waste Information Tracking System
TAP	toxic air pollutant
TBACT	best available control technology for toxics
TEDE	total effective dose equivalent
TRU	transuranic
TTQP	tritium target qualification program
ULSF	ultra-low sulfur fuel
Vac	vacuum
VE	visible emission
VOC	volatile organic compound
WAC	Washington Administrative Code
WDOH	Washington State Department of Health
WIPP	Waste Isolation Pilot Plant
WRAP	Waste Receiving and Processing Facility
WSCF	Waste Sampling and Characterization Facility
WTP	Waste Treatment Project

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**HANFORD SITE AIR OPERATING PERMIT  
ANNUAL COMPLIANCE CERTIFICATION REPORT FOR THE PERIOD  
JANUARY 1, 2007 THROUGH DECEMBER 31, 2007**

**1.0 INTRODUCTION**

The Hanford Site Air Operating Permit (AOP), Number 00-05-006, Renewal 1, became effective on January 1, 2007. AOP Standard Term and General Conditions (STGC) Section 4.3.4, *Annual Compliance Certification*, requires submittal of an annual compliance certification report by July 31 of each year. This report is required to be certified by a Responsible Official [WAC 173-401-200(29)] for truth, accuracy, and completeness [Washington Administrative Code (WAC) 173-401-520].

This annual compliance certification report contains information from January 1, 2007 through December 31, 2007.

Copies of the annual compliance certification report are transmitted to the Washington State Department of Ecology (Ecology), the Washington State Department of Health (WDOH), the Benton Clean Air Agency (BCAA), and the U.S. Environmental Protection Agency (EPA), Region 10.

For the applicable reporting period, AOP STGC Section 4.3.4, *Annual Compliance Certification*, requires the following content for the annual compliance certification report. No certification is required for insignificant emission units:

1. Each emission unit-specific term or condition listed in Attachments 1 and 2, as well as Attachment 3 for asbestos and open burning, pursuant to the source's or emission unit's operational portion of the calendar year.
2. The compliance status.
3. Whether compliance was continuous, intermittent, or not applicable.
4. Method(s) used to determine compliance status of the source over the reporting period consistent with WAC 173-401-615 (3)(a).
5. Such other facts as Ecology, WDOH, or BCAA might require to determine compliance status of the source.

**ATTACHMENT 1 REQUIREMENTS**

AOP Attachment 1 contains terms and conditions issued by Ecology. Emission unit specific terms and conditions are contained in Tables 1.2 through 1.7. Table 1.7 includes the 283-W Water Treatment Plant, which continues to be the only Hanford Site facility subject to the requirements of 40 Code of Federal Regulations (CFR) 68. Appendix A of this report provides emission unit specific terms and conditions, compliance status during the reporting period, and the basis used to determine the compliance status.

## **ATTACHMENT 2 REQUIREMENTS**

AOP Attachment 2 contains terms and conditions issued by WDOH. Emission unit specific terms and conditions are contained in Enclosure 2 of Attachment 2. Appendix B of this report provides emission unit specific terms and conditions, the compliance status during the reporting period, and the basis used to determine compliance status.

## **ATTACHMENT 3 REQUIREMENTS**

AOP Attachment 3 contains conditions issued by BCAA which apply on a sitewide basis. These two conditions are for asbestos and open burning. Appendix C of this report lists the conditions, the compliance status during the reporting period, and the basis used to determine compliance status.

## 2.0 REFERENCES

- 40 CFR 61, Subpart M, *National Emission Standards for Asbestos*, U.S. Government Printing Office, Washington, D.C.
- 40 CFR 68, *Chemical Accident Prevention Provisions*, U.S. Government Printing Office, Washington, D.C.
- Benton Clean Air Agency, *Regulation 1*
- 99-EAP-339, Letter from J. E. Rasmussen, DOE/RL, to RMP Reporting Center, "Final Risk Management Plan for the 283W Water Treatment Facility", dated June 18, 1999.
- DOE/RL-99-38, *Risk Management Program for the 283-W Water Treatment Facility*, U.S. Department of Energy, Richland Operations Office, Richland, Washington.
- DOE/RL-2007-05, *Hanford Site Air Operating Permit Semiannual Report for the Period January 1, 2007 through June 30, 2007*, U.S. Department of Energy, Richland Operations Office, Richland, Washington.
- DOE/RL-2008-03, *Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007*, U.S. Department of Energy, Richland Operations Office, Richland, Washington.
- DOE/RL-2008-12, *Hanford Site Air Operating Permit Semiannual Report for the Period July 1, 2007 through December 31, 2007*, U.S. Department of Energy, Richland Operations Office, Richland, Washington.
- EM-QA-01, *Effluent Management Quality Assurance Plan*, Pacific Northwest National Laboratory, Richland, Washington.
- Airborne Radionuclide Emission Sample Analysis Statement of Work, Rev. 7, 2007*, Pacific Northwest National Laboratory, Richland, Washington.
- HNF-EP-0528-7, *NESHAP Quality Assurance Project Plan for Radioactive Air Emissions*, Fluor Hanford, Inc., Richland, Washington.
- HNF-EP-0538-11, *Near-Facility Environmental Monitoring Quality Assurance Project Plan*, Fluor Hanford, Inc., Richland, Washington.
- HNF-EP-0835-13, *Statement of Work for Services Provided by the Waste Sampling and Characterization Facility for the Environmental Compliance Program during Calendar Year 2007*, Fluor Hanford, Inc., Richland, Washington.
- WAC 173-401, *Operating Permit Regulation*, Washington Administrative Code, Olympia, Washington.
- WAC 246-247, *Radiation Protection-Air Emissions*, Washington Administrative Code, Olympia, Washington.

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**APPENDIX A**

**AOP ATTACHMENT 1 REQUIREMENTS**

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**Nuisance Standards**  
Page in AOP: 1-011

**Permit:** AOP Table 1.2 Nuisance Standards **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07  
**NOC:** Sitewide for Odor, Concealment and Masking, Fallout, etc.

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> Fallout. Prohibits emissions of particulate matter from any source to be deposited beyond the facility boundaries in sufficient quantity to interfere unreasonably with the use and enjoyment of the property upon which the material was deposited. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Recordkeeping of Complaint Investigation. <b>Required Records:</b> Not specified.</p>	Continuous	<p><b>CDM:</b> No requests to perform a complaint investigation were received from Ecology during the reporting period (as required by AOP Attachment 1 Section 2.2).</p>
<p><b>Condition:</b> Odor. Requires any facility causing an odor that unreasonably interferes with another person's use and enjoyment of their property to use recognized good practices and procedures to reduce odors to a reasonable minimum. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Recordkeeping of complaint investigations. <b>Required Records:</b> Not specified.</p>	Continuous	<p><b>CDM:</b> No requests to perform a complaint investigation were received from Ecology during the reporting period (as required by AOP Attachment 1 Section 2.2).</p>
<p><b>Condition:</b> Emissions detrimental to persons or property. Prohibits emissions of any air contaminant from any source that is detrimental to the health, safety, or welfare of any person, or causes damage to property or business. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Recordkeeping of complaint investigations. <b>Required Records:</b> Not specified.</p>	Continuous	<p><b>CDM:</b> No requests to perform a complaint investigation were received from Ecology during the reporting period (as required by AOP Attachment 1 Section 2.2).</p>
<p><b>Condition:</b> Concealment and masking. Prohibits the installation or use of any device or use of any means that conceals or masks an emission of an air contaminant that would otherwise violate any provision of WAC 173-400. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Recordkeeping of complaint investigations. <b>Required Records:</b> Not specified.</p>	Continuous	<p><b>CDM:</b> No requests to perform a complaint investigation were received from Ecology during the reporting period (as required by AOP Attachment 1 Section 2.2).</p>

**ESPC Boilers**  
**Page in AOP: 1-015**

**Permit:** AOP Table 1.3 N.G. <5mm BTU/hr **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07  
**NOC:** AOP Table 1.3 Natural Gas Steam Generators <5mmBTU/Hr.

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040(1) 20% Opacity: Prohibits visible emissions exceeding 20% opacity for more than 3 minutes in any 1 hour of an air contaminant from any emissions unit or within a reasonable distance of the emission unit except for scheduled soot blowing/grate cleaning or due to documented water. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA 9 <b>EPA Test Method Frequency:</b> Not Applicable <b>Periodic Monitoring:</b> Visible emission surveys, Section 2.1, Tier 2 Frequency: At least once per quarter.</p> <p><b>Required Records:</b></p>	<p align="center">Continuous</p>	<p><b>CDM:</b> Visual observations and inspections are made during daily rounds. Visible emissions are considered an unusual or abnormal condition signaling operational difficulties. Conditions of this type are recorded on round sheets and in the operations log. Corrective measures are immediately implemented whenever possible or entered into JCI's Maintenance Management Program. In addition, presence or absence of visible emissions are noted on monthly inspection checklists. Checklists are maintained and available for review on request.</p> <p><b>Comment:</b> No unusual conditions were noted during the period of compliance January 1, 2007 through December 31, 2007.</p>

**Permit:** AOP Table 1.3 F.O. <5mm BTU/hr **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07  
**NOC:** AOP Table 1.3 Fuel Oil Steam Generators <5mm BTU/Hr.

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040(1) 20% Opacity: Prohibits visible emissions exceeding 20% opacity for more than 3 minutes in any 1 hour of an air contaminant from any emissions unit or within a reasonable distance of the emission unit except for scheduled soot blowing/grate cleaning or due to documented water. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA 9 <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Visible emission surveys, Section 2.1, Tier 1 Frequency: At least once per calendar year quarter. <b>Required Records:</b></p>	<p align="center">Continuous</p>	<p><b>CDM:</b> Visual observations and inspections are made during daily rounds. Visible emissions are considered an unusual or abnormal condition signaling operational difficulties. Conditions of this type are recorded on round sheets and in the operations log. Corrective measures are immediately implemented whenever possible or entered into JCI's Maintenance Management Program. In addition, presence or absence of visible emissions are noted on monthly inspection checklists. Checklists are maintained and available for review on request.</p>

Requirement	Compliance Status	Compliance Determination Method
		<b>Comment:</b> No unusual conditions were noted during the period of compliance January 1, 2007 through December 31, 2007.
<p><b>Condition:</b> WAC 173-400-040(6) 1,000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis. Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any period of 60 consecutive minutes. <b>Model ID:</b> Model 1 <b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Method: Section 2.7, Tier 1 Frequency: At least annually. <b>Required Records:</b> 1. Amount and type of fuel burned. 2. Vendor documentation or fuel analysis once per year.</p>	Continuous	<b>CDM:</b> Vendor documentation verifies fuel oil delivered contained <0.05% S. Model 1 shows diesel engines 2,200 Hp or less can not exceed the 1,000 ppm SO <sub>2</sub> standard when using fuel with S concentration <0.05%.
<p><b>Condition:</b> WAC 173-400-050(1) &amp; (3) Particulate matter 0.23 gram per dry cubic meter at standard conditions (0.1 grain/dscf) adjusted for volumes, corrected to 7% O<sub>2</sub>. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 5 or approved procedure in "Source Test Manual - Procedures for Compliance Testing." 7/12/90. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> <b>Required Records:</b> Section 2.5</p>	Continuous	<b>CDM:</b> Boiler tune-ups are performed annually or more frequently if needed. Tapes recording tune-up and boiler performance are maintained as records. Abnormal conditions immediately are corrected during the tuning.

**Permit:** AOP Table 1.3 N.G. >=5 BTU/hr **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07

**NOC:** AOP Table 1.3 Natural Gas Steam Generators >=5mmBTU/Hr.

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> 97NM-138 NO<sub>x</sub> shall not exceed 0.337 lb/mmBTU and 30 ppm @ 3% O<sub>2</sub>. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 7E of 40 CFR 60, App. A. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.6 <b>Required Records:</b> Section 2.5</p>	Continuous	<b>CDM:</b> Owner/operator maintains required records of monthly fuel use and provides an annual report and certification that this represents all fuel combusted during the year. Logs of boiler tune-ups and significant boiler maintenance activities are kept indicating good combustion practices and maximum achievable control technology (MACT) standards are maintained.

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> 97NM-138 CO shall not exceed 0.225 lb/mmBTU and 300 ppm @ 3% O<sub>2</sub>. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 10 of 40 CFR 60, App. A. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.6 <b>Required Records:</b> Section 2.5</p>	Continuous	<p><b>CDM:</b> Owner/operator maintains required records of monthly fuel use and provides an annual report and certification that this represents all fuel combusted during the year. Logs of boiler tune-ups and significant boiler maintenance activities are kept indicating good combustion practices and maximum achievable control technology (MACT) standards are maintained.</p>
<p><b>Condition:</b> 97NM-138 Particulate matter (PM<sub>10</sub>) shall not exceed 0.012 lb/mmBTU. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 5 of 40 CFR 60, App. A. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.6 <b>Required Records:</b> Section 2.5</p>	Continuous	<p><b>CDM:</b> Owner/operator maintains required records of monthly fuel use and provides an annual report and certification that this represents all fuel combusted during the year. Logs of boiler tune-ups and significant boiler maintenance activities are kept indicating good combustion practices and maximum achievable control technology (MACT) standards are maintained.</p>
<p><b>Condition:</b> 97NM-138 VOC shall not exceed 0.013 lb/mmBTU and 30 ppm @ 3% O<sub>2</sub>. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 25 or 25A of 40 CFR 60, App. A. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.6 <b>Required Records:</b> Section 2.5</p>	Continuous	<p><b>CDM:</b> Owner/operator maintains required records of monthly fuel use and provides an annual report and certification that this represents all fuel combusted during the year. Logs of boiler tune-ups and significant boiler maintenance activities are kept indicating good combustion practices and maximum achievable control technology (MACT) standards are maintained.</p>
<p><b>Condition:</b> 97NM-138 SO<sub>2</sub> shall not exceed 0.0006 lb/mmBTU. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.6 <b>Required Records:</b> Section 2.5</p>	Continuous	<p><b>CDM:</b> Owner/operator maintains required records of monthly fuel use and provides an annual report and certification that this represents all fuel combusted during the year. Logs of boiler tune-ups and significant boiler maintenance activities are kept indicating good combustion practices and maximum achievable control technology (MACT) standards are maintained.</p>
<p><b>Condition:</b> WAC 173-400-040(1) [Table 1.2 General Standard] 20% Opacity. Prohibits visible emissions exceeding 20% opacity for more than 3 minutes in any 1 hour of an air contaminant</p>	Continuous	<p><b>CDM:</b> Visual observations and inspections are made during daily rounds. Visible emissions are considered an unusual or abnormal condition signaling operational</p>

Requirement	Compliance Status	Compliance Determination Method
<p>from any emissions unit or within a reasonable distance of the emission unit except for scheduled soot blowing/grate cleaning or due to documented water.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> EPA Method 9  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Visible emission surveys. See section 2.1.  <b>Required Records:</b></p>		<p>difficulties. Conditions of this type are recorded on round sheets and in the operations log. Corrective measures are immediately implemented whenever possible or entered into JCI's Maintenance Management Program. In addition, presence or absence of visible emissions are noted on monthly inspection checklists. Checklists are maintained and available for review on request.</p> <p><b>Comment:</b> No unusual conditions were noted during the period of compliance January 1, 2007 through December 31, 2007.</p>

**Permit:** AOP Table 1.3 F.O. >=5 BTU/hr **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07  
**NOC:** AOP Table 1.3 Fuel Oil Steam Generators >=5mmBTU/Hr.

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040(1) [Table 1.2 General Standard]            20% Opacity.            Prohibits visible emissions exceeding 20% opacity for more than 3 minutes in any 1 hour of an air contaminant from any emissions unit or within a reasonable distance of the emission unit except for scheduled soot blowing/grate cleaning or due to documented water.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> EPA Method 9  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Visible emission surveys. See Section 2.1.  <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Visual observations and inspections are made during daily rounds. Visible emissions are considered an unusual or abnormal condition signaling operational difficulties. Conditions of this type are recorded on round sheets and in the operations log. Corrective measures are immediately implemented whenever possible or entered into JCI's Maintenance Management Program. In addition, presence or absence of visible emissions are noted on monthly inspection checklists. Checklists are maintained and available for review on request.</p> <p><b>Comment:</b> No unusual conditions were noted during the period of compliance January 1, 2007 through December 31, 2007.</p>
<p><b>Condition:</b> 97NM-138            0.05% sulfur distillate fuel oil will be used in the 200 area; natural gas will be used in the 300 Area.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b></p>	Continuous	<p><b>CDM:</b> Owner/operator maintains required records of monthly fuel use and provides an annual report and certification that this represents all fuel combusted during the year. Logs of boiler tune-ups and significant boiler maintenance activities are kept</p>

Requirement	Compliance Status	Compliance Determination Method
<b>Required Records:</b> Section 2.5		indicating good combustion practices and maximum achievable control technology (MACT) standards are maintained.
<p><b>Condition:</b> 97NM-138 NOx shall not exceed 0.150 lb/mmBTU and 115 ppm @ 3% O<sub>2</sub>.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> EPA Method 7E of 40 CFR 60, App. A.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Section 2.6</p> <p><b>Required Records:</b> Section 2.5</p>	Continuous	<p><b>CDM:</b> Owner/operator maintains required records of monthly fuel use and provides an annual report and certification that this represents all fuel combusted during the year. Logs of boiler tune-ups and significant boiler maintenance activities are kept indicating good combustion practices and maximum achievable control technology (MACT) standards are maintained.</p>
<p><b>Condition:</b> 97NM-138 SO<sub>2</sub> shall not exceed 0.051 lb/mmBTU.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Section 1.6</p> <p><b>Required Records:</b> Section 2.5.</p>	Continuous	<p><b>CDM:</b> Owner/operator maintains required records of monthly fuel use and provides an annual report and certification that this represents all fuel combusted during the year. Logs of boiler tune-ups and significant boiler maintenance activities are kept indicating good combustion practices and maximum achievable control technology (MACT) standards are maintained.</p>
<p><b>Condition:</b> 97NM-138 CO shall not exceed 0.071 lb/mmBTU and 90 ppm @ 3% O<sub>2</sub>.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> EPA Method 10 of 40 CFR 60, App. A.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Section 2.6</p> <p><b>Required Records:</b> Section 2.5</p>	Continuous	<p><b>CDM:</b> Owner/operator maintains required records of monthly fuel use and provides an annual report and certification that this represents all fuel combusted during the year. Logs of boiler tune-ups and significant boiler maintenance activities are kept indicating good combustion practices and maximum achievable control technology (MACT) standards are maintained.</p>
<p><b>Condition:</b> 97NM-138 Particulate matter (PM<sub>10</sub>) shall not exceed 0.011 lb/mmBTU.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> EPA Method 5 of 40 CFR 60, App. A.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Section 2.6</p> <p><b>Required Records:</b> Section 2.5</p>	Continuous	<p><b>CDM:</b> Owner/operator maintains required records of monthly fuel use and provides an annual report and certification that this represents all fuel combusted during the year. Logs of boiler tune-ups and significant boiler maintenance activities are kept indicating good combustion practices and maximum achievable control technology (MACT) standards are maintained.</p>

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> 97NM-138 VOC shall not exceed 0.013 lb/mmBTU and 30 ppm @ 3% O<sub>2</sub>. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 25 or 25A of 40 CFR 60, App. A. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.6 <b>Required Records:</b> Section 2.5</p>	Continuous	<p><b>CDM:</b> Owner/operator maintains required records of monthly fuel use and provides an annual report and certification that this represents all fuel combusted during the year. Logs of boiler tune-ups and significant boiler maintenance activities are kept indicating good combustion practices and maximum achievable control technology (MACT) standards are maintained.</p>

**Permit:** AOP Table 1.3 Small Industrial Units **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07

**NOC:** AOP Table 1.3 Small Industrial-Commercial-Institutional Steam Generating Units

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> 40 CFR 60 Subpart DC; WAC 173-400-115 0.5 weight percent sulfur fuel (NOC 97NM-138 condition listed below) <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Fuel supplier certifications and monthly records reported annually. <b>Required Records:</b> Section 2.5</p>	Continuous	<p><b>CDM:</b> Owner/operator maintains the following required records. Vendor certification and invoices from distillate fuel-oil supplier for all fuel-oil consumed by the boilers. Fuel usage logs: fuel meter readings are taken and run time of boiler logged. Fuel usage and run time data are used to calculate monthly emissions levels for each boiler. Reports are prepared to calculate monthly emission levels for each boiler.</p>

**Permit:** AOP Table 1.3 Good Comb. Practices **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07

**NOC:** Good Combustion Practices for All Boilers

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> Operation and maintenance manuals will be obtained from the manufacturer(s) and made available for review by Ecology on request. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> None. <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Operation and Maintenance Manuals are available for review.</p>
<p><b>Condition:</b> DAILY 1. Visually check combustion. 2. Record available operating data. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified.</p>	Continuous	<p><b>CDM:</b> Visual observations and inspections are conducted daily. Operating data are recorded and daily round sheet records are maintained. In addition, abnormal conditions are</p>

Requirement	Compliance Status	Compliance Determination Method
<p><b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> None  <b>Required Records:</b></p>		<p>discussed and corrective measures immediately are implemented whenever possible or entered into JCI's Maintenance Management Program.</p>
<p><b>Condition:</b> MONTHLY            1. Inspect burner.            2. Inspect boiler exteriors.            3. Check combustion controls.            4. Check for leaks.            5. Check for unusual noise, vibrations, etc.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> None.  <b>Required Records:</b></p>	<p>Continuous</p>	<p><b>CDM:</b> Visual observations and inspections are made monthly. Abnormal conditions (leaks, excessive noise, vibrations) are recorded on monthly inspection checklists and records are maintained. Corrective measures immediately are implemented whenever possible or entered into JCI's Maintenance Management Program.</p>
<p><b>Condition:</b> SEMI-ANNUALLY            1. Visually inspect air supply system, and clean and repair if necessary.            2. Clean and check fuel supply system (visually inspect and replace filters if necessary).  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> None.  <b>Required Records:</b></p>	<p>Continuous</p>	<p><b>CDM:</b> Visual observations and inspections are conducted monthly. Abnormal conditions are discussed and recorded and checklists are maintained. Corrective measures immediately are implemented whenever possible or entered into JCI's Maintenance Management Program.</p>
<p><b>Condition:</b> ANNUALLY            1. Conduct boiler tune-ups on large boilers (&gt;5mmBTU/hr heat input) by manufacturer trained technicians or other qualified personnel.            2. Clean fireside surfaces and breaching for power boilers.            3. Inspect refractory for power boilers.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> None.  <b>Required Records:</b> Section 2.5</p>	<p>Continuous</p>	<p><b>CDM:</b> Boiler tune-ups are performed annually or more frequently if needed. Tapes recording the tune-up and boiler performance are maintained as records. Fireside surfaces and breaching are cleaned just prior to the annual inspection. Annual internal inspection is conducted by a third-party certified inspector. The inspector completes a report certifying conditions were satisfactory. Any unsatisfactory conditions immediately are corrected otherwise certification for operation will not be granted. The inspection report is maintained as record of the inspection.</p> <p><b>Comment:</b> No unsatisfactory conditions were noted during the 2007 annual inspection.</p>

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> EVERY TWO YEARS</p> <p>1. Conduct boiler tune-ups on smaller boilers (&lt;5 mmBTU/hr heat input) by manufacturer trained technicians or other qualified personnel.</p> <p>2. Inspect refractory for low pressure boilers.</p> <p>3. Clean fireside surfaces and breaching for low pressure boilers.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Not specified.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> None.</p> <p><b>Required Records:</b> Section 2.5</p>	<p>Continuous</p>	<p><b>CDM:</b> Boiler tune-ups are performed annually or more frequently if needed. Tapes recording the tune-up and boiler performance are maintained as records. Fireside surfaces and breaching are cleaned just prior to the biennial inspection. The internal inspection is conducted every 2 years by a third-party certified inspector. The inspector completes a report certifying conditions were satisfactory. Any unsatisfactory conditions immediately are corrected or certification for operation will not be granted. The inspection report is maintained as record of inspection.</p> <p><b>Comment:</b> No unsatisfactory conditions were noted for the last biennial inspection.</p>

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**Permit:** AOP Table 1.4 ICE >= 500 HP **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07  
**NOC:** AOP Table 1.4 Internal Combustion Engines (500HP and Greater)

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040(1) 20% Opacity.</p> <p>Prohibits visible emissions exceeding 20% opacity for more than 3 minutes in any 1 hour of an air contaminant from any emissions unit or within a reasonable distance of the emission unit except for scheduled soot blowing/grate cleaning or due to documented water.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> EPA Method 9.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Method: Section 2.1, Tier 1. Frequency: At least once per calendar quarter if operated.</p> <p><b>Required Records:</b></p>	<p>Continuous</p>	<p><b>CDM:</b> Visible emission surveys conducted once per calendar quarter when operated. No visible emissions observed.</p>
<p><b>Condition:</b> WAC 173-400-040(6) 1,000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis.</p> <p>Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1,000 ppm of a dry basis, corrected to 7% oxygen for combustion sources,</p>	<p>Continuous</p>	<p><b>CDM:</b> Vendor documentation verifies fuel oil delivered contained &lt;0.5%.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>and based on the average of any period of 60 consecutive minutes.</p> <p><b>Model ID:</b> Model 1</p> <p><b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Section 2.7, Tier 1</p> <p><b>Required Records:</b> 1. Amount and type of fuel burned. 2. Vendor documentation or fuel analysis once per year.</p>		
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard]</p> <p>Reasonably available control technology (RACT).</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Not specified.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Permit terms considered RACT</p> <p><b>Required Records:</b></p>	Continuous	<b>CDM:</b> Permit terms are considered RACT. Complied with all permit terms.

**E-225BG 001**

Page in AOP: 1-019

**Permit:** AOP Table 1.4 ICE >= 500 HP **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07

**NOC:** AOP Table 1.4 Internal Combustion Engines (500HP and Greater)

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040(1)</p> <p>20% Opacity.</p> <p>Prohibits visible emissions exceeding 20% opacity for more than 3 minutes in any 1 hour of an air contaminant from any emissions unit or within a reasonable distance of the emission unit except for scheduled soot blowing/grate cleaning or due to documented water.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> EPA Method 9.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Method: Section 2.1, Tier 1. Frequency: At least once per calendar quarter if operated.</p> <p><b>Required Records:</b></p>	Continuous	<b>CDM:</b> Visible emission surveys conducted once per calendar year when operated. No visible emissions observed.
<p><b>Condition:</b> WAC 173-400-040(6)</p> <p>1,000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis.</p> <p>Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1,000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any period of 60 consecutive minutes.</p> <p><b>Model ID:</b> Model 1</p>	Continuous	<b>CDM:</b> Sample verified fuel oil in the tank contained <0.5%.

Requirement	Compliance Status	Compliance Determination Method
<p><b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Section 2.7, Tier 1</p> <p><b>Required Records:</b> 1. Amount and type of fuel burned. 2. Vendor documentation or fuel analysis once per year.</p>		
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard]</p> <p>Reasonably available control technology (RACT).</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Not specified.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Permit terms considered RACT</p> <p><b>Required Records:</b></p>	Continuous	<b>CDM:</b> Permit terms are considered RACT. Complied with all permit terms.

**E-900 001**

Page in AOP: 1-019

**Permit:** AOP Table 1.4 ICE >= 500 HP **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07

**NOC:** AOP Table 1.4 Internal Combustion Engines (500HP and Greater)

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040(1)</p> <p>20% Opacity.</p> <p>Prohibits visible emissions exceeding 20% opacity for more than 3 minutes in any 1 hour of an air contaminant from any emissions unit or within a reasonable distance of the emission unit except for scheduled soot blowing/grate cleaning or due to documented water.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> EPA Method 9.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Method: Section 2.1, Tier 1. Frequency: At least once per calendar quarter if operated.</p> <p><b>Required Records:</b></p>	Continuous	<b>CDM:</b> Emission unit did not operate during the reporting period.
<p><b>Condition:</b> WAC 173-400-040(6)</p> <p>1,000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis.</p> <p>Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1,000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any period of 60 consecutive minutes.</p> <p><b>Model ID:</b> Model 1</p> <p><b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p>	Continuous	<b>CDM:</b> Emission unit did not operate during the reporting period.

Requirement	Compliance Status	Compliance Determination Method
<p><b>Periodic Monitoring:</b> Section 2.7, Tier 1  <b>Required Records:</b> 1. Amount and type of fuel burned.  2. Vendor documentation or fuel analysis once per year.</p>		
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard]  Reasonably available control technology (RACT).  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Permit terms considered RACT  <b>Required Records:</b></p>	Continuous	CDM: Emission unit did not operate during the reporting period.

**E-900 002**  
Page in AOP: 1-019

**Permit:** AOP Table 1.4 ICE >= 500 HP **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07  
**NOC:** AOP Table 1.4 Internal Combustion Engines (500HP and Greater)

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040(1)  20% Opacity.  Prohibits visible emissions exceeding 20% opacity for more than 3 minutes in any 1 hour of an air contaminant from any emissions unit or within a reasonable distance of the emission unit except for scheduled soot blowing/grate cleaning or due to documented water.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> EPA Method 9.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Method: Section 2.1, Tier 1.  Frequency: At least once per calendar quarter if operated.  <b>Required Records:</b></p>	Continuous	CDM: Emission unit did not operate during the reporting period.
<p><b>Condition:</b> WAC 173-400-040(6)  1,000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis.  Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1,000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any period of 60 consecutive minutes.  <b>Model ID:</b> Model 1  <b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Section 2.7, Tier 1  <b>Required Records:</b> 1. Amount and type of fuel burned.  2. Vendor documentation or fuel analysis once per year.</p>	Continuous	CDM: Emission unit did not operate during the reporting period.

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard] Reasonably available control technology (RACT). <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Permit terms considered RACT <b>Required Records:</b></p>	Continuous	<b>CDM:</b> Emission unit did not operate during the reporting period.

**E-900 003**

**Page in AOP:** 1-019

**Permit:** AOP Table 1.4 ICE >= 500 HP **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07

**NOC:** AOP Table 1.4 Internal Combustion Engines (500HP and Greater)

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040(1) 20% Opacity. Prohibits visible emissions exceeding 20% opacity for more than 3 minutes in any 1 hour of an air contaminant from any emissions unit or within a reasonable distance of the emission unit except for scheduled soot blowing/grate cleaning or due to documented water. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 9. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Method: Section 2.1, Tier 1. Frequency: At least once per calendar quarter if operated. <b>Required Records:</b></p>	Continuous	<b>CDM:</b> Emission unit did not operate during the reporting period.
<p><b>Condition:</b> WAC 173-400-040(6) 1,000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis. Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1,000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any period of 60 consecutive minutes. <b>Model ID:</b> Model 1 <b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.7, Tier 1 <b>Required Records:</b> 1. Amount and type of fuel burned. 2. Vendor documentation or fuel analysis once per year.</p>	Continuous	<b>CDM:</b> Emission unit did not operate during the reporting period.

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard] Reasonably available control technology (RACT). <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Permit terms considered RACT <b>Required Records:</b></p>	Continuous	<b>CDM:</b> Emission unit did not operate during the reporting period.

**E-1000 001**  
**Page in AOP: 1-019**

**Permit:** AOP Table 1.4 ICE >= 500 HP **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07  
**NOC:** AOP Table 1.4 Internal Combustion Engines (500HP and Greater)

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040(1) 20% Opacity. Prohibits visible emissions exceeding 20% opacity for more than 3 minutes in any 1 hour of an air contaminant from any emissions unit or within a reasonable distance of the emission unit except for scheduled soot blowing/grate cleaning or due to documented water. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 9. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Method: Section 2.1, Tier 1. Frequency: At least once per calendar quarter if operated. <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> EPA Method 9 surveys conducted.</p> <p><b>Comment:</b> Visible emissions are also in compliance using Ecology Method 9A.</p>
<p><b>Condition:</b> WAC 173-400-040(6) 1,000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis. Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1,000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any period of 60 consecutive minutes. <b>Model ID:</b> Model 1 <b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.7, Tier 1 <b>Required Records:</b> 1. Amount and type of fuel burned. 2. Vendor documentation or fuel analysis once per year.</p>	Continuous	<p><b>CDM:</b> Vendor documentation verifies fuel oil delivered contained &lt;0.5% sulfur. Model 1 shows that diesel engines 2,200 Hp or less cannot exceed the 1,000 ppm SO<sub>2</sub> standard when using fuel with sulfur concentration &lt;0.5%.</p> <p><b>Comment:</b> No fuel was purchased in calendar year 2007.</p>
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard] Reasonably available control technology (RACT).</p>	Continuous	<b>CDM:</b> Permit terms are considered RACT. Complied with all permit conditions for this emission unit.

Requirement	Compliance Status	Compliance Determination Method
<b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Permit terms considered RACT <b>Required Records:</b>		

**E-1450 001**  
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**Permit:** AOP Table 1.4 ICE >= 500 HP **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07

**NOC:** AOP Table 1.4 Internal Combustion Engines (500HP and Greater)

Requirement	Compliance Status	Compliance Determination Method
<b>Condition:</b> WAC 173-400-040(1) 20% Opacity. Prohibits visible emissions exceeding 20% opacity for more than 3 minutes in any 1 hour of an air contaminant from any emissions unit or within a reasonable distance of the emission unit except for scheduled soot blowing/grate cleaning or due to documented water. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 9. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Method: Section 2.1, Tier 1. Frequency: At least once per calendar quarter if operated. <b>Required Records:</b>	Continuous	<b>CDM:</b> Emission unit did not operate during the reporting period.
<b>Condition:</b> WAC 173-400-040(6) 1,000 ppm SO <sub>2</sub> @ 7% O <sub>2</sub> on a dry basis. Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1,000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any period of 60 consecutive minutes. <b>Model ID:</b> Model 1 <b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.7, Tier 1 <b>Required Records:</b> 1. Amount and type of fuel burned. 2. Vendor documentation or fuel analysis once per year.	Continuous	<b>CDM:</b> Emission unit did not operate during the reporting period.
<b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard] Reasonably available control technology (RACT). <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable.	Continuous	<b>CDM:</b> Emission unit did not operate during the reporting period.

Requirement	Compliance Status	Compliance Determination Method
<b>Periodic Monitoring:</b> Permit terms considered RACT <b>Required Records:</b>		

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**Permit:** AOP Table 1.4 ICE >= 500 HP **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07

**NOC:** AOP Table 1.4 Internal Combustion Engines (500HP and Greater)

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040(1) 20% Opacity. Prohibits visible emissions exceeding 20% opacity for more than 3 minutes in any 1 hour of an air contaminant from any emissions unit or within a reasonable distance of the emission unit except for scheduled soot blowing/grate cleaning or due to documented water. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 9. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Method: Section 2.1, Tier 1. Frequency: At least once per calendar quarter if operated. <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Emergency turbine generator did not run during calendar year 2007. <b>Comment:</b> Engine was removed from service September 2006.</p>
<p><b>Condition:</b> WAC 173-400-040(6) 1,000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis. Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1,000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any period of 60 consecutive minutes. <b>Model ID:</b> Model 1 <b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.7, Tier 1 <b>Required Records:</b> 1. Amount and type of fuel burned. 2. Vendor documentation or fuel analysis once per year.</p>	Continuous	<p><b>CDM:</b> Emergency turbine generator did not run during calendar year 2007. <b>Comment:</b> Engine was removed from service September 2006.</p>
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard] Reasonably available control technology (RACT). <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Permit terms considered RACT <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Emergency turbine generator did not run during calendar year 2007. <b>Comment:</b> Engine was removed from service September 2006.</p>

**E-WSCF 001**  
**Page in AOP: 1-019**

**Permit:** AOP Table 1.4 ICE >= 500 HP **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07

**NOC:** AOP Table 1.4 Internal Combustion Engines (500HP and Greater)

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040(1) 20% Opacity. Prohibits visible emissions exceeding 20% opacity for more than 3 minutes in any 1 hour of an air contaminant from any emissions unit or within a reasonable distance of the emission unit except for scheduled soot blowing/grate cleaning or due to documented water. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 9. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Method: Section 2.1, Tier 1. Frequency: At least once per calendar quarter if operated. <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Visible emission surveys conducted once per calendar quarter as required. No visible emissions observed.</p>
<p><b>Condition:</b> WAC 173-400-040(6) 1,000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis. Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1,000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any period of 60 consecutive minutes. <b>Model ID:</b> Model 1 <b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.7, Tier 1 <b>Required Records:</b> 1. Amount and type of fuel burned. 2. Vendor documentation or fuel analysis once per year.</p>	Continuous	<p><b>CDM:</b> Vendor documentation verifies fuel oil delivered contained &lt;0.5%.</p>
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard] Reasonably available control technology (RACT). <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Permit terms considered RACT <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Permit terms are considered RACT.</p>

**P-296AP-001**  
**Page in AOP: 1-020**

**Permit:** AOP Table 1.5 EUs Exceeding Threshold **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07

**NOC:** AOP Table 1.5 Emission Units Exceeding Insignificant EU Threshold

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040(1) 20% Opacity. Prohibits visible emissions exceeding 20% opacity for more than 3 minutes in any 1 hour of an air contaminant from any emissions unit or within a reasonable distance of the emission unit except for scheduled soot blowing/grate cleaning or due to documented water. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 9. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Units with HEPA filtration: Section 2.1 Tier 3. <b>Required Records:</b></p>	<p>Continuous</p>	<p><b>CDM:</b> Abatement control technology was maintained for emission units 296-A-40 (EU ID 204) as required in AOP Attachment 2.</p>
<p><b>Condition:</b> WAC 173-400-040(6) 1,000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis. Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1,000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any 60 consecutive minutes. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.7, Tier 2. Ecology has determined, based on process knowledge, that these emission units do not emit significant levels of SO<sub>2</sub>. The permittee annually shall certify that the processes have not been modified to increase SO<sub>2</sub> emissions and no SO<sub>2</sub> monitoring is required. <b>Required Records:</b></p>	<p>Continuous</p>	<p><b>CDM:</b> Ecology has determined that this emission unit does not emit significant levels of SO<sub>2</sub>. The process has not been modified to increase SO<sub>2</sub> emissions.</p>
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard] Reasonable available control technology (RACT). <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Permit terms considered RACT. <b>Required Records:</b></p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews.</p>

**P-296AW-001**  
**Page in AOP: 1-020**

**Permit:** AOP Table 1.5 EUs Exceeding Threshold **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07

**NOC:** AOP Table 1.5 Emission Units Exceeding Insignificant EU Threshold

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040(1) 20% Opacity. Prohibits visible emissions exceeding 20% opacity for more than 3 minutes in any 1 hour of an air contaminant from any emissions unit or within a reasonable distance of the emission unit except for scheduled soot blowing/grate cleaning or due to documented water. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 9. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Units with HEPA filtration: Section 2.1 Tier 3. <b>Required Records:</b></p>	<p>Continuous</p>	<p><b>CDM:</b> Abatement control technology was maintained for emission unit 296-A-27 (EU ID 150) as required in AOP Attachment 2.</p>
<p><b>Condition:</b> WAC 173-400-040(6) 1,000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis. Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1,000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any 60 consecutive minutes. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.7, Tier 2. Ecology has determined, based on process knowledge, that these emission units do not emit significant levels of SO<sub>2</sub>. The permittee annually shall certify that the processes have not been modified to increase SO<sub>2</sub> emissions and no SO<sub>2</sub> monitoring is required. <b>Required Records:</b></p>	<p>Continuous</p>	<p><b>CDM:</b> Ecology has determined that this emission unit does not emit significant levels of SO<sub>2</sub>. The process has not been modified to increase SO<sub>2</sub> emissions.</p>
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table I.2 General Standard] Reasonable available control technology (RACT). <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Permit terms considered RACT. <b>Required Records:</b></p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews.</p>

**P-296AN-001**  
**Page in AOP: 1-020**

**Permit:** AOP Table 1.5 EUs Exceeding Threshold **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07

**NOC:** AOP Table 1.5 Emission Units Exceeding Insignificant EU Threshold

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040(1) 20% Opacity. Prohibits visible emissions exceeding 20% opacity for more than 3 minutes in any 1 hour of an air contaminant from any emissions unit or within a reasonable distance of the emission unit except for scheduled soot blowing/grate cleaning or due to documented water. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 9. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Units with HEPA filtration: Section 2.1 Tier 3. <b>Required Records:</b></p>	<p>Continuous</p>	<p><b>CDM:</b> Abatement control technology was maintained for emission units 296-A-29 (EU ID 227) as required in AOP Attachment 2.</p>
<p><b>Condition:</b> WAC 173-400-040(6) 1,000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis. Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1,000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any 60 consecutive minutes. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.7, Tier 2. Ecology has determined, based on process knowledge, that these emission units do not emit significant levels of SO<sub>2</sub>. The permittee annually shall certify that the processes have not been modified to increase SO<sub>2</sub> emissions and no SO<sub>2</sub> monitoring is required. <b>Required Records:</b></p>	<p>Continuous</p>	<p><b>CDM:</b> Ecology has determined that this emission unit does not emit significant levels of SO<sub>2</sub>. The process has not been modified to increase SO<sub>2</sub> emissions.</p>
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard] Reasonable available control technology (RACT). <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Permit terms considered RACT. <b>Required Records:</b></p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews.</p>

**P-296SY-001**  
**Page in AOP: 1-020**

**Permit:** AOP Table 1.5 EUs Exceeding Threshold **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07

**NOC:** AOP Table 1.5 Emission Units Exceeding Insignificant EU Threshold

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040(1) 20% Opacity. Prohibits visible emissions exceeding 20% opacity for more than 3 minutes in any 1 hour of an air contaminant from any emissions unit or within a reasonable distance of the emission unit except for scheduled soot blowing/grate cleaning or due to documented water. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 9. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Units with HEPA filtration: Section 2.1 Tier 3. <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Abatement control technology was maintained for emission unit 296-P-23 (EU ID 56) as required in AOP Attachment 2.</p>
<p><b>Condition:</b> WAC 173-400-040(6) 1,000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis. Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1,000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any 60 consecutive minutes. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.7, Tier 2. Ecology has determined, based on process knowledge, that these emission units do not emit significant levels of SO<sub>2</sub>. The permittee annually shall certify that the processes have not been modified to increase SO<sub>2</sub> emissions and no SO<sub>2</sub> monitoring is required. <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Ecology has determined that this emission unit does not emit significant levels of SO<sub>2</sub>. The process has not been modified to increase SO<sub>2</sub> emissions.</p>
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard] Reasonable available control technology (RACT). <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Permit terms considered RACT. <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Field interviews.</p>

**200 Area Diffuse/Fugitive - Tank Farms**

Page in AOP: 1-024

**Permit:** DE00NWP-001 R1 **Issue Date:** 02-15-05 **Effective Date:**02-15-05 **Date In AOP:** 01-01-07

**NOC:** Installation and Operation of a Waste Retrieval System in Double-Shell Tanks

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> Operation of the proposed boilers shall not exceed 720 hours per year per boiler, and be in accordance with good combustion practices (GCP) to minimize emissions, based on the manufacturer's recommendations, and require the use of fuel with a Sulfur content of 0.05% or less. Periodic preventive maintenance and combustion adjustments shall be made, as necessary, to maintain GCP, but at least annually.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Not specified. (see Required Records below).</p> <p><b>EPA Test Method Frequency:</b> Annually.</p> <p><b>Periodic Monitoring:</b> Recordkeeping.</p> <p><b>Required Records:</b> 1. Operating logs showing all hours of operation. 2. GCP - Preventive maintenance and combustion adjustment records 3. Records of vendor documentation or fuel analysis documenting procurements of diesel fuel with sulfur content of 0.05% or less once per year.</p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews.</p> <p><b>Comment:</b> The boiler for this project has been installed for 241-AN and 241-AZ tank farms. This boiler has not been made operational (a future requirement). No activities were conducted requiring the use of the NOC during the reporting period.</p>
<p><b>Condition:</b> Tanks: A new NOC also will be required, if total emissions of toxic air pollutants exceed the SQER, unless dispersion modeling demonstrates that emissions would continue to result in concentrations less than the ASILS. Results of any such dispersion modeling demonstrations/calculations will be maintained on file at the tank farms and made available upon inspection.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Not specified.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Analyze each proposed change to determine if emissions would exceed an SQER or ASIL.</p> <p><b>Required Records:</b> Results of analyses.</p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews.</p> <p><b>Comment:</b> No activities were conducted requiring the use of the NOC during the reporting period.</p>
<p><b>Condition:</b> Tanks: Notification will be made ten (10) days prior to initiating waste retrieval operations in each tank covered by this order.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Not specified.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews.</p> <p><b>Comment:</b> No activities were conducted requiring the use of the NOC during the reporting period.</p>

Requirement	Compliance Status	Compliance Determination Method
<p><b>Periodic Monitoring:</b> Recordkeeping. <b>Required Records:</b> Copy of notification.</p>		
<p><b>Condition:</b> An updated schedule of installation and operation activities will be made available upon request. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Recordkeeping. <b>Required Records:</b> Copy of updated schedule.</p>	Continuous	<p><b>CDM:</b> Field interviews.  <b>Comment:</b> A project construction schedule is available upon request. No activities were conducted requiring the use of the NOC during the reporting period.</p>
<p><b>Condition:</b> The data obtained in the course of monitoring worker exposure will be used by the Permittee as an administrative control measure to verify that VOC emissions do not exceed 500 parts per million (PPM). The 500 PPM level will be used as an indicator to facilitate field monitoring of potential VOC emissions, using the existing Industrial Hygiene equipment. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Organic Vapor Analyzers (OVAs) or similar instruments. <b>EPA Test Method Frequency:</b> At least once per year during mixer pump operations. If mixer pumps do not operate, no monitoring is required. <b>Periodic Monitoring:</b> VOC measurements from each stack. <b>Required Records:</b> VOC measurement.</p>	Continuous	<p><b>CDM:</b> Field interviews and industrial hygiene monitoring and sample analysis plans.  <b>Comment:</b> No activities were conducted requiring the use of the NOC during the reporting period.</p>

**Permit:** AOP Table 1.6 - Non-CUs with HEPA **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07

**NOC:** AOP Table 1.6 - Non-Combustion Units with HEPA

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040(1) 20% Opacity: Prohibits visible emissions exceeding 20% opacity for more than 3 minutes in any 1 hour of an air contaminant from any emissions unit or within a reasonable distance of the emission unit except for scheduled soot blowing/grate cleaning or due to documented water. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 9. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.1, unless an alternative visible emissions, opacity, or particulate matter emission limit is identified in Table 1.6 below. <b>Required Records:</b> As specified in Section 2.1.</p>	Continuous	<p><b>CDM:</b> Field interviews.  <b>Comment:</b> The boiler for this project has been installed for 241-AN and 241-AZ tank farms. This boiler has not been made operational (a future requirement). No activities were conducted requiring the use of the NOC during the reporting period.</p>
<p><b>Condition:</b> WAC 173-400-040(6) 1000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis. Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1000 ppm of a dry basis,</p>	Continuous	<p><b>CDM:</b> Field interviews.  <b>Comment:</b> No activities were</p>

Requirement	Compliance Status	Compliance Determination Method
<p>corrected to 7% oxygen for combustion sources, and based on the average of any period of 60 consecutive minutes.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Section 2.7, Tier 2, unless an alternative SO<sub>2</sub> emission limit is identified in Table 1.6.  <b>Required Records:</b> As specified in Section 2.7.</p>		<p>conducted requiring the use of the NOC during the reporting period.</p>
<p><b>Condition:</b> WAC 173-400-040(3)(a) [Table 1.2 General Standard]  Fugitive emissions.  The permittee shall take reasonable precautions to prevent the release of air contaminants from any emissions unit engaging in materials handling, construction, demolition, or any other operation that is a source of fugitive emissions.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Pre-job planning to determine reasonable control measures.  <b>Required Records:</b></p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews.    <b>Comment:</b> Emissions that pass through a stack are not sources of fugitive emissions per WAC 173-400-030(38) or fugitive dust per WAC 173-400-030(37). No activities were conducted requiring the use of the NOC during the reporting period.</p>
<p><b>Condition:</b> WAC 173-400-040(8)(a) [Table 1.2 General Standard]  Fugitive dust.  Requires reasonable precautions be taken to prevent fugitive dust from becoming airborne and to minimize dust generation.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Pre-job planning to determine reasonable control measures.  <b>Required Records:</b></p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews.    <b>Comment:</b> Emissions that pass through a stack are not sources of fugitive emissions per WAC 173-400-030(38) or fugitive dust per WAC 173-400-030(37). No activities were conducted requiring the use of the NOC during the reporting period.</p>
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard]  Reasonably available control technology (RACT).  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Permit terms considered RACT.  <b>Required Records:</b></p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews. Permit terms are considered RACT.    <b>Comment:</b> No activities were conducted requiring the use of the NOC during the reporting period.</p>

**C-106 Sluicing**  
**Page in AOP: 1-027**

**Permit:** 97NM-001 (2/24/2003) **Issue Date:** 02-24-03 **Date In AOP:** 04-11-05  
**NOC:** 241-C-106 Tank Sluicing, Phase II

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> VOC 500 ppm. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Hanford's IH monitoring program. <b>EPA Test Method Frequency:</b> VOC monitoring as part of the routine industrial hygiene sampling program during and after the sluicing operation. <b>Periodic Monitoring:</b> Instruments used to detect fugitive organic emissions as part of Hanford's Industrial Hygiene (IH) worker monitoring program will be used to monitor for VOCs during sluicing pump operations. <b>Required Records:</b> Records of VOC sample results.</p>	Continuous	<p><b>CDM:</b> Field interviews. <b>Comment:</b> No activities were conducted requiring the use of the NOC during the reporting period.</p>
<p><b>Condition:</b> Sluicing operations may be conducted for up to 1800 hours per calendar year. Actions shall be taken prior to reaching 50 ppm to limit any excursions above that level. VOC readings may peak at re-start of sluicing operations but then are expected to stabilize. A sluicing pump operations log shall show hours of operation. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Recordkeeping. <b>Required Records:</b> Operations log showing all hours of sluicing pump operation.</p>	Continuous	<p><b>CDM:</b> Field interviews. <b>Comment:</b> No activities were conducted requiring the use of the NOC during the reporting period.</p>

**Permit:** AOP Table 1.6 - Non-CUs with HEPA **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07  
**NOC:** AOP Table 1.6 - Non-Combustion Units with HEPA

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040(1) 20% Opacity: Prohibits visible emissions exceeding 20% opacity for more than 3 minutes in any 1 hour of an air contaminant from any emissions unit or within a reasonable distance of the emission unit except for scheduled soot blowing/grate cleaning or due to documented water. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 9. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.1, unless an alternative visible emissions, opacity, or particulate matter emission limit is identified in Table 1.6 below. <b>Required Records:</b> As specified in Section 2.1.</p>	Continuous	<p><b>CDM:</b> Field interviews. <b>Comment:</b> This emission unit did not operate during the reporting period.</p>

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040(6) 1000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis. Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any period of 60 consecutive minutes.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Section 2.7, Tier 2, unless an alternative SO<sub>2</sub> emission limit is identified in Table 1.6.</p> <p><b>Required Records:</b> As specified in Section 2.7.</p>	Continuous	<p><b>CDM:</b> Ecology has determined that this emission unit does not emit significant levels of SO<sub>2</sub>. The process has not been modified to increase SO<sub>2</sub> emissions.</p> <p><b>Comment:</b> This emission unit did not operate during the reporting period.</p>
<p><b>Condition:</b> WAC 173-400-040(3)(a) [Table 1.2 General Standard] Fugitive emissions. The permittee shall take reasonable precautions to prevent the release of air contaminants from any emissions unit engaging in materials handling, construction, demolition, or any other operation that is a source of fugitive emissions.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Not specified.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Pre-job planning to determine reasonable control measures.</p> <p><b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Field interviews.</p> <p><b>Comment:</b> Emissions that pass through a stack are not sources of fugitive emissions per WAC 173-400-030(38) or fugitive dust per WAC 173-400-030(37). No activities were conducted requiring the use of the NOC during the reporting period.</p>
<p><b>Condition:</b> WAC 173-400-040(8)(a) [Table 1.2 General Standard] Fugitive dust. Requires reasonable precautions be taken to prevent fugitive dust from becoming airborne and to minimize dust generation.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Not specified.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Pre-job planning to determine reasonable control measures.</p> <p><b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Field interviews.</p> <p><b>Comment:</b> Emissions that pass through a stack are not sources of fugitive emissions per WAC 173-400-030(38) or fugitive dust per WAC 173-400-030(37). No activities were conducted requiring the use of the NOC during the reporting period.</p>
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard] Reasonably available control technology (RACT).</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Not specified.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Permit terms considered RACT.</p> <p><b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Field interviews and NOC revision form for modification of NRA. Permit terms are considered RACT.</p> <p><b>Comment:</b> This emission unit did not operate during the reporting period.</p>

**Concrete Batch Plant**  
Page in AOP: 1-028

**Permit:** DE01NWP-003, Rev. 9/24/2002 **Issue Date:** 09-24-02 **Date In AOP:** 03-31-04

**NOC:** Revision to Concrete Batch Plant NOC

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> Total Emission Limits</p> <p>A. Particulate Matter - Particulates from the bag-house exhaust shall not exceed 0.01 grains per dry standard cubic foot, with no visible emissions. Engineering calculations or vendor information that the bag-house, when properly operated and maintained, will control emissions to less than 0.01 grains per dry standard cubic foot will be available at the facility. Periodic measurements shall consist of visible emission inspections per EPA Reference Method 22, Title 40 Part 60, Appendix A, July 1, 2000.</p> <p>B. Fugitive Dust - Visible emissions from the sand and aggregate transfer points, truck loading station, the piles, or any other source shall not be allowed beyond 100 yards.</p> <p><b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> B. EPA Method 22, Title 40 Part 60, App. A, July 1, 2000.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> A. Recordkeeping  <b>Required Records:</b> A. Calculations, vendor information, baghouse maintenance logs, surveillance checklists.  B. Visible emission survey results.</p>	<p>Continuous</p>	<p><b>CDM:</b> Records review and field observations.</p>
<p><b>Condition:</b> Fugitive Dust</p> <p>All unpaved areas at the CBP and quarry will be controlled by watering or chemical stabilization, or both. Means of chemical stabilization include the application of petroleum resins (EPA 1998). A water spray additive, (such as, "soil cement") will also be considered for application on unpaved roads. Soil cement has been previously used on the Hanford Site with effective results.</p> <p>Vehicle speed limit signs will be posted to control speeds. Paved roads between the quarry and CBP will be kept clear of heavy accumulations of dust and debris. Front-end loaders will be used to pick up any significant spill of sand or aggregate material on the pave roads between the quarry and CBP. The sand and aggregate stockpiles will be kept sprinkled with water to prevent the movement of materials that may migrate because of wind erosion. Transfer points at conveyors, crushers, and screens will also be sprayed with water.</p> <p><b>Model ID:</b> Not applicable.</p>	<p>Continuous</p>	<p><b>CDM:</b> Records review and field observations.</p>

Requirement	Compliance Status	Compliance Determination Method
<p><b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Recordkeeping  <b>Required Records:</b> Surveillance checklists.</p>		
<p><b>Condition:</b> Emission Control Monitors  Emission equipment control monitors shall include but not be limited to the following:  A. Bag-house - None required if there are no visible emissions per section 1.A. of the APPROVAL CONDITIONS, and maintenance records indicate proper maintenance practices and schedules.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Recordkeeping  <b>Required Records:</b> Surveillance checklists, bag-house maintenance logs.</p>	Continuous	CDM: Records review and field observations.
<p><b>Condition:</b> General Conditions  A. Visible Emissions: No visible emissions shall be allowed beyond 100 yards of source. During periods of high winds, an assessment shall be made to suspend operations or initiate a more comprehensive plant watering scheme.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Visible Emission Surveys.  <b>Required Records:</b> Results of visible emission surveys.</p>	Continuous	CDM: Records review and field observations.

**Permit:** AOP Table 1.6 - CUs <20% Opacity **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07  
**NOC:** Combustion Units with Opacity Limit Less Than 20%

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> 1000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis:  Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any period of 60 consecutive minutes.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Section 2.7, Tier 2, unless an alternative SO<sub>2</sub> emission limit is identified in Table 1.6.  <b>Required Records:</b> As specified in Section 2.7.</p>	Continuous	CDM: Records review
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2</p>	Continuous	CDM: The NOC Approval requires

Requirement	Compliance Status	Compliance Determination Method
<p>General Standard] Reasonably available control technology (RACT). <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Permit terms considered RACT. <b>Required Records:</b></p>		BACT.

**Permit:** DE01NWP-003, Rev. 3/12/2003 **Issue Date:** 03-12-03 **Effective Date:**03-12-03 **Date In AOP:** 12-05-07

**NOC:** Revision to Concrete Batch Plant NOC to add Diesel Fuel Oil Boiler

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> Diesel Fuel Oil Boiler</p> <ol style="list-style-type: none"> <li>1. A 4.4 MMBtu diesel fuel oil boiler will be operated</li> <li>2. The diesel fuel sulfur content will be less then or equal to 0.05% S, by weight.</li> <li>3. Operation of the boiler is limited to 2000 hours per year.</li> <li>4. Good combustion engineering practices shall be followed, including adherence to the boiler manufacturer's specification for operation, maintenance, and combustion control.</li> <li>5. Specific combustion feed gas ratios, including the fuel-air ratio, monitoring, startup and shutdown procedures shall be followed to maximize combustion efficiency and minimize discharge of pollutants into the atmosphere.</li> </ol> <p><b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Recordkeeping <b>Required Records:</b> 1. Manufacturer's specifications for operation, maintenance, and combustion control. 2. Records of operating hours. 3. Records of fuel specification (sulfur content). 4. Records of good combustion engineering practices and operating procedures.</p>	Continuous	<b>CDM:</b> Records review

**J-CWC 001**  
**Page in AOP: 1-030**

**Permit:** DE00NWP-002, Revision 1 **Issue Date:** 06-29-06 **Effective Date:**06-29-06 **Date In AOP:** 01-01-07  
**NOC:** Central Waste Complex, Rev. 1

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> Visible emissions shall not exceed limits specified in WAC 173-400-040(1).</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> EPA Method 9 or Tier 3 Visible Emissions Survey on this AOP.</p> <p><b>EPA Test Method Frequency:</b> Routine observations.</p> <p><b>Periodic Monitoring:</b> Tier 3 survey/observation.</p> <p><b>Required Records:</b> Log book.</p>	Continuous	<b>CDM:</b> Annual walk down.
<p><b>Condition:</b> VOC emissions shall not exceed 3.5 tons per year.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Material assessment, inventory, and calculation as identified in the NOC Approval Condition 3.0.</p> <p><b>EPA Test Method Frequency:</b> Annually.</p> <p><b>Periodic Monitoring:</b> Emission estimation (Condition 3.0 of this NOC).</p> <p><b>Required Records:</b> Results of analyses.</p>	Continuous	<b>CDM:</b> Annual emission estimation report.
<p><b>Condition:</b> All TAPs, as submitted in the Permittee's Notice of Construction Application, shall be below their respective ASIL.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Material assessment, inventory, and calculation as identified in the NOC Approval Condition 3.0.</p> <p><b>EPA Test Method Frequency:</b> Annually.</p> <p><b>Periodic Monitoring:</b> Emission estimation (Condition 3.0 of this NOC)</p> <p><b>Required Records:</b> Results of analyses.</p>	Continuous	<b>CDM:</b> Annual emission estimation report.

**Permit:** AOP Table 1.6 - Non-CUs <20% Opacity & Fugitive **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07  
**NOC:** AOP Table 1.6 - Non Combustion Units with <20% Opacity Requirements

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040(3)(a) [Table 1.2 General Standard] Fugitive emissions. The permittee shall take reasonable precautions to prevent the release of air contaminants from any emissions unit engaging in materials handling,</p>	Continuous	<b>CDM:</b> Containers are not opened at the CWC during normal operations. Activities involving soil disturbance utilize dust suppression as necessary.

Requirement	Compliance Status	Compliance Determination Method
<p>construction, demolition, or any other operation that is a source of fugitive emissions.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Pre-job planning to determine reasonable control measures.  <b>Required Records:</b></p>		
<p><b>Condition:</b> WAC 173-400-040(8)(a) [Table 1.2 General Standard]  Fugitive Dust.  Requires reasonable precautions be taken to prevent fugitive dust from becoming airborne and to minimize dust generation.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Pre-job planning to determine reasonable control measures.  <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Activities involving soil disturbance utilize dust suppression as necessary.</p>
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard]  Reasonably available control technology (RACT).  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Permit terms considered RACT.  <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Permit terms considered RACT. Complied with all permit terms.</p>
<p><b>Condition:</b> 1000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis. Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any period of 60 consecutive minutes.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Section 2.7, Tier 2, unless an alternative SO<sub>2</sub> emission limit is identified in Table 1.6 below.  <b>Required Records:</b> As specified in Section 2.7.</p>	Continuous	<p><b>CDM:</b> The process has not been modified to increase SO<sub>2</sub> emissions.</p>

**E-282ED 001**  
**Page in AOP: 1-031**

**Permit:** NWP-96-1 - A **Issue Date:** 04-30-96 **Date In AOP:** 07-02-01  
**NOC:** Diesel Powered Emergency Fire Pump Generator

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> Engine E shall operate no more than 350 hours per year. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Recordkeeping. <b>Required Records:</b> Maintain records showing all hours of operation.</p>	Continuous	<p><b>CDM:</b> Recordkeeping. <b>Comment:</b> Records shows engine operated no more than 350 hours.</p>
<p><b>Condition:</b> Engine E shall burn only No. 2 fuel oil with sulfur content no more than 0.05 weight percent. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Recordkeeping for compliance with condition. <b>Required Records:</b> Vendor documentation of fuel purchase from retail outlet (i.e., for use in the motor vehicles, see 40 CFR 80), or fuel analysis once per year showing <math>\leq 0.05\text{wt}\%</math> sulfur.</p>	Continuous	<p><b>CDM:</b> Vendor documentation shows fuel oil delivered contained no more than 0.05 weight percent sulfur.</p>
<p><b>Condition:</b> NOx 75.5 pounds per hour NOx. <b>Model ID:</b> 2B. <b>EPA Test Method:</b> EPA Method 7A of 40 CFR 60, App. A. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Recordkeeping &amp; average fuel consumption rate determination shall be performed at least once per 12 months. <b>Required Records:</b> 1. Monthly fuel burned (this calculation is based on fuel added to supply tank). 2. Hours of operation logged.</p>	Continuous	<p><b>CDM:</b> Recordkeeping and calculation shows average fuel consumption is below manufacturer's specification.</p>
<p><b>Condition:</b> Opacity 10 %. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 9 of 40 CFR 60, App. A. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> See Section 2.1, Tier 1. Frequency: At least once per quarter, if operates. <b>Required Records:</b> Results of visible emissions survey or records of visual determination of the opacity.</p>	Continuous	<p><b>CDM:</b> EPA Method 9 opacity surveys were conducted and recorded. <b>Comment:</b> Visible emissions are also in compliance using Ecology Method 9A.</p>

**Permit:** AOP Table 1.6 - CUs with Opacity & SO<sub>2</sub> **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07  
**NOC:** Combustion Units with Opacity and SO<sub>2</sub> Requirements

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard] Reasonably available control technology (RACT). <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Permit terms considered RACT. <b>Required Records:</b></p>	Not Applicable	<b>CDM:</b> Applies only to regulatory orders determined to be less than RACT (RCW 70.94.154).

**E-282WD 001**  
**Page in AOP:** 1-033

**Permit:** NWP-96-1 - B **Issue Date:** 04-30-96 **Date In AOP:** 07-02-01  
**NOC:** Diesel Powered Emergency Fire Pump Generator

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> Engine W shall operate no more than 350 hours per year. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Recordkeeping. <b>Required Records:</b> Maintain records showing all hours of operation.</p>	Continuous	<b>CDM:</b> Recordkeeping. <b>Comment:</b> Records shows engine operated no more than 350 hours.
<p><b>Condition:</b> Engine W shall burn only No. 2 fuel oil with sulfur content no more than 0.05 weight percent. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Recordkeeping for compliance with condition. <b>Required Records:</b> Vendor documentation of fuel purchase from retail outlet (i.e. for use in motor vehicles, see 40 CFR 80), or fuel analysis once per year showing <math>\leq 0.05</math> wt% sulfur.</p>	Continuous	<b>CDM:</b> Vendor documentation shows fuel oil delivered contained no more than 0.05% weight percent sulfur.
<p><b>Condition:</b> NO<sub>x</sub> 42 pounds per hour. <b>Model ID:</b> 2B. <b>EPA Test Method:</b> EPA Method 7A of 40 CFR 60, App. A. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Recordkeeping &amp; average fuel consumption rate determination shall be performed at least once per 12 months.</p>	Continuous	<b>CDM:</b> Recordkeeping and calculation shows average fuel consumption is below manufacturer's specification.

Requirement	Compliance Status	Compliance Determination Method
<p><b>Required Records:</b> 1. Monthly fuel burned (this calculation is based on fuel added to supply tank). 2. Hours of operation logged.</p>		
<p><b>Condition:</b> 10 % Opacity. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 9 of 40 CFR 60, App. A. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> See Section 2.1, Tier 1 Frequency: At least once per quarter, if operates. <b>Required Records:</b> Results of visible emissions survey or records of visual determination of the opacity.</p>	Continuous	<p><b>CDM:</b> EPA Method 9 Opacity surveys were conducted and recorded.</p> <p><b>Comment:</b> Visible emissions are also in compliance using Ecology Method 9A.</p>

**Permit:** AOP Table 1.6 - CUs with Opacity & SO2 **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07  
**NOC:** Combustion Units with Opacity and SO2 Requirements

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard] Reasonably available control technology (RACT). <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Permit terms considered RACT. <b>Required Records:</b></p>	Not Applicable	<p><b>CDM:</b> Applies only to regulatory orders determined to be less than RACT (RCW 70.94.154).</p>

**Emergency Diesel Generators**  
**Page in AOP:** 1-035

**Permit:** DE02NWP-001 **Issue Date:** 01-15-02 **Date In AOP:** 03-31-04  
**NOC:** Emergency Diesel Generators

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> Emissions Control SOx emissions will be controlled through use of #2 Diesel Fuel with a sulfur content within the range of 0.2% to 0.5%. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Per fuel shipment. <b>Periodic Monitoring:</b> Recordkeeping. <b>Required Records:</b> Vendor documentation or fuel analysis showing sulfur content &lt;0.5%.</p>	Continuous	<p><b>CDM:</b> Fuel Invoices for #2 diesel fuel.</p>

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> Total Emission Limits</p> <p>A. The activities described in the Notice of Construction application will be permitted without additional control technologies required, provided that the total emissions from all activities will not result in exceedance of WAC 173-460 ASILs.</p> <p>B. A new Notice of Construction will be required, if total emissions of toxic air pollutants exceed the Small Quantity Emission Rates, unless dispersion modeling demonstrates that emissions would continue to result in concentrations less than the ASILs. Results of any such dispersion modeling demonstrations/calculations will be maintained on file and made available upon inspection.</p> <p>C. A new NOC also is required if total emissions of criteria pollutants would exceed the WAC 173-400-110 thresholds.</p> <p><b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Analyze each proposed change to determine if emissions would exceed an ASIL or NSR threshold.  <b>Required Records:</b> Results of analyses.</p>	Continuous	<p><b>CDM:</b> No changes in fuel usage and operating hours occurred in 2007 warranting additional demonstration ASIL's were not exceeded.</p>
<p><b>Condition:</b> Monitoring and Recordkeeping</p> <p>Specific records shall be kept on-site by the Permittee and made available for inspection by Ecology upon request. The records shall be organized in a readily accessible manner and cover a minimum of the most recent sixty (60) month period. The records to be kept shall include the following:</p> <p>A. Maintain records of the hours of operation.</p> <p><b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Recordkeeping.  <b>Required Records:</b> 1. Hours of operation  2. Fuel consumption.</p>	Continuous	<p><b>CDM:</b> Hours of operation and fuel consumption recorded monthly. Records of operation and fuel consumption are on file and available for review on request.</p>

**Permit:** AOP Table 1.6 - Combustion Units **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07  
**NOC:** AOP Table 1.6 - Combustion Units (CU)

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040(1)  20% Opacity: Prohibits visible emissions exceeding 20% opacity for more than 3 minutes in any 1 hour of an air</p>	Continuous	<p><b>CDM:</b> More stringent condition of DE02NWP-001 is being met, through compliance with limitation on</p>

Requirement	Compliance Status	Compliance Determination Method
<p>contaminant from any emissions unit or within a reasonable distance of the emission unit except for scheduled soot blowing/grate cleaning or due to documented water.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> EPA Method 9.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Section 2.1, unless an alternative visible emissions, opacity, or particulate matter emission limit is identified in Table 1.6 below.  <b>Required Records:</b> As specified in Section 2.1.</p>		<p>maximum annual emission limit for particulate matter.</p>
<p><b>Condition:</b> WAC 173-400-040(6)            1000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis. Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any period of 60 consecutive minutes.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Section 2.7, Tier 2, unless an alternative SO<sub>2</sub> emission limit is identified in Table 1.6.  <b>Required Records:</b> As specified in Section 2.7.</p>	Continuous	<p><b>CDM:</b> More stringent condition of DE02NWP-001 is being met, through compliance with limitation on maximum annual emission limit for SO<sub>x</sub> and purchase of #2 diesel fuel.</p>
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard]            Reasonably available control technology (RACT).  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Permit terms: considered RACT.  <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Permit terms complied with through purchase of #2 diesel fuel and maintenance of required records of hours of operation and fuel consumption.</p>

### 331C-01-V Gas Cylinder Management Process

Page in AOP: 1-037

Permit: DE98NWP-003 Issue Date: 09-01-98 Date In AOP: 07-02-01

NOC: 305-B AOP Table 1.6

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> GCMP Release Limits:            The maximum total quantity of residuals that are allowed to be released under this Order per calendar year will not exceed two (2) tons/year. This shall include no more than one (1) ton/year of Class I and Class II ozone-depleting substances.</p>	Continuous	<p><b>CDM:</b> Records Review / Personnel Interview.            No gas cylinder residuals were exhausted in 331C during the review period.</p>

Requirement	Compliance Status	Compliance Determination Method
<p><b>Model ID:</b> 6.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Operator recording of release information. Frequency: for each release.  <b>Required Records:</b> Daily volumes and concentrations emitted from each cylinder and operator signature.</p>		
<p><b>Condition:</b> GCMP Release Limits:  The above release limits and the ASILs shall not be exceeded until a revised NOC application is submitted to Ecology and approved by Ecology.  <b>Model ID:</b> 6.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Applicable if triggered.  <b>Required Records:</b> 1. Chemical inventory if use rates are unavailable.  2. Volumes and concentrations in each cylinder.  3. Waste handling rates.  4. Chemical use rate.  5. Chemical inventory if use rates are unavailable.</p>	Continuous	<p><b>CDM:</b> Records Review / Personnel Interview.  No gas cylinder residuals were exhausted in 331C during the review period.</p>
<p><b>Condition:</b> Total Building Emission Limits:  GCMP process and emission controls, building research and waste handling projects and supporting operations, and building equipment additions and changes, including emission control systems, can be made to accommodate changing research and support requirements without filing a new Notice of Construction, providing the total emissions meet the ASILs and WAC 173-400-110 NSR thresholds.  <b>Model ID:</b> 7A and 7B.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Recordkeeping  Frequency: For each release.  <b>Required Records:</b> Results of analyses.</p>	Continuous	<p><b>CDM:</b> Records Review.  Waste handling activities were controlled to maintain emissions below ASILs and NSR thresholds.  No gas cylinder residuals were exhausted in 331C during the review period.</p>
<p><b>Condition:</b> Total Building Emission Limits:  A new NOC will be required if total building emissions of toxic air pollutants exceed the Small Quantity Emission Rates, unless a T-Screen analysis is run that shows that emissions would result in concentrations less than ASILs. Results of these analyses will be maintained on file at PNNL for inspection.  <b>Model ID:</b> 6, 7A &amp; 7B.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Applicable if triggered.  <b>Required Records:</b> 1. Chemical inventory if use rates are unavailable</p>	Not Applicable	<p><b>CDM:</b> Records Review.  A new NOC was not required during this review period to trigger this requirement.</p>

Requirement	Compliance Status	Compliance Determination Method
2. Volumes and concentrations in each cylinder 3. Waste handling rates 4. Chemical use rate 5. Chemical inventory if use rates are unavailable.		
<p><b>Condition:</b> Total Building Emission Limits: A new NOC will be required if total building emissions of criteria pollutants would exceed the WAC 173-400-110 thresholds.</p> <p><b>Model ID:</b> 6, &amp; 7A.</p> <p><b>EPA Test Method:</b> Not specified.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Applicable if triggered.</p> <p><b>Required Records:</b> 1. Chemical inventory if use rates are unavailable            2. Volumes and concentrations in each cylinder            3. Waste handling rates            4. Chemical use rate            5. Chemical inventory if use rates are unavailable.</p>	<p>Not Applicable</p>	<p><b>CDM:</b> Records Review. A new NOC was not required during this review period to trigger this requirement.</p>
<p><b>Condition:</b> Monitoring and Recordkeeping: Specific records shall be kept on-site by the permittee and made available for inspection by Ecology upon request. The records shall be organized in a readily accessible manner and cover a minimum of the most recent 60-month period.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Not specified.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Recordkeeping.</p> <p><b>Required Records:</b> 1. Logbook identifying individual cylinders.            2. Logbook identifying contents of the cylinders            3. The amount of residuals            4. The date and rate of release            5. Any other information pertaining to said release.</p>	<p>Continuous</p>	<p><b>CDM:</b> Records Review.</p> <p><b>Comment:</b> GCMP release rates, volumes, &amp; chemical concentrations and any other information associated with each release are recorded in the 331C Facility RIDS, Section T04.8.</p>
<p><b>Condition:</b> Should any of the emissions become subject to 40 Code of Federal Regulations (CFR) 264/265 Subparts AA, those emissions would be regulated under those parts and are then exempt from WAC 173-460. In that event, those exempted emissions would be excluded from ASIL and threshold evaluations.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Not specified.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Applicable if triggered.</p> <p><b>Required Records:</b></p>	<p>Not Applicable</p>	<p><b>CDM:</b> There have been no emissions from 331C subject to 40CFR 264/265 Subparts AA to trigger this requirement.</p>

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> General Conditions: Visible emissions - No visible emissions shall be allowed beyond the property line, as determined by opacity readings when warranted. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 9. <b>EPA Test Method Frequency:</b> Frequency: At least once per quarter, or as prescribed for Tier2. <b>Periodic Monitoring:</b> Section 2.1, Tier 2. <b>Required Records:</b> Operating log.</p>	Continuous	<p><b>CDM:</b> Records Review. Visible emissions surveys were performed as directed in Section 2.1, Tier 2.</p> <p><b>Comment:</b> There were no visible emissions. The requirements of the procedure for reducing visible emission survey frequencies were met. Observations are now only required when visible emissions are noticed or expected.</p>

**Permit:** AOP Table 1.6 - Non-CUs **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07

**NOC:** AOP Table 1.6 - Non Combustion Units with No Fugitive Emission or Dust Generals

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040(1) 20% Opacity: Prohibits visible emissions exceeding 20% opacity for more than 3 minutes in any 1 hour of an air contaminant from any emissions unit or within a reasonable distance of the emission unit except for scheduled soot blowing/grate cleaning or due to documented water. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 9. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.1, unless an alternative visible emissions, opacity, or particulate matter emission limit is identified in Table 1.6 below. <b>Required Records:</b> As specified in Section 2.1.</p>	Continuous	<p><b>CDM:</b> Records Review. Visible emissions surveys were performed as directed in Section 2.1, Tier 2.</p> <p><b>Comment:</b> There were no visible emissions. The requirements of the procedure for reducing visible emission survey frequencies were met. Observations are now only required when visible emissions are noticed or expected.</p>
<p><b>Condition:</b> 1000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis. Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any period of 60 consecutive minutes. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.7, Tier 2, unless an alternative SO<sub>2</sub> emission limit is identified in Table 1.6 below. <b>Required Records:</b> As specified in Section 2.7.</p>	Continuous	<p><b>CDM:</b> Ecology has determined, based on process knowledge that these emission units do not emit significant levels of SO<sub>2</sub>. It was verified through project and facility modification reviews that SO<sub>2</sub> emissions did not increase.</p>
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard] Reasonably available control technology (RACT).</p>	Continuous	<p><b>CDM:</b> Permit terms considered RACT. Complied with all the permit conditions for this emission point.</p>

Requirement	Compliance Status	Compliance Determination Method
<p><b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Permit terms considered RACT.  <b>Required Records:</b></p>		

**EP-325-01-S Hazardous Waste Treatment Unit**

Page in AOP: 1-041

Permit: DE98NWP-004 Issue Date: 09-01-98 Date In AOP: 07-02-01

NOC: 325, AOP Table 1.6

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> HWTU Feed Rate:  The process feed rate shall be limited to a rate that will control the WAC 173-460 listed Toxic Air Pollutants (TAPs) to meet the Acceptable Source Impact Level (ASIL), and in any case, not to exceed 8,000 kg of waste per calendar year total for the HWTU the permittee is proposing under this NOC application approval Order.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Recordkeeping.  Frequency: Daily when operating.  <b>Required Records:</b> HWTU daily feed rate (Total and WAC 173-460 TAPs).</p>	Continuous	<p><b>CDM:</b> Verification via records created and maintained under PNNL Administrative Procedure HWTU-033, 325 HWTU Chemical Air Permit Compliance.</p>
<p><b>Condition:</b> Total Building Emission Limits:  HWTU process and emission controls, building research and waste handling projects and supporting operations, and building equipment additions and changes, including control systems, can be made to accommodate changing research and support requirements without filing a new Notice of Construction, providing the total emissions meet the ASILs and WAC 173-400-110 NSR thresholds.  <b>Model ID:</b> 7A and 7B.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Recordkeeping and emission calculations.  Frequency: Each treatment process and proposed change.  <b>Required Records:</b> Results of analyses.</p>	Continuous	<p><b>CDM:</b> Reviewed records created and maintained under HWTU-033, 325 HWTU Chemical Air Permit Compliance, which indicate each HWTU/SAL treatment process was evaluated, and emissions were within the limits established in that procedure.</p> <p><b>Comment:</b> Under the PNNL Standards Based Management System (SBMS) each new research project is required to be reviewed via the Electronic Prep &amp; Risk assessment process. The reviews are recorded in the EPR database.</p> <p>Facility modifications are reviewed through the FMP/ECN process.</p> <p>Projects with potential air emissions were further analyzed by Effluent</p>

Requirement	Compliance Status	Compliance Determination Method
		Management (EM) under the SBMS Airborne Emission Subject Area to verify that total facility emissions were within the ASILs and NSR thresholds. EM retained the records.
<p><b>Condition:</b> A new Notice of Construction will be required if total building emissions of toxic air pollutants exceed the Small Quantity Emission Rates, unless a T-Screen analysis is run that shows the emissions would result in concentrations less than the ASILs.</p> <p><b>Model ID:</b> 7A and 7B.</p> <p><b>EPA Test Method:</b> Not specified.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Recordkeeping and emission calculations.</p> <p>Frequency: Each proposed change.</p> <p><b>Required Records:</b> Results of analyses.</p>	Not Applicable	<b>CDM:</b> Records Review. A new Notice of Construction was not required during this review period to trigger this requirement.
<p><b>Condition:</b> A new Notice of Construction also is required if total building emissions of criteria pollutants would exceed the WAC 173-400-110 thresholds.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Not specified.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Applicable if triggered.</p> <p><b>Required Records:</b></p>	Not Applicable	<b>CDM:</b> Records Review. A new Notice of Construction was not required during this review period to trigger this requirement.
<p><b>Condition:</b> Monitoring and Recordkeeping: Specific records shall be kept on-site by the permittee and made available for inspection by Ecology upon request. The records shall be organized in a readily accessible manner and cover a minimum of the most recent 60-month period.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Not specified.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Recordkeeping and emission calculations.</p> <p><b>Required Records:</b> 1. HWTU unit feed rates for TAPS and NSR threshold listed criteria pollutants. 2. HWTU treatment process destruction efficiency data or engineering estimates. 3. Engineering estimates of the maximum emissions of reaction products. 4. Evaluations of each bench-scale treatment process or additions or changes not otherwise exempt.</p>	Continuous	<p><b>CDM:</b> Verified that the records created and maintained under HWTU-033, 325 HWTU Chemical Air Permit Compliance, include the Required Records.</p> <p>Verified that the annual records submitted by HWTU/SAL to Effluent Management were entered into the Air Chemical Emissions Task RIDS and will have a 60-month retention period.</p>
<p><b>Condition:</b> General Conditions: Visible Emissions - No visible emissions shall be allowed beyond the property line, as determined by opacity readings when warranted.</p> <p><b>Model ID:</b> Not applicable.</p>	Continuous	<p><b>CDM:</b> Records Review. Abatement Control Technology maintained in accordance with Section 2.1, Tier 3.</p> <p><b>Comment:</b> Air Balance personnel are</p>

Requirement	Compliance Status	Compliance Determination Method
<p><b>EPA Test Method:</b> EPA Method 9.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> See Section 2.1, Tier 3.  <b>Required Records:</b> Operating log.</p>		<p>responsible for the efficiency testing and replacement of HEPA filters. This testing is performed in accordance with Air Balance procedures located on the F&amp;O web page. Data collected through support organizations is coordinated through statements of work (SOWs) that outline project expectations for collection and reporting of data: Effluent Sampling and Monitoring Support-Memorandum of Agreement (performance of stack flow measurements and maintenance of equipment)            Note: The SOW and Memorandum of agreement documents are maintained on the EM web page.</p>

**Permit:** AOP Table 1.6 - Non-CUs **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07

**NOC:** AOP Table 1.6 - Non Combustion Units with No Fugitive Emission or Dust Generals

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040(1)            20% Opacity: Prohibits visible emissions exceeding 20% opacity for more than 3 minutes in any 1 hour of an air contaminant from any emissions unit or within a reasonable distance of the emission unit except for scheduled soot blowing/grate cleaning or due to documented water.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> EPA Method 9.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Section 2.1, unless an alternative visible emissions, opacity, or particulate matter emission limit is identified in Table 1.6 below.  <b>Required Records:</b> As specified in Section 2.1.</p>	<p>Continuous</p>	<p><b>CDM:</b> Records Review / Personnel Interview.            Abatement control technology maintained in accordance with Section 2.1, Tier 3.</p>
<p><b>Condition:</b> 1000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis. Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any period of 60 consecutive minutes.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Section 2.7, Tier 2, unless an alternative SO<sub>2</sub> emission limit is identified in Table 1.6 below.</p>	<p>Continuous</p>	<p><b>CDM:</b> Ecology has determined, based on process knowledge that these emission units do not emit significant levels of SO<sub>2</sub>. It was verified through project and facility modification reviews that SO<sub>2</sub> emissions did not increase.</p>

Requirement	Compliance Status	Compliance Determination Method
<b>Required Records:</b> As specified in Section 2.7.		
<b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard] Reasonably available control technology (RACT). <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Permit terms considered RACT. <b>Required Records:</b>	Continuous	<b>CDM:</b> Permit terms considered RACT. Complied with all permit conditions for this emission point.

**EP-329-01-S Chemical Sciences Laboratory**

Page in AOP: 1-044

**Permit:** NWP95-329/300A **Issue Date:** 09-18-96 **Date In AOP:** 07-02-01

**NOC:** 329 AOP Table 1.6

Requirement	Compliance Status	Compliance Determination Method
<b>Condition:</b> Opacity 5 %. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 9 of 40 CFR Part 60, Appendix A. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> See Section 2.1, Tier 3. <b>Required Records:</b>	Continuous	<b>CDM:</b> Records Review. Abatement Control Technology maintained in accordance with Section 2.1, Tier 3.
<b>Condition:</b> VOC 0.8 lb/hr. <b>Model ID:</b> 4B. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Chemical inventory and usage records and emission calculations for each change. <b>Required Records:</b> Results of analyses.	Continuous	<b>CDM:</b> Results of Analyses. Performed calculations according to Model ID 4B, results indicate VOC release rate is below the NOC limit.

**Permit:** AOP Table 1.6 - Non-CUs <20% Opacity & No Fugitive **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07

**NOC:** AOP Table 1.6 - Non Combustion Units with <20% Opacity and No Fugitive Requirements

Requirement	Compliance Status	Compliance Determination Method
<b>Condition:</b> 1000 ppm SO <sub>2</sub> @ 7% O <sub>2</sub> on a dry basis. Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any period of 60 consecutive minutes. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60,	Continuous	<b>CDM:</b> Ecology has determined, based on process knowledge that these emission units do not emit significant levels of SO <sub>2</sub> . It was verified through project and facility modification reviews that SO <sub>2</sub> emissions did not increase.

Requirement	Compliance Status	Compliance Determination Method
<p>App. A.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Section 2.7, Tier 2, unless an alternative SO2 emission limit is identified in Table 1.6 below.  <b>Required Records:</b> As specified in Section 2.7.</p>		
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard]  Reasonably available control technology (RACT).  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Permit terms considered RACT.  <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Permit terms considered RACT. Complied with all permit conditions for this emission point.</p>

**EP-331-01-V Life Sciences Laboratory I**

Page in AOP: 1-045

Permit: 97NM-147 Issue Date: 11-10-97 Date In AOP: 07-02-01

NOC: 331 AOP Table 1.6

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> A new Notice of Construction shall be filed if emissions of toxic air pollutants exceed the pounds per year Small Quantity Emissions Rates (SQER) of WAC 173-460-080(2)(e), or it shall be on file at the 331 Building that T-SCREEN was run and that emissions were less than the Acceptable Source Impact Level (ASIL), in accordance with 173-460-080(2) and (3). Results shall be on file at PNNL for inspection.</p> <p>A new Notice of Construction shall be filed if emissions of criteria pollutants exceed the following thresholds:</p> <p>Carbon Monoxide - 20 tons/year  Nitrogen Oxides - 8 tons/year  Sulfur dioxide - 8 tons/year  Volatile Organic Compounds - 8 tons/year  Particulate matter - 5 tons/year  PM-10 - 3 tons/year  Lead - 0.12 tons/year.</p> <p><b>Model ID:</b> 7A and 7B.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Recordkeeping  Frequency: For each change.  <b>Required Records:</b> Results of analyses.</p>	Continuous	<p><b>CDM:</b> Records Review</p> <p><b>Comment:</b> Under the PNNL Standards-Based Management System (SBMS) each new research project is required to be reviewed via the Electronic Prep &amp; Risk (EPR) assessment process. The reviews are recorded in the EPR database.</p> <p>Facility changes are required to be reviewed via the SBMS Subject Area for Engineering Calculations, Drawings and Specifications, Creating and Modifying.</p> <p>Projects with potential air emissions were further reviewed by Effluent Management (EM) under the SBMS Airborne Emissions Subject Area to verify that facility emissions are within the ASILs and NSR thresholds. The records are retained by EM.</p>

**Permit:** AOP Table 1.6 - Non-CUs **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07

**NOC:** AOP Table 1.6 - Non Combustion Units with No Fugitive Emission or Dust Generals

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040(1) 20% Opacity: Prohibits visible emissions exceeding 20% opacity for more than 3 minutes in any 1 hour of an air contaminant from any emissions unit or within a reasonable distance of the emission unit except for scheduled soot blowing/grate cleaning or due to documented water. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 9. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.1, unless an alternative visible emissions, opacity, or particulate matter emission limit is identified in Table 1.6 below. <b>Required Records:</b> As specified in Section 2.1.</p>	Continuous	<p><b>CDM:</b> Records Review / Personnel Interview. Abatement control technology maintained in accordance with Section 2.1, Tier 3.</p>
<p><b>Condition:</b> 1000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis. Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any period of 60 consecutive minutes. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.7, Tier 2, unless an alternative SO<sub>2</sub> emission limit is identified in Table 1.6 below. <b>Required Records:</b> As specified in Section 2.7.</p>	Continuous	<p><b>CDM:</b> Ecology has determined, based on process knowledge that these emission units do not emit significant levels of SO<sub>2</sub>. It was verified through project and facility modification reviews that SO<sub>2</sub> emissions did not increase.</p>
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard] Reasonably available control technology (RACT). <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Permit terms considered RACT. <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Permit terms considered RACT. Complied with all permit conditions for this emission point.</p>

**N-1724K 001**  
**Page in AOP: 1-046**

**Permit:** 97NM-551 **Issue Date:** 01-29-98 **Obsolete Date:** 12-04-07 **Date In AOP:** 07-02-01  
**NOC:** Maintenance Shop Operation

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> Particulate Matter (PM):</p> <p>For welding, use of a commercially available portable fume exhauster is required containing a two stage electrostatic precipitator (filter) that removes 98 percent of the particulates.</p> <p>For abrasive blasting, use of a commercially available ventilation system containing a cloth bag filtration system.</p> <p>For sawdust, use of a cyclone separator and bag filter prior to discharge to the atmosphere.</p> <p><b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Startup inspection. <b>Required Records:</b> 1. Inspection records. 2. Work procedures.</p>	<p>Continuous</p>	<p><b>CDM:</b> Verified by field inspection that welding is not performed in the facility nor is there a portable fume exhauster.</p> <p><b>Comment:</b> A Department of Ecology 2007 Hanford Air Operating Permit Inspection letter was received December 2007 Number 0703045. This letter stated that Ecology would withdraw Order 97NM-551. Since the primary basis for issuance of that permit was to support the welding and painting operations which were not installed the permit will be withdrawn.</p>
<p><b>Condition:</b> Volatile Organic Compounds: Use of an activated charcoal filter is required. The filter shall be examined and replaced when it becomes loaded.</p> <p><b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Filter maintenance inspections. <b>Required Records:</b> Maintenance records and schedules.</p>	<p>Continuous</p>	<p><b>CDM:</b> Verified by field inspection that there were no volatile organic compounds used nor is there an activated charcoal filter installed. The paint booth has never been used.</p> <p><b>Comment:</b> A Department of Ecology 2007 Hanford Air Operating Permit Inspection letter was received December 2007 Number 0703045. This letter stated that Ecology would withdraw Order 97NM-551. Since the primary basis for issuance of that permit was to support the welding and painting operations which were not installed the permit will be withdrawn.</p>

**Permit:** AOP Table 1.6 - Non-CUs with HEPA **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07  
**NOC:** AOP Table 1.6 - Non-Combustion Units with HEPA

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040(1) 20% Opacity: Prohibits visible emissions exceeding 20% opacity for more than 3 minutes in any 1 hour of an air contaminant from any emissions unit or within a reasonable distance of the emission unit except for scheduled soot blowing/grate cleaning or due to documented water. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 9. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.1, unless an alternative visible emissions, opacity, or particulate matter emission limit is identified in Table 1.6 below. <b>Required Records:</b> As specified in Section 2.1.</p>	Continuous	<p><b>CDM:</b> During CY 2007 no operations were observed that generated visible emissions. <b>Comment:</b> A Department of Ecology 2007 Hanford Air Operating Permit Inspection letter was received December 2007 Number 0703045. This letter stated that Ecology would withdraw Order 97NM-551. Since the primary basis for issuance of that permit was to support the welding and painting operations which were not installed the permit will be withdrawn.</p>
<p><b>Condition:</b> WAC 173-400-040(6) 1000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis. Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any period of 60 consecutive minutes. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.7, Tier 2, unless an alternative SO<sub>2</sub> emission limit is identified in Table 1.6. <b>Required Records:</b> As specified in Section 2.7.</p>	Continuous	<p><b>CDM:</b> During CY 2007 no operations were observed that generated SO<sub>2</sub> emissions. <b>Comment:</b> A Department of Ecology 2007 Hanford Air Operating Permit Inspection letter was received December 2007 Number 0703045. This letter stated that Ecology would withdraw Order 97NM-551. Since the primary basis for issuance of that permit was to support the welding and painting operations which were not installed the permit will be withdrawn.</p>
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard] Reasonably available control technology (RACT). <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Permit terms considered RACT. <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> During CY 2007 the only activity being performed was woodworking which utilized a saw dust collection as RACT. <b>Comment:</b> A Department of Ecology 2007 Hanford Air Operating Permit Inspection letter was received December 2007 Number 0703045. This letter stated that Ecology would withdraw Order 97NM-551. Since the primary basis for issuance of that permit was to support the welding and painting operations which were not installed the permit will be withdrawn.</p>
<p><b>Condition:</b> WAC 173-400-040(3)(a) [Table 1.2 General Standard] Fugitive emissions. The permittee shall take reasonable precautions to</p>	Continuous	<p><b>CDM:</b> During CY 2007 there were no activities that required the need to control fugitive emissions.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>prevent the release of air contaminants from any emissions unit engaging in materials handling, construction, demolition, or any other operation that is a source of fugitive emissions.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Pre-job planning to determine reasonable control measures.  <b>Required Records:</b></p>		<p><b>Comment:</b> A Department of Ecology 2007 Hanford Air Operating Permit Inspection letter was received December 2007 Number 0703045. This letter stated that Ecology would withdraw Order 97NM-551. Since the primary basis for issuance of that permit was to support the welding and painting operations which were not installed the permit will be withdrawn.</p>
<p><b>Condition:</b> WAC 173-400-040(8)(a) [Table 1.2 General Standard]            Fugitive dust.            Requires reasonable precautions be taken to prevent fugitive dust from becoming airborne and to minimize dust generation.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Pre-job planning to determine reasonable control measures.  <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> During CY 2007 there were no activities that required the need to control fugitive dust.   <b>Comment:</b> A Department of Ecology 2007 Hanford Air Operating Permit Inspection letter was received December 2007 Number 0703045. This letter stated that Ecology would withdraw Order 97NM-551. Since the primary basis for issuance of that permit was to support the welding and painting operations which were not installed the permit will be withdrawn.</p>

**P-2025E ETF**  
Page in AOP: 1-047

**Permit:** 96NW-1-301 **Issue Date:** 10-16-96 **Obsolete Date:** 06-06-07 **Date In AOP:** 07-02-01  
**NOC:** Modification, Rev 1

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> Any addition of waste streams that do not meet the new source review exemption in WAC 173-460-040(2)(c) or that have previously unidentified constituents to the facility requires prior review and approval by the Department of Ecology.  <b>Model ID:</b> 7C.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Analyze each waste stream to determine if emissions would exceed an SQER or ASIL.  <b>Required Records:</b> Results of analysis.</p>	Continuous	<p><b>CDM:</b> Review of constituents of new waste streams.  <b>Comment:</b> Before receipt, each new waste stream is reviewed to determine if processing the new stream would exceed SQE or ASIL levels. Results of the review are placed in the operating record.</p>

**Permit:** NOC-93-3 **Issue Date:** 12-20-93 **Obsolete Date:** 06-06-07 **Date In AOP:** 07-02-01  
**NOC:** Construction and Operation, Rev 0

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> Energy shall notify the department in writing at least 45 days before start-up of any emission unit subject to this approval which could cause release of any air pollutants to the atmosphere.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Not applicable.  <b>Required Records:</b></p>	Not Applicable	<p><b>CDM:</b> No startup of such units have occurred this reporting period, therefore the requirement to notify the department was not triggered.</p>
<p><b>Condition:</b> Energy shall not make any changes to the proposed air emission control system which may result in an increase; or change the types of air emissions without first notifying the department. Based on the notification, the department will make a determination whether a new approval or a modification of this final approval is required.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Not applicable.  <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Review of facility design change documents and new waste streams as specified in administrative procedures.  <b>Comment:</b> Facility design changes and new stream receipts require documentation that includes environmental reviews which determine if the actions would affect emission controls or change the types of emissions.</p>
<p><b>Condition:</b> Opacity at each stack 5%.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> See Section 2.1, Tier 3.  <b>Required Records:</b> As required in Attachment 2, Section 4.</p>	Continuous	<p><b>CDM:</b> LERF/ETF maintains abatement control technology (stack HEPA filtration) as required in AOP Attachment 2.</p>

**Permit:** AOP Table 1.6 - Non-CUs <20% Opacity & Fugitive **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07  
**NOC:** AOP Table 1.6 - Non Combustion Units with <20% Opacity Requirements

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard]  Reasonably available control technology (RACT).  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Permit terms considered RACT.  <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Permit conditions are considered RACT and complied with all applicable permit conditions.</p>
<p><b>Condition:</b> 1000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis. Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1000 ppm of a dry</p>	Continuous	<p><b>CDM:</b> LERF/ETF does not emit SO<sub>2</sub> in its current configuration. New waste feeds are reviewed to determine if</p>

Requirement	Compliance Status	Compliance Determination Method
<p>basis, corrected to 7% oxygen for combustion sources, and based on the average of any period of 60 consecutive minutes.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Section 2.7, Tier 2, unless an alternative SO<sub>2</sub> emission limit is identified in Table 1.6 below.</p> <p><b>Required Records:</b> As specified in Section 2.7.</p>		processing the new stream would affect emissions.

**Permit:** DE07NWP-003 **Issue Date:** 06-06-07 **Effective Date:**06-06-07 **Date In AOP:** 07-26-07  
**Permit:** DE07NWP-003, Amendment 1 **Issue Date:** 08-07-07 **Effective Date:**08-07-07 **Date In AOP:** 12-05-07  
**Permit:** DE07NWP-003, Amendment 2 **Issue Date:** 09-27-07 **Effective Date:**09-27-07 **Date In AOP:** 12-05-07  
**NOC:** Effluent Treatment Facility

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> Visible emissions from the ETF stack and the ETF STU stack (Figures 1 and 2, respectively, of Order DE07NWP-003) shall not exceed five percent (5%).</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Not specified.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Tier 3 Visible Emission Survey, Section 2.1 of AOP ATT 1.</p> <p><b>Required Records:</b> As required in AOP Attachment 2 for maintaining abatement control technology.</p>	Continuous	<b>CDM:</b> LERF/ETF maintains abatement control technology (stack HEPA filtration) as required in AOP Attachment 2.
<p><b>Condition:</b> Visible emission from the ETF STU dry material storage bins (Figure 2 of Order DE07NWP-003) shall not exceed 20 percent (20%). [WAC 173-400-040(1)]</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Record-keeping and EPA Method 9.</p> <p><b>EPA Test Method Frequency:</b> Once a year.</p> <p><b>Periodic Monitoring:</b> Tier 2 Visible Emission Survey, Section 2.1 of AOP ATT 1.</p> <p><b>Required Records:</b> Annual surveillance records and/or EPA Method 9 test results.</p>	Not Applicable	<b>CDM:</b> ETF STU has not been constructed.
<p><b>Condition:</b> Volatile Organic Compound (VOC) emissions from the ETF (Figure 1 of Order DE07NWP-003) shall not exceed 0.50 gram per minute (g/min).</p> <p>Volatile Organic Compound (VOC) emissions from the ETF (Figure 1 of Order DE07NWP-003) shall not exceed 0.55 gram per cubic meter (g/m<sup>3</sup>) at standard</p>	Continuous	<b>CDM:</b> Field Walk downs and Review of Facility Records.

Requirement	Compliance Status	Compliance Determination Method
<p>conditions.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> EPA Method 18 or 25A.  <b>EPA Test Method Frequency:</b> Not applicable (initial test condition for construction).  <b>Periodic Monitoring:</b> Initial compliance verified by EPA Method 18 in 1996 (NOC-93-3).  <b>Required Records:</b> Testing Results of 1996 EPA Method.</p>		
<p><b>Condition:</b> Volatile Organic Compound (VOC) emissions from ETF and ETF STU operations shall not exceed 4,000 lb/yr. [WAC 173-400-110(5)(d)]  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Calculations and record-keeping.  <b>EPA Test Method Frequency:</b> Annual.  <b>Periodic Monitoring:</b> Material emission estimates.  <b>Required Records:</b> Records of data and calculations for the VOC emissions from ETF and ETF STU operations.</p>	Continuous	<b>CDM:</b> Field Walk downs and Review of Facility Records.
<p><b>Condition:</b> Particulate matter emissions shall not exceed 1,500 lb/yr. [WAC 173-400-110(5)(d)]  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> See Required Records.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> (1) HEPA filtration of ETF stack gases,  (2) HEPA filtration of off-gases from the Feed Hopper, Grout Mixer, and Discharge Chute, and  (3) Industrial filtration of dry material storage bins.   <b>Required Records:</b> Maintenance and operating records of all filtration systems.</p>	Not Applicable	<b>CDM:</b> STU has not been constructed.
<p><b>Condition:</b> All newly identified TAPs shall not exceed ASILs (with assessment of ASIL compliance). [WAC 173-460-070]  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Assessment of ASIL compliance (see Required Records).  <b>Required Records:</b> Report laboratory or waste analysis result of newly identified TAPs within 90 days of completion of analysis, and (2) waste stream influent volumetric records.</p>	Continuous	<b>CDM:</b> Field Walk downs and Review of Facility Records.
<p><b>Condition:</b> Emissions of ammonia from the ETF STU stack shall not exceed two pounds per hour. [WAC 173-460-080(2)(e)]  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.</p>	Not Applicable	<b>CDM:</b> ETF STU has not been constructed.

Requirement	Compliance Status	Compliance Determination Method
<p><b>Periodic Monitoring:</b> Ammonia emission calculations based on Grouted waste production records and material emission estimates (see Required Records).</p> <p><b>Required Records:</b> Supporting data, calculation, and procedures to demonstrate grouted waste production administrative control of ammonia content (an emission factor of 5.2% shall be applied to determine ammonia emissions based upon STU brine feed concentrations of ammonium sulfate and ammonium nitrate).</p>		

**Permit:** DE07NWP-003, Amendment 2 **Issue Date:** 09-27-07 **Effective Date:** 09-27-07 **Date In AOP:** 12-05-07  
**NOC:** Effluent Treatment Facility

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> All TAPs in the NOC applications and identified in Table 1 of DE07NWP-003 Amendment 2 (9/27/2007) and Table 2 of DE07NWP-003 (6/6/2007), shall not exceed ASILs. [WAC 173-460-070]</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Not specified.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Waste analysis records (see Required Records).</p> <p><b>Required Records:</b> (1) Laboratory or waste analysis results for TAPs identified in Table 1 of DE07NWP-003 Amendment 2 (9/27/2007) and Table 2 of DE07NWP-003 (6/6/2007), and (2) waste stream influent volumetric records.</p>	Continuous	<b>CDM:</b> Field Walk downs and Review of Facility Records.

**P-241U107-001, P-241S102-001, P-241S112-001**

Page in AOP: 1-049

**Permit:** DE03NWP-001 R1 **Issue Date:** 11-03-04 **Date In AOP:** 01-01-07  
**NOC:** Construction and Operation of the 241-S-102, 241-S-112, 241-U-107 Waste Retrieval System

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> TOTAL EMISSION LIMITS</p> <p>A new NOC also is required if total emissions of criteria pollutants would exceed the WAC 173-400-110 thresholds.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Not specified.</p> <p><b>EPA Test Method Frequency:</b> At least once per calendar year, if NOC is used.</p> <p><b>Periodic Monitoring:</b> Recordkeeping and calculations.</p>	Continuous	<p><b>CDM:</b> Field interviews.</p> <p><b>Comment:</b> Retrieval operations took place in 2007 at 241-S-102 and 241-S-112 single shell tanks. No retrieval operations took place at tank U-107 during the reporting period.</p>

Requirement	Compliance Status	Compliance Determination Method
<b>Required Records:</b> Calculations of criteria pollutants.		
<p><b>Condition:</b> GENERAL REQUIREMENTS</p> <p>Notification will be made ten (10) days prior to initiating waste retrieval operations from each tank covered by this Order.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Not specified.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Recordkeeping.</p> <p><b>Required Records:</b> Notification documentation.</p>	Not Applicable	<p><b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are a historical summary or fact, that pertain to actions to be completed in the future, or that pertain to actions required of the agency.</p>
<p><b>Condition:</b> GENERAL REQUIREMENTS</p> <p>An updated schedule of installation and operation activities will be made available upon request.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Not specified.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Recordkeeping.</p> <p><b>Required Records:</b> Copy of updated schedule.</p>	Continuous	<p><b>CDM:</b> Field interviews. Updated schedules are maintained.</p> <p><b>Comment:</b> Retrieval operations took place in 2007 at 241-S-102 and 241-S-112 single shell tanks. No retrieval operations took place at tank U-107 during the reporting period.</p>
<p><b>Condition:</b> EMISSION CONTROLS</p> <p>The portable exhausters may be used to control emissions. If the exhauster is in use, exhaust will be monitored for VOCs and ammonia until levels rise and fall off, or until the dome space VOC and ammonia concentrations are reduced to minimum levels (at which point the levels stop changing).</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Not specified.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Recordkeeping.</p> <p><b>Required Records:</b> Portable exhauster exhaust monitoring records for ammonia and VOCs.</p>	Continuous	<p><b>CDM:</b> Field interviews.</p> <p><b>Comment:</b> Retrieval operations took place in 2007 at 241-S-102 and 241-S-112 single shell tanks. No retrieval operations took place at tank U-107 during the reporting period.</p>
<p><b>Condition:</b> EMISSION CONTROLS</p> <p>The controls established under the site specific and general Health and Safety Plans, as they apply to minimizing the instantaneous mass emission rate from the tank, are hereby made part of this approval order. A list and description of these controls shall be provided to Ecology upon request.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Not specified.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Recordkeeping.</p> <p><b>Required Records:</b> List and description of controls.</p>	Continuous	<p><b>CDM:</b> Field interviews.</p> <p><b>Comment:</b> Retrieval operations took place in 2007 at 241-S-102 and 241-S-112 single shell tanks. No retrieval operations took place at U-107 during the reporting period.</p>
<b>Condition:</b> EMISSION MONITORING	Continuous	<b>CDM:</b> Industrial hygiene monitoring and sample analysis plans.

Requirement	Compliance Status	Compliance Determination Method
<p>Although all contaminant emissions are estimated below their respective small quantity emission rates (SQERs) or below their acceptable source impact levels (ASILs), during waste retrieval, the following sampling and monitoring will take place to verify emissions estimates and to ensure emission limits are not exceeded:</p> <p>Volatile Organic Compounds (VOCs), ammonia, and other air toxic levels, to include NDMA as necessary, will be monitored in accordance with the industrial hygiene worker safety program and site-specific IH Monitoring Plan and this order. A plan for monitoring shall be submitted to Ecology upon request.</p> <p><b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Recordkeeping.  <b>Required Records:</b> IH Monitoring Plan.</p>		<p><b>Comment:</b> Retrieval operations took place in 2007 at 241-S-102 and 241-S-112 single shell tanks. No retrieval operations took place at tank U-107 during the reporting period.</p>
<p><b>Condition:</b> EMISSION CONTROL MONITORS</p> <p>Although all contaminant emissions are estimated below their respective small quantity emission rates (SQERs) or below their acceptable source impact levels (ASILs), during waste retrieval, the following sampling and monitoring will take place to verify emissions estimates and to ensure emission limits are not exceeded:</p> <p>A grab sample will be drawn and analyzed for nitrosamines (N-nitrosodimethylamine and related compounds) from the sampling port of the exhauster stack on each of the three tanks to be retrieved. Samples will be drawn within 15 minutes after the first start of an exhauster, approximately two hours after the first start of waste retrieval and again when approximately half of the waste has been transferred. This analysis is in addition to the list of compounds presented under item (C.) as listed in section 4, Emission Monitoring, subparagraph b of the NOC approval order DE03NWP-001 R1.</p> <p>This sampling and analysis shall be functionally equivalent with standard EPA method 15A, including all Quality Assurance and Quality Control (QA/QC) protocols. The IH sampling and analysis plan (including a QA/QC plan) shall be provided to Ecology. Additional samples and analyses may be conducted but overall sampling must be sufficient to demonstrate compliance with emission limits of Condition 1 as listed in Section 1, Total Emission Limits of the NOC approval order DE03NWP-001R1, with consideration of practical quantitation limits.</p> <p><b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> EPA Method 15A or functionally</p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews and industrial hygiene monitoring and sample analysis plans.</p> <p><b>Comment:</b> Retrieval operations took place in 2007 at 241-S-102 and 241-S-112 single shell tanks. No retrieval operations took place at tank U-107 during the reporting period.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>equivalent method.  <b>EPA Test Method Frequency:</b> 1. 15 minutes after the first start of an exhauster            2. Approximately two hours after the first start of waste retrieval            3. When approximately half of the waste has been transferred.  <b>Periodic Monitoring:</b> Recordkeeping.  <b>Required Records:</b> Results of sample analyses.</p>		
<p><b>Condition:</b> EMISSION CONTROL MONITORS</p> <p>Although all contaminant emissions are estimated below their respective small quantity emission rates (SQERs) or below their acceptable source impact levels (ASILs), during waste retrieval, the following sampling and monitoring will take place to verify emissions estimates and to ensure emission limits are not exceeded:</p> <p>Additional SUMA sampling will be performed in accordance with the IH sampling plan to obtain a representative sample of standard target compounds. However, any spikes detected during analysis that are not on the target compound list will be noted and analyzed for if warranted. This sampling and analysis shall be functionally equivalent with standard EPA method 15A, including all Quality Assurance and Quality Control (QA/QC) protocols.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> EPA Method 15A or functionally equivalent method.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Recordkeeping.  <b>Required Records:</b> 1. Suma sampling results.            2. IH sampling and analysis plan.</p>	Continuous	<p><b>CDM:</b> Field interviews and industrial hygiene monitoring and sample analysis plans.</p> <p><b>Comment:</b> Retrieval operations took place in 2007 at 241-S-102 and 241-S-112 single shell tanks. No retrieval operations took place at tank U-107 during the reporting period.</p>
<p><b>Condition:</b> EMISSION MONITORING</p> <p>Although all contaminant emissions are estimated below their respective small quantity emission rates (SQERs) or below their acceptable source impact levels (ASILs), during waste retrieval, the following sampling and monitoring will take place to verify emissions estimates and to ensure emission limits are not exceeded:</p> <p>If the exhauster is not operated at all during the retrieval operation, alternative sampling and analysis methods to determine maximum emissions will be established under the IH Monitoring Plan. A sampling and analysis plan (including a QA/QC plan) shall be provided to Ecology upon request. The permittee will provide an alternative plan for measuring toxic emissions if the exhauster is not operated during retrieval. Ecology reserves the right to</p>	Continuous	<p><b>CDM:</b> Industrial hygiene monitoring and sample analysis plans.</p> <p><b>Comment:</b> Retrieval operations took place in 2007 at 241-S-102 and 241-S-112 single shell tanks. No retrieval operations took place at U-107 during the reporting period.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>request a modification to this plan.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Not specified.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Recordkeeping.</p> <p><b>Required Records:</b> Alternative plan for measuring toxic emissions, if portable exhauster is not used.</p>		

**Permit:** AOP Table 1.6 - Non-CUs with HEPA **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07

**NOC:** AOP Table 1.6 - Non-Combustion Units with HEPA

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040(1)</p> <p>20% Opacity: Prohibits visible emissions exceeding 20% opacity for more than 3 minutes in any 1 hour of an air contaminant from any emissions unit or within a reasonable distance of the emission unit except for scheduled soot blowing/grate cleaning or due to documented water.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> EPA Method 9.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Section 2.1, unless an alternative visible emissions, opacity, or particulate matter emission limit is identified in Table 1.6 below.</p> <p><b>Required Records:</b> As specified in Section 2.1.</p>	Continuous	<p><b>CDM:</b> Abatement control technology was maintained for emission unit 296-P-44 (EU ID 58) for 241-S-102 retrieval and emission unit 296-P-43 (EU ID 57) for 241-S-112 retrieval as required in AOP Attachment 2.</p> <p><b>Comment:</b> Retrieval operations took place in 2007 at 241-S-102 and 241-S-112 single shell tanks. No retrieval operations took place at U-107 during the reporting period.</p>
<p><b>Condition:</b> WAC 173-400-040(6)</p> <p>1000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis. Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any period of 60 consecutive minutes.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Section 2.7, Tier 2, unless an alternative SO<sub>2</sub> emission limit is identified in Table 1.6.</p> <p><b>Required Records:</b> As specified in Section 2.7.</p>	Continuous	<p><b>CDM:</b> Ecology has determined that this emission unit does not emit significant levels of SO<sub>2</sub>. The process has not been modified to increase SO<sub>2</sub> emissions.</p> <p><b>Comment:</b> Retrieval operations took place in 2007 at 241-S-102 and 241-S-112 single shell tanks. No retrieval operations took place at U-107 during the reporting period.</p>
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard]</p> <p>Reasonably available control technology (RACT).</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Not specified.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Permit terms considered RACT.</p> <p><b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Field interviews. Permit terms are considered RACT.</p> <p><b>Comment:</b> Retrieval operations took place in 2007 at 241-S-102 and 241-S-112 single shell tanks. No retrieval operations took place at U-107 during the reporting period.</p>

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040(3)(a) [Table 1.2 General Standard] Fugitive emissions. The permittee shall take reasonable precautions to prevent the release of air contaminants from any emissions unit engaging in materials handling, construction, demolition, or any other operation that is a source of fugitive emissions. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Pre-job planning to determine reasonable control measures. <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Field interviews.  <b>Comment:</b> Emissions that pass through a stack are not sources of fugitive emissions per WAC 173-400-030(38) or fugitive dust per WAC 173-400-030(37).</p>
<p><b>Condition:</b> WAC 173-400-040(8)(a) [Table 1.2 General Standard] Fugitive Dust. Requires reasonable precautions be taken to prevent fugitive dust from becoming airborne and to minimize dust generation. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Pre-job planning to determine reasonable control measures. <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Field interviews.  <b>Comment:</b> Emissions that pass through a stack are not sources of fugitive emissions per WAC 173-400-030(38) or fugitive dust per WAC 173-400-030(37).</p>

**P-2706T 001**

Page in AOP: 1-054

**Permit:** DE01NWP-002 Revision 1 **Issue Date:** 06-29-06 **Effective Date:**06-29-06 **Date In AOP:** 01-01-07  
**NOC:** T Plant Complex, Toxic Air Emissions

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> Visible Emissions A. Visible emissions from any T-Plant Complex stack will not exceed limits specified in WAC 173-400-040(1). <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> 30 CFR 60, Appendix A, Method 9 <b>EPA Test Method Frequency:</b> Not applicable (when visible emissions are observed). <b>Periodic Monitoring:</b> Section 2, Tier 3. <b>Required Records:</b> Maintenance records.</p>	Continuous	<p><b>CDM:</b> Abatement control technology was maintained as required in AOP Attachment 2 for emission unit P-296T007-001 (EU ID 315)</p>
<p><b>Condition:</b> Emission Limits A. VOC emissions will not exceed 3.5 tons per year.</p>	Continuous	<p><b>CDM:</b> ASIL Review</p>

Requirement	Compliance Status	Compliance Determination Method
<p>B. All TAPs, as submitted in the Permittee's Notice of Construction Application, will be below their respective ASIL.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Section 3.0 of the Approval Order DE01NWP-002 Revision 1</p> <p><b>EPA Test Method Frequency:</b> Section 3.0 of the Approval Order DE01NWP-002 Revision 1</p> <p><b>Periodic Monitoring:</b> Analyze each proposed changed to determine if emissions would exceed Emission limits.</p> <p><b>Required Records:</b> Results of analyses.</p>		

**Permit:** AOP Table 1.6 - Non-CUs <20% Opacity & Fugitive **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07  
**NOC:** AOP Table 1.6 - Non Combustion Units with <20% Opacity Requirements

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard] Reasonably available control technology (RACT).</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Not specified.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Permit terms considered RACT.</p> <p><b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Permit terms are considered RACT. Complied with all permit terms for this emission unit.</p>
<p><b>Condition:</b> 1000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis. Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any period of 60 consecutive minutes.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Section 2.7, Tier 2, unless an alternative SO<sub>2</sub> emission limit is identified in Table 1.6 below.</p> <p><b>Required Records:</b> As specified in Section 2.7.</p>	Continuous	<p><b>CDM:</b> Ecology determined this emission unit does not emit significant levels of SO<sub>2</sub>. The process has not been modified to increase SO<sub>2</sub> emissions.</p>

**P-291Z001-001**  
**Page in AOP: 1-056**

**Permit:** DE01NWP-001 **Issue Date:** 07-17-01 **Date In AOP:** 03-31-04  
**NOC:** Thermal Stabilization of Polycubes

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> Total Emission Limits: A. The activities described in the NOC application will be permitted without additional control technologies required, provided that the total emissions from all activities will not exceed the Small Quantity Emission Rates (SQERs) for constituents where a SQER is listed. Constituents without a listed SQER cannot result in exceedance of WAC 173-460 ASILs.</p> <p>B. A new NOC will be required, if total emissions of toxic air pollutants exceed the SQERs, unless dispersion modeling demonstrates that emissions would continue to result in concentrations less than the ASILs. Results of any such dispersion modeling demonstrations/calculations will be maintained on file at the facility and made available upon inspection.</p> <p>C. A new NOC also is required if total emissions of criteria pollutants would exceed the WAC 173-400-110 thresholds.</p> <p><b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Analyze each proposed change to determine if emissions would exceed an ASIL or NSR threshold. <b>Required Records:</b> Results of analyses.</p>	<p>Continuous</p>	<p><b>CDM:</b> A. Activity under this approval order was completed in February of 2003. Not used during the compliance period.</p> <p>B. There were no emissions from polycube stabilization during the compliance period.</p> <p>C. The total emissions from polycube stabilization did not exceed the WAC 173-400-110 thresholds during the compliance period.</p>
<p><b>Condition:</b> General Requirements: In accordance with the method(s) identified in Section 6 of this Order, an annual assessment shall be conducted to document compliance that no monitoring and/or sampling systems are needed. This assessment will be reported annually beginning as part of the Calendar Year 2001 nonradioactive inventory of airborne emissions report as specified in WAC 173-400-105.</p> <p><b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Annually. <b>Periodic Monitoring:</b> Recordkeeping. <b>Required Records:</b> WAC 173-400-105 Report.</p>	<p>Continuous</p>	<p><b>CDM:</b> Activity under this approval order was completed in February of 2003. Not used during the compliance period.</p>
<p><b>Condition:</b> Monitoring and Recordkeeping: Facility operating records will be maintained on file to verify the low emission estimates stated in the notice of construction application have not been exceeded. Each</p>	<p>Continuous</p>	<p><b>CDM:</b> Activity under this approval order was completed in February of 2003. Not used during the compliance period.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>batch of material from the total polycube inventory entering the furnaces will also be recorded (i.e., grams of polycube material per unit time) on the facility operating records, which are classified. The classified records shall be kept on-site by the Permittee and made available to cleared Ecology personnel, upon request. The records will cover a minimum of the most recent sixty- (60-) month period.</p> <p>Emissions from the polycube thermal stabilization process will be reported in the annual Hanford report, pursuant to WAC 173-400-105.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Per batch.  <b>Periodic Monitoring:</b> Recordkeeping.  <b>Required Records:</b> 1. Emission estimates/calculations.                  2. Operating log showing number of batches processed.</p>		

**Permit:** DE04NWP-001

**Issue Date:** 03-30-04 **Date In AOP:** 01-01-07

**Permit:** DE04NWP-001 Amendment 1

**Issue Date:** 05-18-06 **Date In AOP:** 01-01-07

**NOC:** Criteria/Toxic Air Pollutant Emissions Associated with Deactivation of the PFP Complex, Amendment 1

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> Monitoring and Recordkeeping: PROCESS ACTIONS resulting in the emissions of polychlorinated biphenyl from paint sources will not exceed the SQER.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Per process action  <b>Periodic Monitoring:</b> Recordkeeping.  <b>Required Records:</b> 1. Emission estimates/calculations.                  2. Operating log showing the process action.</p>	Continuous	<p><b>CDM:</b> The SQER was not exceeded because no process actions were conducted during the compliance period that released PCB emissions.</p>
<p><b>Condition:</b> Application of Rad Pro 100 decontamination solution:                  Process use of Rad Pro 100 decontamination solution (identifies as decontamination solution #1 of Table 2, Section 5, of the NOC Application) is enjoined and may not be applied without petition and approval of specific acceptable emission standards for ethylene glycol monobutyl ether.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Recordkeeping.  <b>Required Records:</b> 1. Petition and approval.                  2. Operating log showing the application.</p>	Continuous	<p><b>CDM:</b> Review of records and inquiry of personnel.</p> <p><b>Comment:</b> No applications of Rad Pro 100 took place under this approval order during the compliance period.</p>

**Permit:** AOP Table 1.6 - Non-CUs **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07  
**NOC:** AOP Table 1.6 - Non Combustion Units with No Fugitive Emission or Dust Generals

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040(1) 20% Opacity: Prohibits visible emissions exceeding 20% opacity for more than 3 minutes in any 1 hour of an air contaminant from any emissions unit or within a reasonable distance of the emission unit except for scheduled soot blowing/grate cleaning or due to documented water. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 9. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.1, unless an alternative visible emissions, opacity, or particulate matter emission limit is identified in Table 1.6 below. <b>Required Records:</b> As specified in Section 2.1.</p>	Continuous	<p><b>CDM:</b> Abatement control technology was maintained as required in AOP Attachment 2, page EU0393-001.</p>
<p><b>Condition:</b> 1000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis. Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any period of 60 consecutive minutes. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.7, Tier 2, unless an alternative SO<sub>2</sub> emission limit is identified in Table 1.6 below. <b>Required Records:</b> As specified in Section 2.7.</p>	Continuous	<p><b>CDM:</b> Ecology determined this emission unit does not emit significant levels of SO<sub>2</sub>. The process has not been modified to increase SO<sub>2</sub> emissions.</p>
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard] Reasonably available control technology (RACT). <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Permit terms considered RACT. <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Permit terms are considered RACT. Complied with all permit terms for this emission unit.</p>

**P-296A042-001**  
Page in AOP: 1-058

**Permit:** NOC 94-07-01 **Issue Date:** 12-22-97 **Obsolete Date:** 05-07-08 **Date In AOP:** 07-02-01  
**NOC:** AY and AZ Tank Farms Ventilation Upgrades

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> VOC max emission limit, 50 ppm, measured as Total Organic Carbon. <b>Model ID:</b> 4A. <b>EPA Test Method:</b> EPA Method 25A or approved alternative. <b>EPA Test Method Frequency:</b> Annually. <b>Periodic Monitoring:</b> Recordkeeping and emission calculations. <b>Required Records:</b> Organic vapor sampling data.</p>	Continuous	CDM: Field interviews.

**Permit:** NOC 94-07 **Issue Date:** 08-29-94 **Obsolete Date:** 05-07-08 **Date In AOP:** 07-02-01  
**NOC:** AY and AZ Tank Farms Ventilation Upgrades

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> Ammonia, 0.05 lbs/hr. <b>Model ID:</b> 5. <b>EPA Test Method:</b> Field instruments, which may include Draeger Tubes. <b>EPA Test Method Frequency:</b> Annually. <b>Periodic Monitoring:</b> Recordkeeping and emission calculations. <b>Required Records:</b> 1. Stack flow measurements. 2. Record field instrument or Draeger Tube ammonia concentrations.</p>	Continuous	<p>CDM: Field interviews, sampling activity, CH2M HILL notification procedure and notification logbook. <b>Comment:</b> An unavoidable upset condition occurred resulting in the release of Ammonia emissions in excess of 0.05 lbs/hr. It was determined to be an excusable excess emission under the provision of WAC 173-400-107(6)(c).</p>

**Permit:** AOP Table 1.5 EUs Exceeding Threshold **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07  
**NOC:** AOP Table 1.5 Emission Units Exceeding Insignificant EU Threshold

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040(1) 20% Opacity. Prohibits visible emissions exceeding 20% opacity for more than 3 minutes in any 1 hour of an air contaminant from any emissions unit or within a reasonable distance of the emission unit except for scheduled soot blowing/grate cleaning or due to documented water. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 9. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Units with HEPA filtration:</p>	Continuous	CDM: Abatement control technology was maintained for emission units 296-A-42 (EU ID 93) as required in AOP Attachment 2.

Requirement	Compliance Status	Compliance Determination Method
Section 2.1 Tier 3. <b>Required Records:</b>		
<p><b>Condition:</b> WAC 173-400-040(6) 1,000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis. Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1,000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any 60 consecutive minutes.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Section 2.7, Tier 2. Ecology has determined, based on process knowledge, that these emission units do not emit significant levels of SO<sub>2</sub>. The permittee annually shall certify that the processes have not been modified to increase SO<sub>2</sub> emissions and no SO<sub>2</sub> monitoring is required.</p> <p><b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Ecology has determined that this emission unit does not emit significant levels of SO<sub>2</sub>. The process has not been modified to increase SO<sub>2</sub> emissions.</p>
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard] Reasonable available control technology (RACT).</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Not specified.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Permit terms considered RACT.</p> <p><b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Field interviews. Permit terms are considered RACT.</p>

**P-296K142 001**

Page in AOP: 1-059

**Permit:** 97NM-022 **Issue Date:** 03-07-97 **Date In AOP:** 07-02-01

**NOC:** Construction and Operation, Phase II

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> Approval to construct and install process equipment.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Not specified.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> None.</p> <p><b>Required Records:</b> None.</p>	Continuous	<p><b>CDM:</b> Facility and systems constructed as described in the NOC, as verified by field inspection. Facility modifications are screened against existing permits to determine impacts. No modifications to CVDF have been made that have any impact on the work described in the NOC.</p>

**Permit:** AOP Table 1.6 - Non-CUs with HEPA **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07

**NOC:** AOP Table 1.6 - Non-Combustion Units with HEPA

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040(1) 20% Opacity: Prohibits visible emissions exceeding 20% opacity for more than 3 minutes in any 1 hour of an air contaminant from any emissions unit or within a reasonable distance of the emission unit except for scheduled soot blowing/grate cleaning or due to documented water. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 9. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.1, unless an alternative visible emissions, opacity, or particulate matter emission limit is identified in Table 1.6 below. <b>Required Records:</b> As specified in Section 2.1.</p>	Continuous	<p><b>CDM:</b> Process knowledge. There are no processes within the facility generating emissions measured by opacity.</p>
<p><b>Condition:</b> WAC 173-400-040(6) 1000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis. Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any period of 60 consecutive minutes. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.7, Tier 2, unless an alternative SO<sub>2</sub> emission limit is identified in Table 1.6. <b>Required Records:</b> As specified in Section 2.7.</p>	Continuous	<p><b>CDM:</b> Ecology determined this emission unit does emit significant levels of SO<sub>2</sub>. Process has not been modified to increase SO<sub>2</sub> emissions. There are no processes in CVDF emitting SO<sub>2</sub>.</p>
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard] Reasonably available control technology (RACT). <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Permit terms considered RACT. <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Permit terms are considered RACT. Complied with all permit terms for this emission point.</p>

**P-296W004 001**  
**Page in AOP: 1-060**

**Permit:** DE03NWP-002                      **Issue Date:** 05-21-03    **Date In AOP:** 03-31-04  
**Permit:** DE03NWP-002 Amendment 1 **Issue Date:** 06-29-06    **Effective Date:**06-29-06    **Date In AOP:** 01-01-07  
**NOC:** Nonrad NOC for TAPs Emissions at the WRAP Facility

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> Total Emission Limits: The processing and repackaging activities described in the Notice of Construction application will be permitted without requiring additional emission controls, provided that the emissions from the stack, venting the 100 and 300 Series Waste Process Lines, the 200 and 400 Restricted Waste process Lines, the process area, and the storage areas are maintained below the level described in and meeting T-BACT (according to WRAP Module 1 Best Available Control Technology Assessment, WHC-SD-W026-TI-005, January 1993, Westinghouse Hanford Company, Richland, Washington). <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Recordkeeping. <b>Required Records:</b> Documentation implementing T-BACT.</p>	Continuous	<p><b>CDM:</b> Records review. Emissions assessments are maintained on file at the facility and actual annual emissions from the facility are reported in the annual emissions inventory report pursuant to WAC 173-400-105.</p>
<p><b>Condition:</b> Total Emission Limits: For toxic compounds not included in the T-BACT analysis, the emission limits shall be the Small Quantity Emission Rate (SQER). A modification submittal of a Notice of Construction (NOC) application will be required if the SQER limit would be exceeded for compounds not addressed under the T-BACT assessment. The calculation/measurement methods described in section 4 of the NOC Approval Order DE03NWP-002, or other method as approved by Ecology, may be used to document compliance with the SQER limit. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Once every 2 years. <b>Periodic Monitoring:</b> PID or other device capable of detecting TAPs measurements. <b>Required Records:</b> 1. IH Test Plan. 2. Results of measurements.</p>	Continuous	<p><b>CDM:</b> Records Review. Calculation/measurement methods performed under Section 4 are maintained on file and are available for agency inspection.</p>
<p><b>Condition:</b> An internal annual assessment of the facility container tracking system, such as SWITS or the data management system (DMS), shall be conducted by the facility to document/ verify de minimus emissions from the source. This assessment will be maintained on file,</p>	Continuous	<p><b>CDM:</b> Records Review. Emissions assessment is maintained on file at the facility and actual annual emission from the facility are reported in the annual emissions inventory report</p>

Requirement	Compliance Status	Compliance Determination Method
<p>made available for Ecology inspector requests, and compiled into emission estimates that will be reported annually beginning as part of the Calendar Year 2003 nonradioactive inventory of airborne emissions.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Annually.  <b>Periodic Monitoring:</b> Recordkeeping; Comparison to threshold.  <b>Required Records:</b> 1. Throughput records, SWITs query evaluation if &gt; 1,000 drums.                  2. Nonradioactive air emissions inventory report required by WAC 173-400-105.</p>		<p>pursuant to WAC 173-400-105.</p>
<p><b>Condition:</b> Emission Controls Monitors:                  Source data from an Organic Vapor Analyzer using a Photoionization detector (PID) with at least an 11.7eV lamp, or other device capable of detecting TAPs, was conducted by the facility in providing verification of de minimus ( i.e., parts per million levels) fugitive emissions in the drum storage and NDE/NDA areas. The results of source test information, conducted on or at the source(s) locations in lieu of downstream at the stack, have been provided to the permit writer under separate cover. This information had been determined to satisfy the previous approval order condition for this source in performing one-time monitoring to demonstrate TAP emissions are below the estimates provided in the NOC application and T-BACT analysis for the drum storage and DNE/NDA areas. As such, no additional sampling or monitoring will be required under this approval order.</p> <p>The facility will continue to perform at least once every two years, and make available upon request or inspection, results from any Industrial Hygiene program measurements to further demonstrate compliance with limits contained herein. The test plan for conducting these measurements shall also be maintained on file and made available upon request and/or inspection by Ecology.</p> <p><b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Once every two years.  <b>Periodic Monitoring:</b> IH Program measurements as specified in NOC, including alternative methods.  <b>Required Records:</b> Test plan.                  Measurement results.</p>	<p>Continuous</p>	<p><b>CDM:</b> Records Review.                  Industrial Hygiene Test Plan is performed at least every 2 years, maintained on file, and available for agency inspection.</p>

**Permit:** AOP Table 1.6 - Non-CUs with HEPA **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07  
**NOC:** AOP Table 1.6 - Non-Combustion Units with HEPA

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040(1) 20% Opacity: Prohibits visible emissions exceeding 20% opacity for more than 3 minutes in any 1 hour of an air contaminant from any emissions unit or within a reasonable distance of the emission unit except for scheduled soot blowing/grate cleaning or due to documented water. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 9. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.1, unless an alternative visible emissions, opacity, or particulate matter emission limit is identified in Table 1.6 below. <b>Required Records:</b> As specified in Section 2.1.</p>	Continuous	<p><b>CDM:</b> Abatement control technology was maintained as required in AOP Attachment 2, Emission Unit ID #193.</p>
<p><b>Condition:</b> WAC 173-400-040(6) 1000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis. Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any period of 60 consecutive minutes. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.7, Tier 2, unless an alternative SO<sub>2</sub> emission limit is identified in Table 1.6. <b>Required Records:</b> As specified in Section 2.7.</p>	Continuous	<p><b>CDM:</b> Ecology determined this emission unit does not emit significant levels of SO<sub>2</sub>. Process has not been modified to increase SO<sub>2</sub> emissions.</p>
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard] Reasonably available control technology (RACT). <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Permit terms considered RACT. <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Permit terms are considered RACT. Complied with all permit terms for this emission point.</p>

**P-340NTEX-001**

Page in AOP: 1-063

Permit: 97NM-137 Issue Date: 05-05-97 Date In AOP: 07-02-01

NOC: Tank Sludge Cleanout

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> Maintain negative pressure of tanks during solids removal.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Not applicable.  <b>Required Records:</b> Operations log showing negative air pressure was maintained during solids removal from tank.</p>	<p>Not Applicable</p>	<p><b>CDM:</b> No solids removal activities were conducted during CY 2007, therefore this requirement to maintain negative pressure was not triggered.</p>
<p><b>Condition:</b> Implement temporary pollution controls during removal of solids and equipment from tanks. Temporary pollution controls implemented during solids removal will consist of temporary barriers installed between the tank access port and the surrounding area. Temporary pollution controls implemented during removal of equipment will consist of plastic sleeving to provide a barrier between the equipment and the surrounding work area and the environment.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Not applicable.  <b>Required Records:</b> Operations log showing appropriate temporary pollution control was in place during solids removal and equipment removal.</p>	<p>Not Applicable</p>	<p><b>CDM:</b> No solids removal activities were conducted during CY 2007, therefore this requirement to maintain negative pressure was not triggered.</p>
<p><b>Condition:</b> Control particulates with a prefilter and two banks of HEPAs. HEPAs are to be in-place tested to demonstrate removal efficiency of 99.95% for particulates with a 0.3 micron median diameter.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Not applicable.  <b>Required Records:</b> 1. Inspection records.  2. HEPA test results.</p>	<p>Continuous</p>	<p><b>CDM:</b> Annual Aerosol test.</p>

**Permit:** AOP Table 1.6 - Non-CUs with HEPA **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07  
**NOC:** AOP Table 1.6 - Non-Combustion Units with HEPA

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040(1) 20% Opacity: Prohibits visible emissions exceeding 20% opacity for more than 3 minutes in any 1 hour of an air contaminant from any emissions unit or within a reasonable distance of the emission unit except for scheduled soot blowing/grate cleaning or due to documented water. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 9. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.1, unless an alternative visible emissions, opacity, or particulate matter emission limit is identified in Table 1.6 below. <b>Required Records:</b> As specified in Section 2.1.</p>	Continuous	<p><b>CDM:</b> Abatement control technology (stack HEPA filtration) was maintained as required in AOP Attachment 2.</p>
<p><b>Condition:</b> WAC 173-400-040(6) 1000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis. Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any period of 60 consecutive minutes. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.7, Tier 2, unless an alternative SO<sub>2</sub> emission limit is identified in Table 1.6. <b>Required Records:</b> As specified in Section 2.7.</p>	Not Applicable	<p><b>CDM:</b> For non-combustion units, Ecology has determined that this emission unit does not emit significant levels of SO<sub>2</sub>. The process has not been modified to increase SO<sub>2</sub> emissions.</p>
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard] Reasonably available control technology (RACT). <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Permit terms considered RACT. <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Permit terms are considered RACT. Complied with all permit terms for this emission point.</p>

**P-WTP-001**  
Page in AOP: 1-064

**Permit:** DE02NWP-002 Amendment 4 **Issue Date:** 11-13-06 **Effective Date:** 11-13-06 **Date In AOP:** 01-01-07  
**NOC:** Hanford Tank Waste Treatment and Immobilization Plant

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> FUGITIVE DUST CONTROL</p> <p>Construction Phase Fugitive Dust Control Plan(s), prepared using EPA and Ecology guidelines, shall be developed and implemented. The plan(s) shall address fugitive dust control at the WTP construction site adjacent to the Hanford 200 Area and the Marshalling Yard established upon property leased from the Port of Benton. A copy of this plan(s) shall be maintained on-site at all times in a place known to facility employees that are responsible for complying with the requirements contained therein and shall be retrievable by those employees at all times when activities regulated by the documents are occurring. These documents shall be made available to Ecology upon request.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Construction Phase Fugitive Dust Control Plan</p> <p><b>EPA Test Method Frequency:</b> During construction or routine/ad hoc dust suppression</p> <p><b>Periodic Monitoring:</b> Not applicable. The owner or operator shall take reasonable precautions (such as pre-job planning) to prevent fugitive dust from becoming airborne.</p> <p><b>Required Records:</b> Fugitive Dust Control Plan and records or actions taken to minimize fugitive dust.</p>	Continuous	CDM: Record keeping.

**Permit:** DE02NWP-002 Amendment 1 **Issue Date:** 11-24-03 **Date In AOP:** 05-28-04  
**NOC:** Hanford Tank Waste Treatment and Immobilization Plant

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> 1.1 Opacity from each exhaust stack from process facilities (Pretreatment, HLW and LAW) shall not exceed 5%, other facility stacks shall not exceed 10 percent, over a 6 minute average as measured by EPA Reference Method 9, or an equivalent method approved in advance by Ecology. A certified opacity reader shall read and record the opacity concurrent with any source testing.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> EPA Reference Method 9.</p> <p><b>EPA Test Method Frequency:</b> Initial test.</p> <p><b>Periodic Monitoring:</b> For Pretreatment, HLW and</p>	Not Applicable	CDM: Facilities were under construction during the reporting period; therefore, this condition did not apply.

Requirement	Compliance Status	Compliance Determination Method
<p>LAW See Section 2.1, Tier 3. <b>Required Records:</b> Test Records.</p>		
<p><b>Condition:</b> 1.1 Opacity from each exhaust stack from process facilities (Pretreatment, HLW and LAW) shall not exceed 5%, other facility stacks shall not exceed 10 percent, over a 6 minute average as measured by EPA Reference Method 9, or an equivalent method approved in advance by Ecology. A certified opacity reader shall read and record the opacity concurrent with any source testing. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Reference Method 9. <b>EPA Test Method Frequency:</b> At least once per calendar quarter. <b>Periodic Monitoring:</b> For Boilers, generators and fire pumps: See Section 2.1, Tier 1. <b>Required Records:</b> Test Records.</p>	<p>Not Applicable</p>	<p><b>CDM:</b> Boiler, generator, and fire pump construction was not complete during the reporting period; therefore, this condition did not apply.</p>
<p><b>Condition:</b> 1.1 Opacity from each exhaust stack from process facilities (Pretreatment, HLW and LAW) shall not exceed 5%, other facility stacks shall not exceed 10 percent, over a 6 minute average as measured by EPA Reference Method 9, or an equivalent method approved in advance by Ecology. A certified opacity reader shall read and record the opacity concurrent with any source testing. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Reference Method 9. <b>EPA Test Method Frequency:</b> Initial test. <b>Periodic Monitoring:</b> For other facility stacks: See Section 2.1, Tier 3. <b>Required Records:</b> Test Records.</p>	<p>Not Applicable</p>	<p><b>CDM:</b> 'Other' Facilities were under construction during the reporting period; therefore, this condition did not apply.</p>
<p><b>Condition:</b> 1.2 All boilers, generators and the diesel fire pump shall be fired on Ultra-Low Sulfur Fuel (ULSF), ULSF means natural gas, propane, or fuel oil with a sulfur content of 0.0030 % or less. Compliance shall be monitored by maintaining and submitting records of fuel purchases. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Annually. <b>Periodic Monitoring:</b> Recordkeeping. <b>Required Records:</b> Records of monthly fuel purchases and use and an annual certification, from the fuel distributor, stating the sulfur content of the fuel that was supplied.</p>	<p>Not Applicable</p>	<p><b>CDM:</b> Boiler, generator, and fire pump construction was not complete during the reporting period; therefore, this condition did not apply.</p>

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> 1.4 Each of the 3 emergency generators shall not operate for more than 164 hours per year on a 12 month rolling summation calculated once per month. Compliance shall be monitored by installing and operating non-resettable totalizers on each generator.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Monthly.  <b>Periodic Monitoring:</b> Recordkeeping.  <b>Required Records:</b> Records showing all hours of operation.</p>	<p>Not Applicable</p>	<p><b>CDM:</b> Generator construction was not complete during the reporting period; therefore, this condition did not apply.</p>
<p><b>Condition:</b> 1.5 Each of the two diesel fire pumps shall not operate for more than 110 hours per year on a 12 month rolling summation calculated once per month. Compliance shall be monitored by installing and operating a non-resettable totalizer on the fire pump.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not Applicable.  <b>Periodic Monitoring:</b> Recordkeeping.  <b>Required Records:</b> Monthly.</p>	<p>Not Applicable</p>	<p><b>CDM:</b> Fire pump construction was not complete during the reporting period; therefore, this condition did not apply.</p>
<p><b>Condition:</b> 2.2 A new NOC will be required, if total emissions of toxic air pollutants exceed the values specified in the tables in Attachment 1 of this approval order. These values shall be confirmed by emission calculations, for indicator constituents, derived from waste characterization data obtained through implementation of the Ecology approved Regulatory Data Objectives Supporting Tank Waste Remediation System Privatization Project (PNNL-12040). The mass feed rates for the indicator constituents will be verified to be less than or equal to the mass feed rates used in the Integrated Emissions Baseline Report for the Hanford Tank Waste Treatment and Immobilization Plant (24590-WTP-RPT, PO-03-008, Rev 0). Results of any such calculations will be maintained on file and made available upon inspection/request.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> At least once per calendar year.  <b>Periodic Monitoring:</b> Recordkeeping.  <b>Required Records:</b> 1. Calculations of TAPs emissions derived from waste feed characterization.  2. Calculations of ammonia emissions from LAW and HLW.</p>	<p>Not Applicable</p>	<p><b>CDM:</b> Facilities were under construction during the reporting period; therefore, this condition did not apply.</p>
<p><b>Condition:</b> 2.3 A new NOC also is required if total emissions of any criteria pollutants, derived from calculations/monitoring, would exceed the estimates listed under the Emissions section of this order.</p>	<p>Not Applicable</p>	<p><b>CDM:</b> Facilities were under construction during the reporting period; therefore, this condition did not apply.</p>

Requirement	Compliance Status	Compliance Determination Method
<p><b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not Specified.  <b>EPA Test Method Frequency:</b> At least once per calendar year.  <b>Periodic Monitoring:</b> Recordkeeping  <b>Required Records:</b> Calculations of criteria pollutants.</p>		
<p><b>Condition:</b> 3.1 Within 180 days of achieving the optimized feed rate of simulant at which the facilities will be operated, the permittee shall demonstrate initial compliance through a performance demonstration conducted per an Ecology approved Performance Demonstration Plan. The permittee shall utilize the Performance Demonstration Plan requirements identified in the Dangerous Waste Portion of the Resource Conservation and Recovery Act Permit for the Treatment, Storage, and Disposal of Dangerous Waste Hanford Waste Treatment and Immobilization Plant (DWP), condition III.10.H.5.f (LAW) and III.10.J.5.f (HLW). Ecology shall be notified at least 30 days prior to the test and invited to participate in the test activities at least one week prior to testing.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Recordkeeping.  <b>Required Records:</b> 1. Notification Documentation.  2. Performance Demonstration Plan.</p>	<p>Not Applicable</p>	<p><b>CDM:</b> Facilities were under construction during the reporting period; therefore, this condition did not apply.</p>
<p><b>Condition:</b> 3.2 Testing per the initial compliance testing identified in 3.1 shall be conducted in accordance with the frequency identified in the DWP, conditions III.10.I.1.h (LAW) and III.10.K.1.h (HLW).  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> As stated in DWP conditions III.10.I.1.H (LAW) and III.10.K.1.h (HLW).  <b>EPA Test Method Frequency:</b> At startup and at least once every 5 years thereafter.  <b>Periodic Monitoring:</b> Recordkeeping, measurements, and emission calculations.  <b>Required Records:</b> Test Records.</p>	<p>Not Applicable</p>	<p><b>CDM:</b> Facilities were under construction during the reporting period; therefore, this condition did not apply.</p>
<p><b>Condition:</b> 3.5 Within 180 days of initial startup, boiler source testing shall be conducted according to the following methods, unless an alternate method has been proposed in writing by the permittee and approved by Ecology in writing in advance of the testing.  Carbon Monoxide - EPA Reference Method 10, 40 CFR 60, Appendix A, 7/1/00  Volatile Organic Compounds (VOC) - EPA Reference Method 18, 40 CFR 60, Appendix A, 7/1/00  Sulfur Dioxide - EPA Reference Method 6C, 40 CFR 60, Appendix A, 7/1/00.</p>	<p>Not Applicable</p>	<p><b>CDM:</b> Boiler construction was not complete during the reporting period; therefore, this condition did not apply.</p>

Requirement	Compliance Status	Compliance Determination Method
<p><b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> As stated in condition.  <b>EPA Test Method Frequency:</b> Initial startup.  <b>Periodic Monitoring:</b> Recordkeeping, measurements, and emission calculations.  <b>Required Records:</b> Test Records.</p>		
<p><b>Condition:</b> 3.6 During the boiler source testing, a direct-reading measurement device for carbon monoxide with a minimum measurement accuracy of five percent or less shall take readings according to methods proposed by the permittee and approved by Ecology in writing in advance of the testing. The direct-reading instrument shall be calibrated for future use, using the results of the source testing.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Portable emissions analyzer calibrated during most recent source test.  <b>EPA Test Method Frequency:</b> Initial startup.  <b>Periodic Monitoring:</b> Recordkeeping, measurements, and emission calculations.  <b>Required Records:</b> Logs of boiler tune-ups and significant boiler maintenance activities will be maintained.</p>	<p>Not Applicable</p>	<p><b>CDM:</b> Boiler construction was not completed during the reporting period; therefore, this condition did not apply.</p>
<p><b>Condition:</b> 4. Emissions from boilers and generators shall be monitored for CO and Oxygen by means of a portable emissions analyzer (direct-reading measurement device) at initial startup and after routinely scheduled maintenance activities and burner/control adjustments such as fuel/air metering ratio control and oxygen trim control.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Portable emissions analyzer calibrated during most recent source test.  <b>EPA Test Method Frequency:</b> Initial startup and after routinely scheduled maintenance activities and burner/control adjustments such as fuel/air metering ratio control and oxygen trim control.  <b>Periodic Monitoring:</b> Recordkeeping, measurements, and emission calculations.  <b>Required Records:</b> Logs of boiler tune-ups and significant boiler maintenance activities will be maintained.</p>	<p>Not Applicable</p>	<p><b>CDM:</b> Boiler and generator construction was not completed during the reporting period; therefore, this condition did not apply.</p>

**Permit:** DE02NWP-002 Amendment 2 **Issue Date:** 11-10-05 **Date In AOP:** 01-01-07  
**NOC:** Hanford Tank Waste Treatment and Immobilization Plant

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> 1.3 The operation of the six steam generating boilers shall not exceed an annual aggregated fuel consumption limit of 13,400,000 gallons per year summed daily for the previous 365 days. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Daily. <b>Periodic Monitoring:</b> Recordkeeping. <b>Required Records:</b> Maintain fuel purchase records.</p>	Not Applicable	<b>CDM:</b> Boiler construction was not completed during the reporting period; therefore, this condition did not apply.

**Permit:** AOP Table 1.6 - CUs with Opacity & SO2 **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07  
**NOC:** Combustion Units with Opacity and SO2 Requirements

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard] Reasonably available control technology (RACT). <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Permit terms considered RACT. <b>Required Records:</b></p>	Continuous	<b>CDM:</b> The NOC Approval requires BACT.

**Integrated Disposal Facility**  
**Page in AOP:** 1-070

**Permit:** DE05NWP-004 **Issue Date:** 05-31-05 **Date In AOP:** 01-01-07  
**NOC:** Operation of the Integrated Disposal Facility.

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> EMISSION LIMITS FOR WASTE COVERING OPERATIONS During waste covering operations, aggregate will be used to cover the waste package at the IDF. Dust control for covering the waste package will consist of watering and/or chemical wetting agents. Waste covering operations will be curtailed during high winds in accordance with abnormal operating procedures for high winds. Prior to long periods of inactivity, an assessment shall be made to implement more comprehensive dust control methods, such as chemical stabilization, on disturbed areas. A reassessment will be made once per</p>	Not Applicable	<b>CDM:</b> Field interviews. Waste has not been introduced to the Integrated Disposal Facility. The facility is operating under care taker status.

Requirement	Compliance Status	Compliance Determination Method
<p>week.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Recordkeeping.  <b>Required Records:</b> Daily activity reports, logs, pre-job reviews, management assessments, surveillances or similar documents.</p>		
<p><b>Condition:</b> EMISSION LIMITS FOR TRAVEL ON UNPAVED ROADS            Surface treatment for dust control will consist of watering and/or chemical stabilization. Minimize vehicle use on unpaved road. Perform regular maintenance of road surface. Reduce vehicle speed limit on unpaved roads.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Recordkeeping.  <b>Required Records:</b> Daily activity reports, logs, pre-job reviews, management assessments, surveillances or similar documents.</p>	Continuous	<p><b>CDM:</b> Field interviews.   <b>Comment:</b> Water, or a soil fixative, was applied to unpaved roads and disturbed soil for dust control during the reporting period. Vehicle traffic on unpaved roads is kept to a minimum and speed limits are reduced. Conditions are assessed weekly.</p>
<p><b>Condition:</b> EMISSION LIMITS FOR AGGREGATE COVER COMPACTING            A water truck will be provided, and operated as needed to spray water for compaction. Waste covering operations will be curtailed during high winds in accordance with abnormal operating procedures for high winds. Prior to long periods of inactivity an assessment shall be made to implement more comprehensive dust control methods, such as chemical stabilization, on disturbed areas. A reassessment will be made once per week.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Recordkeeping.  <b>Required Records:</b> Daily activity reports, logs, pre-job reviews, management assessments, surveillances or similar documents.</p>	Not Applicable	<p><b>CDM:</b> Field interviews.            Waste has not been introduced to the Integrated Disposal Facility. The facility is operating under care taker status.</p>
<p><b>Condition:</b> EMISSION LIMITS FOR AGGREGATE STORAGE PILE            Watering will be utilized to minimize wind erosion during storage pile operation. Storage pile work will be curtailed during high winds in accordance with abnormal operating procedures for high winds. Prior to long periods of inactivity an assessment shall be made to implement more comprehensive dust control methods, such as chemical stabilization, on disturbed areas. A reassessment will be made once per week. Minimize</p>	Continuous	<p><b>CDM:</b> Field interviews.   <b>Comment:</b> Water, or a soil fixative, was applied to prevent fugitive dust from becoming airborne, to minimize dust generation, and to minimize wind erosion during the reporting period. Conditions are assessed weekly.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>vehicle traffic. Minimize areas of disturbance.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Recordkeeping.  <b>Required Records:</b> Daily activity reports, logs, pre-job reviews, management assessments, surveillances or similar documents.</p>		
<p><b>Condition:</b> FUGITIVE EMISSIONS            The permittee shall take reasonable precautions to prevent the release of air contaminants from any emissions unit engaging in materials handling, construction, demolition, or any other operation that is a source of fugitive emissions.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Pre-job planning to determine reasonable control measures.  <b>Required Records:</b> None listed.</p>	Continuous	<p><b>CDM:</b> Field interviews.   <b>Comment:</b> Water, or a soil fixative, was applied to prevent fugitive dust from becoming airborne, to minimize dust generation, and to minimize wind erosion during the reporting period.</p>
<p><b>Condition:</b> FUGITIVE DUST            Requires reasonable precautions be taken to prevent fugitive dust from becoming airborne and to minimize dust generation.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Pre-job planning to determine reasonable control measures.  <b>Required Records:</b> None listed.</p>	Continuous	<p><b>CDM:</b> Field interviews.   <b>Comment:</b> Water, or a soil fixative, was applied to prevent fugitive dust from becoming airborne, to minimize dust generation, and to minimize wind erosion during the reporting period.</p>

**Permit:** AOP Table 1.6 - Non-CUs **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07

**NOC:** AOP Table 1.6 - Non Combustion Units with No Fugitive Emission or Dust Generals

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040(1)            20% Opacity: Prohibits visible emissions exceeding 20% opacity for more than 3 minutes in any 1 hour of an air contaminant from any emissions unit or within a reasonable distance of the emission unit except for scheduled soot blowing/grate cleaning or due to documented water.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> EPA Method 9.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Section 2.1, unless an alternative visible emissions, opacity, or particulate matter emission limit is identified in Table 1.6 below.  <b>Required Records:</b> As specified in Section 2.1.</p>	Continuous	<p><b>CDM:</b> Visible emissions were not observed in excess of 20% opacity during the reporting period.  <b>Comment:</b> Waste has not been introduced to the Integrated Disposal Facility. The facility is operating under care taker status.</p>

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> 1000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis. Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any period of 60 consecutive minutes.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Section 2.7, Tier 2, unless an alternative SO<sub>2</sub> emission limit is identified in Table 1.6 below.</p> <p><b>Required Records:</b> As specified in Section 2.7.</p>	Continuous	<p><b>CDM:</b> Ecology has determined that this emission unit does not emit significant levels of SO<sub>2</sub>. The process has not been modified to increase SO<sub>2</sub> emissions.</p>
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard] Reasonably available control technology (RACT).</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Not specified.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Permit terms considered RACT.</p> <p><b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Field interviews. Permit terms are considered RACT.</p>

**P-BULKVIT - 001**

Page in AOP: 1-073

**Permit:** DE04NWP-002 **Issue Date:** 12-15-04 **Obsolete Date:** 05-09-07 **Date In AOP:** 01-01-07

**NOC:** Notice of Construction (NOC) for the Bulk Vitrification Test and Demonstration Facility and Partial Retrieval of Tank 241-S-109, Revision 1 Approval Order

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> TOTAL EMISSION LIMITS The activities described in the NOCA will be permitted with the control technologies proposed, provided that the total emissions from all activities will not result in exceedance of WAC 173-460 Small Quantity Emission Rates (SQERs) and Acceptable Source Impact Levels (ASILs) or the criteria pollutants estimates listed under the WAC 173-400 section of the completeness checklist.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> In accordance with the Hanford Industrial Hygiene Monitoring Program.</p> <p><b>EPA Test Method Frequency:</b> During waste retrieval operations.</p> <p><b>Periodic Monitoring:</b> Monitoring of VOCs emissions.</p> <p><b>Required Records:</b> Off Gas Treatment System (OGTS) records, monitoring records.</p>	Continuous	<p><b>CDM:</b> Field interviews. No activities were conducted requiring the use of the NOC during the reporting period.</p>

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> TOTAL EMISSION LIMITS A modification submittal of an NOCA will be required if the total emissions of criteria and/or toxic air pollutants exceed the emissions estimated in the NOCA and/or other limits specified under this order. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Recordkeeping. <b>Required Records:</b> OGTS records, monitoring records, and yearly emission estimates.</p>	Continuous	<p><b>CDM:</b> Field interviews. No activities were conducted requiring the use of the NOC during the reporting period.</p>
<p><b>Condition:</b> TOTAL EMISSION LIMITS NOx emissions shall not exceed 13 tons per rolling 12 month total. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Monitoring of NOx emissions <b>Required Records:</b> OGTS records, monitoring records.</p>	Continuous	<p><b>CDM:</b> Field interviews. No activities were conducted requiring the use of the NOC during the reporting period.</p>
<p><b>Condition:</b> EMISSIONS CONTROL During phase 1 of the project, the diesel generator shall not operate for more than 20 hours. During phase 2 the diesel generator shall not operate for more than 80 hours. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Installing and operating a non-resettable totalizer on the generator. <b>Required Records:</b> Phase 1 total hours and phase 2 total hours.</p>	Continuous	<p><b>CDM:</b> Field interviews. No activities were conducted requiring the use of the NOC during the reporting period.</p>
<p><b>Condition:</b> GENERAL APPROVAL CONDITIONS Visible Emissions: The emissions from the retrieval and bulk vitrification activities shall not exceed 10% opacity. The emissions from the diesel generator exhaust shall not exceed 20% opacity. Visible emissions survey must be conducted during daylight hours and during periods when the emission unit is operating. If the operator observes visible emissions for more than 10 consecutive minutes during the observation period, the cause of the visible emission will be determined and corrective actions taken as necessary or a visible determination of opacity will be performed using Ecology Method 9A or the United States Environmental Protection Agency (EPA) Method 9. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Visible emission surveys and if necessary (EPA) Method 9. <b>EPA Test Method Frequency:</b> Shall be at least once per calendar quarter when operated. <b>Periodic Monitoring:</b> Maintaining proper abatement</p>	Continuous	<p><b>CDM:</b> Field interviews. No activities were conducted requiring the use of the NOC during the reporting period.</p>

Requirement	Compliance Status	Compliance Determination Method
control technology as required by the Washington State Department of Health and visible emission surveys. <b>Required Records:</b> Records of corrective actions taken to reduce opacity.		
<b>Condition:</b> EMISSIONS DETRIMENTAL TO PERSONS OR PROPERTY Prohibits emissions of any air contaminant from any source that is detrimental to the health, safety, or welfare of any persons, or causes damages to property or business. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Recordkeeping of complaint investigations. <b>Required Records:</b> None listed.	Continuous	<b>CDM:</b> Field interviews. No activities were conducted requiring the use of the NOC during the reporting period.

**Permit:** AOP Table 1.6 - Non-CUs with HEPA **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07  
**NOC:** AOP Table 1.6 - Non-Combustion Units with HEPA

Requirement	Compliance Status	Compliance Determination Method
<b>Condition:</b> WAC 173-400-040(1) 20% Opacity: Prohibits visible emissions exceeding 20% opacity for more than 3 minutes in any 1 hour of an air contaminant from any emissions unit or within a reasonable distance of the emission unit except for scheduled soot blowing/grate cleaning or due to documented water. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 9. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.1, unless an alternative visible emissions, opacity, or particulate matter emission limit is identified in Table 1.6 below. <b>Required Records:</b> As specified in Section 2.1.	Continuous	<b>CDM:</b> Field interviews. This emission unit did not operate during the reporting period.
<b>Condition:</b> WAC 173-400-040(6) 1000 ppm SO <sub>2</sub> @ 7% O <sub>2</sub> on a dry basis. Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any period of 60 consecutive minutes. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.7, Tier 2, unless an alternative SO <sub>2</sub> emission limit is identified in Table 1.6. <b>Required Records:</b> As specified in Section 2.7.	Continuous	<b>CDM:</b> Field interviews. This emission unit did not operate during the reporting period.

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard] Reasonably available control technology (RACT). <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Permit terms considered RACT. <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Field interviews. Permit terms are considered RACT. This emission unit did not operate during the reporting period.</p>
<p><b>Condition:</b> WAC 173-400-040(3)(a) [Table 1.2 General Standard] Fugitive emissions. The permittee shall take reasonable precautions to prevent the release of air contaminants from any emissions unit engaging in materials handling, construction, demolition, or any other operation that is a source of fugitive emissions. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Pre-job planning to determine reasonable control measures. <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Field interviews. This emission unit did not operate during the reporting period.</p>
<p><b>Condition:</b> WAC 173-400-040(8)(a) [Table 1.2 General Standard] Fugitive dust. Requires reasonable precautions be taken to prevent fugitive dust from becoming airborne and to minimize dust generation. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Pre-job planning to determine reasonable control measures. <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Field interviews. This emission unit did not operate during the reporting period.</p>

**Permit:** DE04NWP-002 Amendment 1 **Issue Date:** 09-05-06 **Obsolete Date:** 05-09-07 **Date In AOP:** 01-01-07  
**NOC:** Bulk Vitrification Test and Demonstration Facility and Partial Retrieval of Tank 241-S-109

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> EMISSION CONTROL The diesel-fired boiler shall not operate for more than 7,008 hours per year on a 12-month rolling summation calculated once per month. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Installing and operating a non-resettable totalizer on the boiler.</p>	Continuous	<p><b>CDM:</b> Field interviews. No activities were conducted requiring the use of the NOC during the reporting period.</p>

Requirement	Compliance Status	Compliance Determination Method
<b>Required Records:</b> Monthly calculations.		

**Permit:** DE04NWP-002 Amendment 2 **Issue Date:** 11-13-06 **Obsolete Date:** 05-09-07 **Date In AOP:** 01-01-07  
**NOC:** Bulk Vitrification Test and Demonstration Facility and Partial Retrieval of Tank 241-S-109

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> EMISSION MONITORING Monitoring of Volatile Organic Compound (VOC) is required during waste retrieval operations and is to be conducted in accordance with the Hanford Industrial Hygiene monitoring program for potential worker exposure.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Field VOC instruments (Hanford Industrial Hygiene worker monitoring program).</p> <p><b>EPA Test Method Frequency:</b> Before, during, and after exhauster operation.</p> <p><b>Periodic Monitoring:</b> Waste retrieval.</p> <p><b>Required Records:</b> VOC monitoring records for once before exhauster operation begins, once during exhauster operation, and once after exhauster operations is completed.</p>	Continuous	<p><b>CDM:</b> Field interviews.</p> <p>No activities were conducted requiring the use of the NOC during the reporting period.</p>
<p><b>Condition:</b> EMISSION MONITORING Monitoring of NOx emissions from bulk vitrification processing.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> CEMS</p> <p><b>EPA Test Method Frequency:</b> During waste treatment operations.</p> <p><b>Periodic Monitoring:</b> NOx Continuous Emissions Monitoring System (CEMS).</p> <p><b>Required Records:</b> OGTS records and monitoring records.</p>	Continuous	<p><b>CDM:</b> Field interviews.</p> <p>No activities were conducted requiring the use of the NOC during the reporting period.</p>

**Ventilation Systems for 241-AN and 241-AW Tank Farms**

Page in AOP: 1-078

**Permit:** DE05NWP-001 **Issue Date:** 02-18-05 **Obsolete Date:** 07-31-07 **Date In AOP:** 01-01-07  
**NOC:** Non-Radioactive Air Emissions NOC for Operation of New Ventilation Systems in AN and AW Tank Farms

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> Emission Limits Visible emissions from each stack shall not exceed five (5) percent.</p> <p><b>Model ID:</b> Not applicable.</p>	Continuous	<p><b>CDM:</b> Field interviews.</p> <p>No visible emissions observed.</p>

Requirement	Compliance Status	Compliance Determination Method
<p><b>EPA Test Method:</b> 40 Code of Federal Regulations (CFR) Part 60, Appendix A, Method 9, as applicable.  <b>EPA Test Method Frequency:</b> None Specified.  <b>Periodic Monitoring:</b> In accordance with the Hanford Air Operating Permit Section 2.1, Visible Emissions Surveys, Tier 3. Should visible emissions be observed which are not solely attributable to water condensation, compliance with Approval Condition shall be met by performing an opacity determination utilizing 40 Code of Federal Regulations (CFR) Part 60, Appendix A, Method 9, providing that such determination shall not place the visible emission observer in hazard greater than that identified for the general worker.  <b>Required Records:</b> Visible emission surveys records in which a visible emission was observed, which are not solely attributable to water condensation.</p>		
<p><b>Condition:</b> Emission Limits            Primary tank ventilation exhauster systems for the 241-AN and for the 241-AW Double-Shell Tank (DST) farms shall not exceed 4,000 ft<sup>3</sup>/min (standard temperature and pressure).  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Stack gas flow and temperature measurement.  <b>Required Records:</b> Records of calibration of stack gas flow rate and temperature measurement devices. Exhauster system stack flow rates and temperatures records.</p>	Continuous	<p><b>CDM:</b> Field interviews.</p> <p><b>Comment:</b> Primary exhausters 296-A-44 (EU ID 735), 296-A-45 (EU ID 736), 296-A-46 (EU ID 855), and 296-A-47 (EU ID 856) did not operate during the reporting period.</p>
<p><b>Condition:</b> Emission Limits            All TAPs, as submitted in the Permittee's Notice of Construction Application, shall be below their respective ASIL or Screening Level of Table 1 of the NOC approval order DE05NWP-001.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Monitoring of NO<sub>x</sub> emissions.  <b>Required Records:</b> All monitoring and operations records required to operate and maintain the emission control equipment which implements T-BACT as described in Section 1.0 of NOC approval order DE05NWP-001. Laboratory analysis result summaries of any samples undertaken after the effective date of this ORDER DE05NWP-001 from 241-AN or 241-AW tank farm headspaces or primary tank ventilation system exhaust which are examined for organic species or other TAPS.</p>	Continuous	<p><b>CDM:</b> Field interviews.</p> <p><b>Comment:</b> Primary exhausters 296-A-44 (EU ID 735), 296-A-45 (EU ID 736), 296-A-46 (EU ID 855), and 296-A-47 (EU ID 856) did not operate during the reporting period.</p>

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition: Emission Limits</b> Emissions of ammonia shall not exceed 0.22 pounds per hour (2.77E-02 gram/second) from either primary tank ventilation exhauster system. The term "each exhauster system", herein, shall mean each individual primary tank ventilation exhauster system within the 241-AN Tank Farm and 241-AW Tank Farm, where an exhauster system may be: operated in single-train or dual-train modes.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Ammonia sampling and analysis will be in accord with approved alternative sampling procedures including the use of Draeger tubes to measure stack gas concentration of ammonia providing such devices are spanned to appropriately measure the stack gas ammonia concentration. Stack flow rate and temperature will be applied with the ammonia stack gas concentration to report ammonia emission in terms of grams per second.</p> <p><b>EPA Test Method Frequency:</b> In order to assess baseline emission concentrations from each exhauster system, emission levels of ammonia will be assessed: 1. During single train exhauster operation: Between 12 and 24 hours after initiation of single train exhauster operation, ammonia stack concentrations shall be sampled a minimum of three times. 2. During dual train exhauster operation: Between 12 and 24 hours after initiation of dual train exhauster operation, ammonia stack concentrations shall be sampled a minimum of three times.</p> <p><b>Baseline Assessments</b> Baseline assessments shall be conducted within ninety (90) days of commencement of operations. Should dual exhauster train operation not be required by the Permittee during this ninety (90) day period, assessment of dual train operation emissions shall be conducted on the first occasion of dual train operation which is anticipated to exceed 24 hours duration.</p> <p><b>Bi-Annual Emission Assessment</b> In order to maintain reasonable assurance of continued compliance with emission limitations from these exhauster systems, bi-annual assessment of ammonia stack emissions will be conducted beginning the second calendar year following completion of single train exhauster operation assessment under Section 3.1 of NOC approval order DE05NWP-001. A minimum of three samples shall be used to assess these emissions.</p> <p><b>Periodic Monitoring:</b> Conduct of ammonia concentration readings as described in Sections 3.1 and 3.2 of NOC approval order DE05NWP-001, and applying these concentration readings with contemporaneous stack flow rate and temperatures to</p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews.</p> <p><b>Comment:</b> Primary exhausters 296-A-44 (EU ID 735), 296-A-45 (EU ID 736), 296-A-46 (EU ID 855), and 296-A-47 (EU ID 856) did not operate during the reporting period.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>determine instantaneous mass release rate of ammonia. <b>Required Records:</b> Results of emission assessments, baseline and bi-annual emission monitoring results, supporting data and calculations to demonstrate compliance with ammonia limits.</p>		
<p><b>Condition: REPORTING</b> Visible emission surveys conducted and a report of the maintenance conducted to maintain the subject exhaust system's T-BACT operations. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Shall be submitted to Ecology within thirty (30) days of completion of the survey with an assessment of the cause of visible emissions. <b>Required Records:</b> Visible emission surveys conducted and a report of the maintenance.</p>	Continuous	<b>CDM:</b> Field interviews. No visible emissions observed.
<p><b>Condition: REPORTING</b> Identification of any TAP not previously identified within the Notice of Construction Application or Supplement emissions estimates shall be submitted to Ecology within ninety (90) days of completion of laboratory analyses which verify emissions of that toxic air pollutant from the project. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Shall be submitted to Ecology within ninety (90) days of completion of laboratory analyses which verify emissions of that toxic air pollutant from the project. <b>Required Records:</b> Laboratory analysis.</p>	Continuous	<b>CDM:</b> Field interviews.
<p><b>Condition: REPORTING</b> Results of emission assessments conducted. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Shall be submitted to Ecology within ninety (90) day of completion of such assessment. <b>Required Records:</b> Emission assessment results.</p>	Continuous	<b>CDM:</b> Field interviews.

**Permit:** DE05NWP-001 R1 **Issue Date:** 07-31-07 **Effective Date:**07-31-07 **Date In AOP:** 12-05-07  
**NOC:** Non-Radioactive Air Emissions NOC for Operation of New Ventilation Systems in AN and AW Tank Farms

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> Emission Limits Visible emissions from each stack shall not exceed five</p>	Continuous	<b>CDM:</b> Field interviews. No visible emissions observed.

Requirement	Compliance Status	Compliance Determination Method
<p>(5) percent.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> 40 Code of Federal Regulations (CFR) Part 60, Appendix A, Method 9, as applicable.  <b>EPA Test Method Frequency:</b> None Specified (as needed for monitoring and compliance)  <b>Periodic Monitoring:</b> Compliance and monitoring shall be met by Tier 3 Visible Emissions Survey requirements of the Hanford AOP, Section 2.1. Should visible emissions be observed which are not solely attributable to water condensation, compliance shall be met by performing an opacity determination utilizing 40 CFR 60, Appendix A, Method 9, providing that such determination shall not place the visible emission observer in hazard greater than that identified for the general worker.  <b>Required Records:</b> Visible emission surveys records in which a visible emission was observed, which are not solely attributable to water condensation; and Method 9 results if conducted.</p>		
<p><b>Condition: EMISSION LIMITS</b>            Primary tank ventilation exhauster systems shall not exceed 4,000 ft<sup>3</sup>/min (at standard temperature and pressure).  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> None Specified (as needed for monitoring and compliance).  <b>Periodic Monitoring:</b> Compliance and monitoring of this condition shall be demonstrated by stack gas flow and temperature measurement.  <b>Required Records:</b> (1) Records of exhauster system stack flow rates and temperature records.            (2) Records of calibration of stack gas flow rate and temperature measurement devices.</p>	Continuous	<p><b>CDM:</b> Field interviews.</p> <p><b>Comment:</b> Primary exhausters 296-A-44 (EU ID 735), 296-A-45 (EU ID 736), 296-A-46 (EU ID 855), and 296-A-47 (EU ID 856) did not operate during the reporting period.</p>
<p><b>Condition: EMISSION LIMITS</b>            All TAPs, as shown in Table 2 of Approval Order DE05NWP-001, Rev 1, shall be below their respective ASIL or Screening Level of Table 1 of Approval Order DE05NWP-001 Rev 1.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> None Specified (as needed for monitoring and compliance).  <b>Periodic Monitoring:</b> Compliance and monitoring shall be met by operating the exhauster systems only when in accord with T-BACT emission controls for the project. T-BACT for this project has been determined to be operation of the primary tank ventilation exhauster systems not exceeding 4,000 cubic feet per minute with moisture de-entrainment, pre-heater, and HEPA filtration</p>	Continuous	<p><b>CDM:</b> Field interviews.</p> <p><b>Comment:</b> Primary exhausters 296-A-44 (EU ID 735), 296-A-45 (EU ID 736), 296-A-46 (EU ID 855), and 296-A-47 (EU ID 856) did not operate during the reporting period.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>in service in the treatment train. <b>Required Records:</b> Documentation and record-keeping of T-BACT compliance of emission control found for this project (operation of the primary tank ventilation exhauster system not exceeding 4,000 ft<sup>3</sup>/min with moisture de-entrainment, pre-heater, and HEPA filtration in service in the treatment train).</p>		
<p><b>Condition: Emission Limits</b> Emissions of ammonia shall not exceed 0.22 pounds per hour (2.77E-02 gram/second) from either primary tank ventilation exhauster system. The term 'either exhauster system' shall mean each individual primary tank ventilation exhauster system within the 241-AN and 241-AW Tank Farms, where an exhauster system may be operated in single-train or dual-train modes. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Ammonia sampling and analysis will be in accord with approved alternative sampling procedures including the use of Draeger tubes to measure stack gas concentration of ammonia providing such devices are spanned to appropriately measure the stack gas ammonia concentration. Stack flow rate and temperature will be applied with the ammonia stack gas concentration to report ammonia emission in terms of grams per second. <b>EPA Test Method Frequency:</b> In order to assess baseline emission concentrations from each exhauster system, emission levels of ammonia will be assessed between 12 and 24 hours after initiation of exhauster operation (single train or dual train). Ammonia stack concentrations shall be sampled a minimum of three times. <b>Baseline Assessments</b> Baseline assessments shall be conducted within ninety (90) days of commencement of operations. Should dual exhauster train operation not be required by the Permittee during this ninety (90) day period, assessment of dual train operation emissions shall be conducted on the first occasion of dual train operation which is anticipated to exceed 24 hours duration. <b>Bi-Annual Emission Assessment</b> In order to maintain reasonable assurance of continued compliance with emission limitations from these exhauster systems, bi-annual assessment of ammonia stack emissions will be conducted beginning the second calendar year following completion of single train exhauster operation assessment under Section 3.1 of NOC approval order DE05NWP-001. A minimum of three samples shall be used to assess these emissions. <b>Periodic Monitoring:</b> Conduct of ammonia concentration readings as described in Sections 3.1 and 3.2 of NOC approval order DE05NWP-001 (2/18/2005),</p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews.  <b>Comment:</b> Primary exhausters 296-A-44 (EU ID 735), 296-A-45 (EU ID 736), 296-A-46 (EU ID 855), and 296-A-47 (EU ID 856) did not operate during the reporting period.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>and applying these concentration readings with contemporaneous stack flow rate and temperatures to determine instantaneous mass release rate of ammonia. <b>Required Records:</b> Results of emission assessments, baseline and bi-annual emission monitoring results, supporting data and calculations to demonstrate compliance with ammonia limits.</p>		
<p><b>Condition: REPORTING</b> Visible emission surveys conducted and a report of the maintenance conducted to maintain the subject exhaust system's T-BACT operations shall be submitted to Ecology within 30 days of completion of the survey with an assessment of the cause of visible emissions. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Compliance of this condition is met by submitting to Ecology within thirty (30) days of completion of the survey with an assessment of the cause of visible emissions. <b>Required Records:</b> Visible emission surveys conducted and a report of the maintenance.</p>	Continuous	<b>CDM:</b> Field interviews. No visible emissions observed.
<p><b>Condition: REPORTING</b> Identification of any TAP not previously identified within the Notice of Construction Application or Supplement emissions estimates shall be submitted to Ecology within ninety (90) days of completion of laboratory analyses which verify emissions of that toxic air pollutant from the project. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Compliance of this condition is met by submitting to Ecology within ninety (90) days of completion of laboratory analyses which verify emissions of that toxic air pollutant from the project. <b>Required Records:</b> Laboratory analysis.</p>	Continuous	<b>CDM:</b> Field interviews.
<p><b>Condition: REPORTING</b> Results of emission assessments conducted shall be submitted to Ecology within 90 days of completion of the assessment. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Compliance of this condition is met by submitting to Ecology within ninety (90) days of completion of such assessment. <b>Required Records:</b> Emission assessment results.</p>	Continuous	<b>CDM:</b> Field interviews.

**Permit:** AOP Table 1.6 - Non-CUs <20% Opacity & Fugitive **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07  
**NOC:** AOP Table 1.6 - Non Combustion Units with <20% Opacity Requirements

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard] Reasonably available control technology (RACT). <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Permit terms considered RACT. <b>Required Records:</b></p>	Continuous	<b>CDM:</b> Field interviews. Permit terms are considered RACT.
<p><b>Condition:</b> 1000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis. Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any period of 60 consecutive minutes. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.7, Tier 2, unless an alternative SO<sub>2</sub> emission limit is identified in Table 1.6 below. <b>Required Records:</b> As specified in Section 2.7.</p>	Continuous	<b>CDM:</b> Ecology has determined that this emission unit does not emit significant levels of SO <sub>2</sub> . The process has not been modified to increase SO <sub>2</sub> emissions.
<p><b>Condition:</b> WAC 173-400-040(3)(a) [Table 1.2 General Standard] Fugitive emissions. The permittee shall take reasonable precautions to prevent the release of air contaminants from any emissions unit engaging in materials handling, construction, demolition, or any other operation that is a source of fugitive emissions. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Pre-job planning to determine reasonable control measures. <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Field interviews.</p> <p><b>Comment:</b> Emissions that pass through a stack are not sources of fugitive emissions per WAC 173-400-030(38) or fugitive dust per WAC 173-400-030(37).</p>
<p><b>Condition:</b> WAC 173-400-040(8)(a) [Table 1.2 General Standard] Fugitive Dust. Requires reasonable precautions be taken to prevent fugitive dust from becoming airborne and to minimize dust generation. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Pre-job planning to determine reasonable control measures. <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Field interviews.</p> <p><b>Comment:</b> Emissions that pass through a stack are not sources of fugitive emissions per WAC 173-400-030(38) or fugitive dust per WAC 173-400-030(37).</p>

**200 Area SST Categorical Waste Retrieval**

Page in AOP: 1-080

**Permit:** DE05NWP-002 R1 **Issue Date:** 10-12-05 **Obsolete Date:** 07-31-07 **Date In AOP:** 01-01-07

**NOC:** Approval of Criteria and Toxics Air Emissions NOC Application for Operations of Waste Retrieval Systems in SST Farms as supplemented with C Farm Exhauster Operation

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition: EMISSION LIMITS</b> Visible emissions from each tank ventilation exhauster stack shall not exceed five (5) percent. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> 40 Code of Federal Regulations (CFR) Part 60, Appendix A, Method 9, as applicable. <b>EPA Test Method Frequency:</b> None Specified <b>Periodic Monitoring:</b> In accordance with the Hanford Air Operating Permit Section 2.1, Visible Emission Surveys, Tier 3. Should visible emissions be observed which are not solely attributable to water condensation, compliance with Approval Condition shall be met by performing an opacity determination utilizing 40 Code of Federal Regulations (CFR) Part 60, Appendix A, Method 9, providing that such determination shall not place the visible emission observer in hazard greater than that identified for the general worker. <b>Required Records:</b> Visible emission surveys records in which a visible emission was observed, which are not solely attributable to water condensation.</p>	Continuous	<p><b>CDM:</b> Abatement control technology was maintained for emission unit 296-P-47 (EU ID 498) as required in AOP Attachment 2.</p>
<p><b>Condition: EMISSION LIMITS</b> Tank ventilation exhauster systems for the 241-C SST farm 100 series tanks (241-C-101 through 241-C-112) shall not exceed cumulative flow rates of 7,000 ft<sup>3</sup>/min (standard temperature and pressure) for three exhausters individually limited to 1,000 ft<sup>3</sup>/min, 3,000 ft<sup>3</sup>/min, and 3,000 ft<sup>3</sup>/min, respectively. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Stack gas flow and temperature measurement. <b>Required Records:</b> Records of calibration of stack gas flow rate and temperature measurement devices. Exhauster system stack flow rates and temperature records.</p>	Continuous	<p><b>CDM:</b> Field interviews.</p> <p><b>Comment:</b> Portable exhausters 296-P-48 (EU ID 749), 296-P-49 (EU ID 885), and 296-P-50 (EU ID 886) did not operate during the reporting period.</p>
<p><b>Condition: EMISSION LIMITS</b> SST ventilation exhauster systems for the retrieval of wastes other than those of the 241-C tank farm 100 series tanks shall not exceed 1,000 ft<sup>3</sup>/min (standard temperature and pressure).</p>	Continuous	<p><b>CDM:</b> Field interviews.</p> <p><b>Comment:</b> Portable exhauster 296-P-47 (EU ID 498) was the only exhauster that operated under this condition</p>

Requirement	Compliance Status	Compliance Determination Method
<p><b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Stack gas flow and temperature measurement.  <b>Required Records:</b> Records of calibration of stack gas flow rate and temperature measurement devices. Exhauster system stack flow rates and temperatures records.</p>		<p>during the reporting period.</p>
<p><b>Condition:</b> Emission Limits  All TAPs, as submitted in the Permittee's Notice of Construction Application, shall be below their respective ASIL or Screening Level of Table 1, per NOC approval DE05NWP-002.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Analytical methods for the analysis shall be the United States Environmental Protection Agency (EPA), OSHA, or NIOSH approved, or by approved equivalent method.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Development and implementation of a sampling and analysis plan (SAP) for each tank retrieval. For each retrieval, the SAP shall address the emission of a, minimum of the three TAPs with the highest potential ambient concentration relative to their ASILs of WAC 173-460-150 and WAC 173-460-160 or relative to their Screening Level of Table 1 of the NOC approval order DE05NWP-002. The TAPs addressed in the SAP shall be identified from Table 6 of the July 22, 2004, Notice of Construction application as supplemented with the December 1, 2004, Notice of Construction revision and based upon best engineering judgment and most current tank content data.  <b>Required Records:</b> All monitoring and operations records required to operate and maintain the emission control equipment which implements T-BACT as described in Section 1.0 of NOC approval. Laboratory analysis result summaries of any samples undertaken after the effective date of this ORDER DE05NWP-002 from 241-AN or 241-AW tank farm tank headspaces or primary tank ventilation system exhaust which are examined for organic species or other TAPS. Sample and Analysis Plans developed for compliance demonstration.</p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews.</p>
<p><b>Condition:</b> REPORTING  Visible emission surveys, conducted pursuant to Compliance Demonstration requirement 1.3.2, per NOC approval DE05NWP-002, and a report of the maintenance conducted to maintain the subject exhaust system's T-BACT operations.  <b>Model ID:</b> Not applicable.</p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews.  No visible emissions observed.</p>

Requirement	Compliance Status	Compliance Determination Method
<p><b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Shall be submitted to Ecology within thirty (30) days of completion of the survey with an assessment of the cause of visible emissions.  <b>Required Records:</b> Visible emission surveys conducted and a report of the maintenance.</p>		
<p><b>Condition:</b> REPORTING  Identification of any TAP not previously identified within the Notice of Construction Application or Supplement emissions estimates as defined in Table 2, per NOC approval DE05NWP-002R1, shall be submitted to Ecology within ninety (90) days of completion of laboratory analyses which verify emissions of that toxic air pollutant from the project.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Shall be submitted to Ecology within ninety (90) days of completion of laboratory analyses which verify emissions of that toxic air pollutant from the project.  <b>Required Records:</b> Laboratory analysis.</p>	Intermittent	<p><b>CDM:</b> Field interviews.  <b>Comment:</b> Stack sampling from AN Farm and C Farm during the reporting period indicated the presence of toxic air pollutants, which have not been identified in previous versions of this permit. A Notice of Construction Application was not submitted to Ecology with the emission estimates for the identified toxic air pollutants within 90 days of completion of laboratory analyses. Ecology issued Notice of Violation, No. DE 4218 for an administrative failure to comply with this condition.</p>
<p><b>Condition:</b> REPORTING  An annual schedule (Federal fiscal year basis) of anticipated operations and installations of exhauster systems.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Shall be submitted by November first of each year.  <b>Required Records:</b> Annual Schedule</p>	Continuous	<p><b>CDM:</b> Field interviews.  The annual schedule was provided to Ecology on October 15, 2007.</p>
<p><b>Condition:</b> OPERATIONAL NOTICE  Notification shall be made at least ten (10) days prior to initial operation of any exhauster system covered by this ORDER DE05NWP-002 when installed to ventilate a tank not previously actively ventilated under this ORDER.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Not applicable.  <b>Required Records:</b> Not applicable</p>	Continuous	<p><b>CDM:</b> Ecology was notified per email on April 27, 2007 that retrieval of tank C-109 would commence in June 2007 while utilizing exhauster 296-P-47 (EU ID 498).</p>

**Permit:** DE05NWP-002 R2 **Issue Date:** 07-31-07 **Effective Date:**07-31-07 **Date In AOP:** 12-05-07  
**NOC:** Approval of Criteria and Toxics Air Emissions NOC Application for Operations of Waste Retrieval Systems in SST Farms as supplemented with C Farm Exhauster Operation

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> EMISSION LIMITS            Visible emissions from each tank ventilation exhauster stack or aggregated exhauster stack shall not exceed five percent.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> 40 CFR 60, Appendix A, Method 9, as applicable.  <b>EPA Test Method Frequency:</b> None Specified (as needed for monitoring and compliance)  <b>Periodic Monitoring:</b> Compliance and monitoring shall be met by Tier 3 Visible Emissions Survey requirements of the Hanford AOP, Section 2.1. Should visible emissions be observed which are not solely attributable to water condensation, compliance shall be met by performing an opacity determination utilizing 40 CFR 60, Appendix A, Method 9, providing that such determination shall not place the visible emission observer in hazard greater than that identified for the general worker.  <b>Required Records:</b> Visible emission surveys records in which a visible emission was observed, which are not solely attributable to water condensation; and Method 9 results if conducted.</p>	Continuous	<p><b>CDM:</b> Abatement control technology was maintained for emission unit 296-P-47 (EU ID 498) as required in AOP Attachment 2.</p>
<p><b>Condition:</b> EMISSION LIMITS            Tank ventilation exhauster systems for the 241-C SST farm 100 series tanks (241-C-101 through 241-C-112) shall not exceed cumulative flow rates of 7,000 ft<sup>3</sup>/min (at standard temperature and pressure) for three exhausters individually limited to 1,000 ft<sup>3</sup>/min, 3,000 ft<sup>3</sup>/min, and 3,000 ft<sup>3</sup>/min, respectively (at standard temperature and pressure).  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> None Specified (as needed for monitoring and compliance).  <b>Periodic Monitoring:</b> Compliance and monitoring of this condition shall be demonstrated by stack gas flow and temperature measurement.  <b>Required Records:</b> (1) Records of exhauster system stack flow rates and temperature records.            (2) Records of calibration of stack gas flow rate and temperature measurement devices.</p>	Continuous	<p><b>CDM:</b> Field interviews.  <b>Comment:</b> Portable exhausters 296-P-48 (EU ID 749), 296-P-49 (EU ID 885), and 296-P-50 (EU ID 886) did not operate during the reporting period.</p>
<p><b>Condition:</b> EMISSION LIMITS            SST ventilation exhauster systems for the retrieval of wastes other than those of the 241-C tank farm 100 series tanks shall not exceed 1,000 ft<sup>3</sup>/min (at standard</p>	Continuous	<p><b>CDM:</b> Field interviews.  <b>Comment:</b> Portable exhauster 296-P-47 (EU ID 498) was the only exhauster</p>

Requirement	Compliance Status	Compliance Determination Method
<p>temperature and pressure).  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> None Specified (as needed for monitoring and compliance).  <b>Periodic Monitoring:</b> Compliance and monitoring of this condition shall be demonstrated by stack gas flow and temperature measurement.  <b>Required Records:</b> (1) Records of exhauster system stack flow rates and temperature records.  (2) Records of calibration of stack gas flow rate and temperature measurement devices.</p>		<p>that operated under this condition during the reporting period.</p>
<p><b>Condition:</b> EMISSION LIMITS  All TAPs, as submitted in the permittee's NOC Applications, shall be below their respective ASIL or Screening Level of Table 1 in Approval Order DE05NWP-002, Rev. 2.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> None specified (as needed for monitoring and compliance).  <b>Periodic Monitoring:</b> Compliance and monitoring with this condition shall be met by:  (1) Operating the exhauster systems only when in accord with T-BACT emission controls found for this project (operation of the tank ventilation exhauster systems with moisture de-entrainment, pre-heater, and HEPA filtration in service in the treatment train).  (2) Development and implementation of a sampling and analysis plan (SAP) for each tank retrieval. For each retrieval, the SAP shall address the emission of a minimum of the three TAPs with the higher potential ambient concentration relative to their ASILs of WAC 173-460-150 and WAC-173- 460-160 or relative to their Screening Level of Table 1 of the Approval Order DE05NWP-002, Rev 2. The TAPs addressed in the SAP shall be identified from Table 2 of the Approval Order DE05NWP-002, Rev 2, and based upon best engineering judgment and most current tank content data. Analytical methods for the analysis shall be the United States EPA, OSHA, or NIOSH approved, or by approved equivalent method.  <b>Required Records:</b> (1) All monitoring and operations records required to operate and maintain the emission control equipment which implements T-BACT as required in Periodic Monitoring above.  (2) SAPs developed for compliance demonstration as described in Periodic Monitoring above.  (3) Laboratory analysis result summaries of any samples undertaken after the effective date of the Approval Order DE05NWP-002, Rev 2, from SST tank farm tank headspaces or SST ventilation system exhaust which are</p>	<p>Continuous</p>	<p>CDM: Field interviews.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>examined for organic species or other TAPs.</p>		
<p><b>Condition: REPORTING</b> Visible emission surveys, conducted pursuant to Compliance Demonstration requirement 1.3.2, per NOC approval DE05NPW-002, and a report of the maintenance conducted to maintain the subject exhaust system's T-BACT operations. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> The reporting condition shall be submitted to Ecology within thirty (30) days of completion of the survey with an assessment of the cause of visible emissions. <b>Required Records:</b> Visible emission surveys conducted and a report of the maintenance.</p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews. No visible emissions observed.</p>
<p><b>Condition: REPORTING</b> Identification of any TAP not previously identified within the Notice of Construction Application or Supplement emissions estimates as defined in Table 2, per NOC approval DE05NWP-002R1, shall be submitted to Ecology within ninety (90) days of completion of laboratory analyses which verify emissions of that toxic air pollutant from the project. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> The reporting condition shall be submitted to Ecology within ninety (90) days of completion of laboratory analyses which verify emissions of that toxic air pollutant from the project. <b>Required Records:</b> Laboratory analysis.</p>	<p>Intermittent</p>	<p><b>CDM:</b> Field interviews. <b>Comment:</b> Stack sampling from AN Farm and C Farm during the reporting period indicated the presence of toxic air pollutants, which have not been identified in previous versions of this permit. A Notice of Construction Application was not submitted to Ecology with the emission estimates for the identified toxic air pollutants within 90 days of completion of laboratory analyses. Ecology issued Notice of Violation, No. DE 4218 for an administrative failure to comply with this condition.</p>
<p><b>Condition: REPORTING</b> An annual schedule (Federal fiscal year basis) of anticipated operations and installations of exhaust systems. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> The reporting condition shall be submitted by November first of each year. <b>Required Records:</b> Annual Schedule</p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews. The annual schedule was provided to Ecology on October 15, 2007.</p>
<p><b>Condition: OPERATIONAL NOTICE</b> Notification shall be made at least ten (10) days prior to initial operation of any exhaust system covered by the ORDER DE05NWP-002 when installed to ventilate a tank not previously actively ventilated under this ORDER. <b>Model ID:</b> Not applicable.</p>	<p>Continuous</p>	<p><b>CDM:</b> Ecology was notified per email on April 27, 2007 that retrieval of tank C-109 would commence in June 2007 while utilizing exhauster 296-P-47 (EU ID 498).</p>

Requirement	Compliance Status	Compliance Determination Method
<b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Not applicable. <b>Required Records:</b> Not applicable.		

**Permit:** AOP Table 1.6 - Non-CUs <20% Opacity & Fugitive **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07  
**NOC:** AOP Table 1.6 - Non Combustion Units with <20% Opacity Requirements

Requirement	Compliance Status	Compliance Determination Method
<b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard] Reasonably available control technology (RACT). <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Permit terms considered RACT. <b>Required Records:</b>	Continuous	<b>CDM:</b> Field interviews. Permit terms are considered RACT.
<b>Condition:</b> 1000 ppm SO <sub>2</sub> @ 7% O <sub>2</sub> on a dry basis. Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any period of 60 consecutive minutes. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Section 2.7, Tier 2, unless an alternative SO <sub>2</sub> emission limit is identified in Table 1.6 below. <b>Required Records:</b> As specified in Section 2.7.	Continuous	<b>CDM:</b> Ecology has determined that this emission unit does not emit significant levels of SO <sub>2</sub> . The process has not been modified to increase SO <sub>2</sub> emissions.
<b>Condition:</b> WAC 173-400-040(3)(a) [Table 1.2 General Standard] Fugitive emissions. The permittee shall take reasonable precautions to prevent the release of air contaminants from any emissions unit engaging in materials handling, construction, demolition, or any other operation that is a source of fugitive emissions. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Pre-job planning to determine reasonable control measures. <b>Required Records:</b>	Continuous	<b>CDM:</b> Field interviews.  <b>Comment:</b> Emissions that pass through a stack are not sources of fugitive emissions per WAC 173-400-030(38) or fugitive dust per WAC 173-400-030(37).
<b>Condition:</b> WAC 173-400-040(8)(a) [Table 1.2 General Standard]	Continuous	<b>CDM:</b> Field interviews.

Requirement	Compliance Status	Compliance Determination Method
<p>Fugitive Dust. Requires reasonable precautions be taken to prevent fugitive dust from becoming airborne and to minimize dust generation. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Pre-job planning to determine reasonable control measures. <b>Required Records:</b></p>		<p><b>Comment:</b> Emissions that pass through a stack are not sources of fugitive emissions per WAC 173-400-030(38) or fugitive dust per WAC 173-400-030(37).</p>

**E-85 Fuel Station**

Page in AOP: 1-083

Permit: DE06NWP-001 Issue Date: 04-17-06 Date In AOP: 01-01-07

NOC: E-85 Alternative Fuel

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> Emission Limits A. Emission of Volatile Organic Compounds shall not exceed 40 tons per year. B. All TAPs, as submitted in the Permittee's NOC Application, shall be below their respective ASIL. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Compliance of the approval condition shall be demonstrated by installation of BACT and T-BACT emission controls including (1) submerged or bottom fill pipe such that the pipe inlet is fully submerged when the fluid level in the tank is six inches (15.2 cm) or greater, and (2) fitting to vapor balance gasoline vapors with the delivery transport tank. <b>EPA Test Method Frequency:</b> Not applicable (maintenance records). <b>Periodic Monitoring:</b> Record fuel storage tank loading of the E-85 fuel and verify NOC Condition 1.6 requirements for each load received. <b>Required Records:</b> Retention of fuel storage tank loading records detailed in NOC (DE06NWP-001) Approval Condition 1.6.</p>	Continuous	<p><b>CDM:</b> Recordkeeping.</p>

Permit: AOP Table 1.6 - Non-CUs with HEPA Issue Date: 01-01-07 Date In AOP: 01-01-07

NOC: AOP Table 1.6 - Non-Combustion Units with HEPA

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040(1) 20% Opacity: Prohibits visible emissions exceeding 20%</p>	Not Applicable	<p><b>CDM:</b> DE06NWP-001 states the following: The proposed project, if</p>

Requirement	Compliance Status	Compliance Determination Method
<p>opacity for more than 3 minutes in any 1 hour of an air contaminant from any emissions unit or within a reasonable distance of the emission unit except for scheduled soot blowing/grate cleaning or due to documented water.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> EPA Method 9.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Section 2.1, unless an alternative visible emissions, opacity, or particulate matter emission limit is identified in Table 1.6 below.  <b>Required Records:</b> As specified in Section 2.1.</p>		<p>operated as herein required, will be in accordance with applicable rules and regulations, as set forth in Chapter 173-400 WAC, Chapter 173-460 WAC and Chapter 173-491.  The operation will not result in ambient air quality standards being exceeded. Also Chapter 173-400-040 WAC, states "Where an emission standard listed in another chapter is applicable to a specific emissions unit, such standard will take precedent over a general emission standard listed in this chapter."</p>
<p><b>Condition:</b> WAC 173-400-040(6)  1000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis. Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any period of 60 consecutive minutes.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Section 2.7, Tier 2, unless an alternative SO<sub>2</sub> emission limit is identified in Table 1.6.  <b>Required Records:</b> As specified in Section 2.7.</p>	<p>Not Applicable</p>	<p><b>CDM:</b> See comment for WAC 173-400-040(1) above.</p>
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard]  Reasonably available control technology (RACT).  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Permit terms considered RACT.  <b>Required Records:</b></p>	<p>Not Applicable</p>	<p><b>CDM:</b> See comment for WAC 173-400-040(1) above.</p>
<p><b>Condition:</b> WAC 173-400-040(3)(a) [Table 1.2 General Standard]  Fugitive emissions.  The permittee shall take reasonable precautions to prevent the release of air contaminants from any emissions unit engaging in materials handling, construction, demolition, or any other operation that is a source of fugitive emissions.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Pre-job planning to determine reasonable control measures.  <b>Required Records:</b></p>	<p>Not Applicable</p>	<p><b>CDM:</b> See comment for WAC 173-400-040(1) above.</p>

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040(8)(a) [Table 1.2 General Standard] Fugitive dust. Requires reasonable precautions be taken to prevent fugitive dust from becoming airborne and to minimize dust generation. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Pre-job planning to determine reasonable control measures. <b>Required Records:</b></p>	Not Applicable	<b>CDM:</b> See comment for WAC 173-400-040(1) above.

**Diesel Engines - 336 Building**

Page in AOP: 1-083-i

**Permit:** DE06NWP-002 **Issue Date:** 07-20-06 **Effective Date:** 07-20-06 **Date In AOP:** 05-03-07

**NOC:** Installation and Operation of Diesel Engines at the 336 Building

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> Visible emissions will not exceed 10%. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Tier 1 Visible Emission Survey (AOP 2.1) and/or EPA Method 9. <b>EPA Test Method Frequency:</b> Annual. <b>Periodic Monitoring:</b> Recordkeeping. <b>Required Records:</b> Operating record and log.</p>	Continuous	<p><b>CDM:</b> Records Review / Personnel Interview. Effluent Management is notified when and where the engine(s) will be operating during each quarter. Effluent Management makes the required quarterly qualitative observations.</p> <p><b>Comment:</b> Confirmed with Ecology that the test method frequency should be quarterly rather than annual. The typographical error will be corrected in the next AOP revision.</p>
<p><b>Condition:</b> Emissions of Nitrogen oxides (NO<sub>x</sub>) and Non-methane Hydrocarbons (NMHC) will not exceed 6.35 tons per year. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Compliance demonstrated by Engine Limitation and Operational Limitation below. 1. Engine Limitation: 1.1 Installation of engines certified to meet Tier 2 (or higher Tier) emission limitations of 40 CFR 89. 1.2 Installation of no more than two engines at any given time. 1.3 Installation of no engines rated above 450 kW. 2. Operational Limitation: 2.1 All recommended operation and equipment</p>	Intermittent	<p><b>CDM:</b> Records Review / Personnel Interview</p> <p><b>Comment:</b> Operations were in compliance with the condition, but two diesel engines were operated for a short period that failed to meet certified Tier 2 Test Method during the reporting period.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>maintenance provisions supplied by the manufacturer(s) of the engine(s) will be current.</p> <p>2.2 A non-resettable hour meter will be installed on each engine and operated.</p> <p>2.3 Operational hours of use for all engines under this order will not result in a ratio exceeding 1.0 as calculated by the following equation.</p> $\sum_{i=1}^n \left[ \frac{\text{Engine Rating (kW)}_i}{450\text{kW}} * \frac{\text{Engine Operating Hours}_i}{2000 \text{ Hours}} \right] \leq 1.0$ <p><b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Recordkeeping. <b>Required Records:</b> Compliance demonstration records, and operating record and log.</p>		
<p><b>Condition:</b> Emissions of Carbon Monoxide (CO) will not exceed 3.47 tons per year.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Compliance demonstrated by Engine Limitation and Operational Limitation below.</p> <p>1. Engine Limitation:</p> <p>1.1 Installation of engines certified to meet Tier 2 (or higher Tier) emission limitations of 40 CFR 89.</p> <p>1.2 Installation of no more than two engines at any given time.</p> <p>1.3 Installation of no engines rated above 450 kW.</p> <p>2. Operational Limitation:</p> <p>2.1 All recommended operation and equipment maintenance provisions supplied by the manufacturer(s) of the engine(s) will be current.</p> <p>2.2 A non-resettable hour meter will be installed on each engine and operated.</p> <p>2.3 Operational hours of use for all engines under this order will not result in a ratio exceeding 1.0 as calculated by the following equation.</p> $\sum_{i=1}^n \left[ \frac{\text{Engine Rating (kW)}_i}{450\text{kW}} * \frac{\text{Engine Operating Hours}_i}{2000 \text{ Hours}} \right] \leq 1.0$ <p><b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Recordkeeping. <b>Required Records:</b> Compliance demonstration records, and operating record and log.</p>	Intermittent	<p><b>CDM:</b> Records Review / Personnel Interview</p> <p><b>Comment:</b> Operations were in compliance with the condition, but two diesel engines were operated for a short period that failed to meet certified Tier 2 Test Method during the reporting period.</p>
<p><b>Condition:</b> Emissions of particulate matter (PM) will not exceed 0.20 tons per year.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Compliance demonstrated by Engine Limitation and Operational Limitation below.</p> <p>1. Engine Limitation:</p> <p>1.1 Installation of engines certified to meet Tier 2 (or higher Tier) emission limitations of 40 CFR 89.</p> <p>1.2 Installation of no more than two engines at any given time.</p> <p>1.3 Installation of no engines rated above 450 kW.</p> <p>2. Operational Limitation:</p>	Intermittent	<p><b>CDM:</b> Records Review / Personnel Interview</p> <p><b>Comment:</b> Operations were in compliance with the condition, but two diesel engines were operated for a short period that failed to meet certified Tier 2 Test Method during the reporting period.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>2.1 All recommended operation and equipment maintenance provisions supplied by the manufacturer(s) of the engine(s) will be current.</p> <p>2.2 A non-resettable hour meter will be installed on each engine and operated.</p> <p>2.3 Operational hours of use for all engines under this order will not result in a ratio exceeding 1.0 as calculated by the following equation.  <math display="block">\sum_{i=1}^n \left[ \frac{(\text{Engine Rating (kW)}_i / 450\text{kW}) * (\text{Engine Operating Hours})_i}{(2000 \text{ Hours})} \right] \leq 1.0</math> <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Recordkeeping.  <b>Required Records:</b> Compliance demonstration records, and operating record and log.</p>		
<p><b>Condition:</b> Emissions of Toxic Air Pollutants (TAPs) identified within the Notice of Construction for which SQERs are defined, are not to exceed SQERs of WAC 173-460-080(2)(e).</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Compliance demonstrated by: Engine Limitation Conditions 1.1 and 1.3, and Operational Limitation Condition 2.3, or Calculation of Toxic Air Pollutant emissions, employing air pollutant emission factors of AP42, Table 3.3-2.</p> <p>1. Engine Limitation:</p> <p>1.1 Installation of engines certified to meet Tier 2 (or higher Tier) emission limitations of 40 CFR 89.</p> <p>1.2 Installation of no more than two engines at any given time.</p> <p>1.3 Installation of no engines rated above 450 kW.</p> <p>2. Operational Limitation:</p> <p>2.1 All recommended operation and equipment maintenance provisions supplied by the manufacturer(s) of the engine(s) will be current.</p> <p>2.2 A non-resettable hour meter will be installed on each engine and operated.</p> <p>2.3 Operational hours of use for all engines under this order will not result in a ratio exceeding 1.0 as calculated by the following equation.  <math display="block">\sum_{i=1}^n \left[ \frac{(\text{Engine Rating (kW)}_i / 450\text{kW}) * (\text{Engine Operating Hours})_i}{(2000 \text{ Hours})} \right] \leq 1.0</math> 3. AP 42, Fifth Edition, Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources, <a href="http://www.epa.gov/ttn/chief/ap42/index.htm">http://www.epa.gov/ttn/chief/ap42/index.htm</a>  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Recordkeeping.  <b>Required Records:</b> Compliance demonstration records, and operating record and log.</p>	<p>Intermittent</p>	<p><b>CDM:</b> Records Review / Personnel Interview</p> <p><b>Comment:</b> Operations were in compliance with this condition, but two diesel engines were operated for a short period that failed to meet certified Tier 2 Test Method during the reporting period.</p>

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> Emissions of Polyaromatic Hydrocarbons (PAHs) will not result in ambient concentrations exceeding 4.8E-03 ug/m3.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Compliance demonstrated by: Engine Limitation Conditions 1.1 and 1.3, and Operational Limitation Condition 2.3, or Calculation of Toxic Air Pollutant emissions, employing air pollutant emission factors of AP42, Table 3.3-2, and dispersion.</p> <p>1. Engine Limitation:</p> <p>1.1 Installation of engines certified to meet Tier 2 (or higher Tier) emission limitations of 40 CFR 89.</p> <p>1.2 Installation of no more than two engines at any given time.</p> <p>1.3 Installation of no engines rated above 450 kW.</p> <p>2. Operational Limitation:</p> <p>2.1 All recommended operation and equipment maintenance provisions supplied by the manufacturer(s) of the engine(s) will be current.</p> <p>2.2 A non-resettable hour meter will be installed on each engine and operated.</p> <p>2.3 Operational hours of use for all engines under this order will not result in a ratio exceeding 1.0 as calculated by the following equation.</p> $\sum_{i=1}^n [(Engine\ Rating\ (kW)_i / 450kW) * (Engine\ Operating\ Hours)_i / (2000\ Hours)] \leq 1.0$ <p>3. AP 42, Fifth Edition, Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources, <a href="http://www.epa.gov/ttn/chief/ap42/index.htm">http://www.epa.gov/ttn/chief/ap42/index.htm</a></p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Recordkeeping.</p> <p><b>Required Records:</b> Compliance demonstration records, and operating record and log.</p>	<p>Intermittent</p>	<p><b>CDM:</b> Records Review / Personnel Interview</p> <p><b>Comment:</b> Operations were in compliance with the condition, but two diesel engines were operated for a short period that failed to meet certified Tier 2 Test Method during the reporting period.</p>
<p><b>Condition:</b> Emission of sulfur dioxide (SO2) is not to exceed 0.20 tons per year.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Compliance demonstrated by use of fuel containing no greater than 0.05 weight percent sulfur (500 parts per million by weight).</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Recordkeeping.</p> <p><b>Required Records:</b> Compliance demonstration records, and/or fuel analysis records.</p>	<p>Continuous</p>	<p><b>CDM:</b> Fuel is procured from Fluor Hanford. Fuel orders and deliveries are recorded. Effluent Management obtained the Fluor Hanford fuel sulfur content records to confirm that the diesel fuel sulfur content was less than 0.05 weight percent.</p>

**Permit:** AOP Table 1.6 - CUs <20% Opacity **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07  
**NOC:** Combustion Units with Opacity Limit Less Than 20%

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> 1000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis: Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any period of 60 consecutive minutes.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App.A.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Section 2.7, Tier 2, unless an alternative SO<sub>2</sub> emission limit is identified in Table 1.6.</p> <p><b>Required Records:</b> As specified in Section 2.7.</p>	Continuous	<p><b>CDM:</b> Vendor documentation to verify that fuel oil delivered contained &lt; 0.5% sulfur. Model 1 shows that diesel engines 2200 HP or less can not exceed the 1000 ppm SO<sub>2</sub> standard when using fuel with sulfur concentration &lt; 0.5%.</p> <p><b>Comment:</b> No fossil-fuel combustion units of 2200 HP or more were operated during this review period.</p>
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard] Reasonably available control technology (RACT).</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Not specified.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Permit terms considered RACT.</p> <p><b>Required Records:</b></p>	Intermittent	<p><b>CDM:</b> Permit terms considered RACT.</p> <p><b>Comment:</b> 336 Building Diesel Engines compliance status reported as intermittent because two diesel engines were operated for a short period that failed to meet certified Tier 2 Test Method during the reporting period.</p>

**600 Area Diffuse/Fugitive - HAMMER**

Page in AOP: 1-083iv

**Permit:** DE07NWP-001 **Issue Date:** 04-19-07 **Effective Date:**04-19-07 **Date In AOP:** 07-26-07  
**NOC:** HAMMER Training Facility

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> Visible emissions from training operations shall not exceed twenty (20) percent opacity. [WAC 173-400-040(1)]</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Tier 2 Visible Emissions Survey requirements Section 2.1 of the Hanford AOP, Attachment 1 and/or EPA Method 9.</p> <p><b>EPA Test Method Frequency:</b> Once per year, if visible emissions are observed (see Periodic Monitoring).</p> <p><b>Periodic Monitoring:</b> Tier 2 Visible Emissions Survey requirements of the Hanford Air Operating Permit if visible emissions from training operations materials, other than those from "fog machines," are exhibited outside training structures.</p>	Continuous	<p><b>CDM:</b> Recordkeeping. No visible emissions.</p>

Requirement	Compliance Status	Compliance Determination Method
<b>Required Records:</b> Records of Tier 2 visible emission event surveys including EPA Method 9 results.		
<p><b>Condition:</b> Fugitive emissions from training operations shall be minimized. [WAC 173-400-040(3)(a)]</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Not specified.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Use of operating procedures: (1) keep containers closed when not in use, and (2) ensure proper handling and storage to minimize unintentional losses.</p> <p><b>Required Records:</b> Records of (1) fugitive release control procedure training, and (2) events which detail non-compliance with fugitive release control procedures or unintentional releases and response to such events.</p>	Continuous	CDM: Recordkeeping. Work packages and AJHAs.
<p><b>Condition:</b> Particulate matter emissions from training materials shall not exceed 1,500 pounds per year (lb/yr). [WAC 173-400-1 10(5)(d)]</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Not applicable.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Material record-keeping.</p> <p><b>Required Records:</b> Material balance records which detail materials receipt and disposal, with a summary assessment of losses calculated each calendar quarter.</p>	Continuous	CDM: Recordkeeping. Spreadsheet maintained.
<p><b>Condition:</b> Volatile Organic Compound (VOC) emissions from training materials shall not exceed 4,000 lb/yr. [WAC 173-400-1 10(5)(d)]</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Not applicable.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Material record-keeping.</p> <p><b>Required Records:</b> Material balance records which detail materials receipt and disposal, with a summary assessment of losses calculated each calendar quarter.</p>	Continuous	CDM: Recordkeeping. Spreadsheet maintained.

Permit: DE07NWP-001, Amendment 1 Issue Date: 07-31-07 Effective Date: 07-31-07 Date In AOP: 12-05-07  
NOC: HAMMER Training Facility

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> Emissions of all TAPs, as identified in Table 1 of NOC Order DE07NWP-001 (4/19/2007) and Amendment 1 (7/31/2007), or newly identified, shall be below their respective SQERs. [WAC 173-460-080(2)(e)]</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Not applicable.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p>	Continuous	CDM: Recordkeeping. Notified for acetic acid.

Requirement	Compliance Status	Compliance Determination Method
<p><b>Periodic Monitoring:</b> Materials record-keeping.  <b>Required Records:</b> Material balance records which detail materials receipt and disposal with a summary assessment of losses, calculated each calendar quarter. Emission of any TAP exceeding SQERs detailed in Table 1 of Order DE07NWP-001 shall be reported to Ecology in accord with WAC 173-400-107.            Identification of any TAP not previously identified within Order DE07NWP-001, shall be submitted to Ecology within 90 days of initiation of use in training with an estimate of annual emissions.</p>		

**Permit:** AOP Table 1.6 - Non-CUs <20% Opacity & No Fugitive **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07

**NO:** AOP Table 1.6 - Non Combustion Units with <20% Opacity and No Fugitive Requirements

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> 1000 ppm SO<sub>2</sub> @ 7% O<sub>2</sub> on a dry basis. Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any period of 60 consecutive minutes.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> EPA Method 6 or 6C of 40 CFR 60, App. A.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Section 2.7, Tier 2, unless an alternative SO<sub>2</sub> emission limit is identified in Table 1.6 below.  <b>Required Records:</b> As specified in Section 2.7.</p>	Continuous	<b>CDM:</b> The processes have not been modified to increase SO <sub>2</sub> emissions.
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard]            Reasonably available control technology (RACT).  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Permit terms considered RACT.  <b>Required Records:</b></p>	Not Applicable	<b>CDM:</b> Applies only to regulatory order approval conditions determined to be less than RACT (RCW 70.94.154).

**181B/182B Emergency Diesel Engines**

Page in AOP: 1-083vi

**Permit:** AOP Table 1.6 - CUs with Opacity & SO2 **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07

**NOC:** Combustion Units with Opacity and SO2 Requirements

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard] Reasonably available control technology (RACT). <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Permit terms considered RACT. <b>Required Records:</b></p>	Not Applicable	<b>CDM:</b> Applies only to regulatory orders determined to be less than RACT (RCW 70.94.154).

**Permit:** DE07NWP-002 **Issue Date:** 06-27-07 **Effective Date:**06-27-07 **Date In AOP:** 07-26-07

**NOC:** 100B Export Water Enhancements

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> Visual emissions will not exceed 20% during acceleration mode [described in 40 CFR §86.884-7(a)(2)]. [WAC 173-400-040(1), 40 CFR §60.4205(b), and 40 CFR §89.113(a)(1)].</p> <p>Visible emissions will not exceed 15 % during lugging mode [described in 40 CFR §86.884-7(a)(3)]. [40 CFR §60.4205(b), and 40 CFR §89.113(a)(2)].</p> <p>Visible emissions will not exceed 50 % during peak in either acceleration or lugging mode. [WAC 173-400-040(1)(a), 40 CFR §60.4205(b), and 40 CFR §89.113(a)(3)].</p> <p><b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Tier 1 Visible Emissions Survey and EPA Method 9 (40 CFR §60, App. A). <b>EPA Test Method Frequency:</b> Each engine authorized by this order shall be surveyed for visible emissions during maintenance and readiness testing and emergency-use based upon the following frequency or events: (1) During maintenance and readiness testing, a visible emission survey shall be conducted with each readiness test startup, (2) During emergency-use operations exceeding, or anticipated to exceed, eight hours duration, a visible emissions survey shall be conducted daily, (3) Visible emissions of each engine shall be determined by procedures detailed in 40 CFR 86 Subpart I (40 CFR 86.884 et seq.) within 90 days of initial startup and as</p>	Continuous	<p><b>CDM:</b> Tier 1 Visible Emissions Surveys and Method 9 conducted and recorded.</p> <p><b>Comment:</b> Method 9 conducted once for each engine.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>required by Ecology.  <b>Periodic Monitoring:</b> Use Tier 1 Visible Emission Survey (Section 2.1 of AOP Attachment 1), unless otherwise specified (see Test Frequency below).  <b>Required Records:</b> Results of visible emissions survey and EPA Method 9 tests conducted pursuant to periodic monitoring.</p>		
<p><b>Condition:</b> Emissions of Nitrogen oxides (NOx) and Non-methane Hydrocarbons (NMHC) will not exceed 14.2 tons per year [WAC 173-400-091, AP 42^2 emission factors for engines in NOC application operating 500 hours per year].</p> <p>Emissions of Carbon Monoxide (CO) will not exceed 5 tons per year. [WAC 173-400-110(5)(d)].  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not Applicable.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Compliance will be demonstrated by</p> <p>(A) Engine Limitation  (1) Installation of engines certified to meet emission limitations of 40 CFR §89 [40 CFR §60.4211(c)], and  (2) Installation of one engine rated no higher than 450 horsepower (HP) and two engines rated no higher than 900 HP each; and</p> <p>(B) Operational Limitation  (1) All recommended operation and equipment maintenance provisions supplied by the manufacturer(s) of the engine(s) will be current [40 CFR §60.4211(a)],  (2) Operational monitoring in accord with installed non-resettable hour meter on each engine [40 CFR §60.4209(a)],  (3) Operational hours of use for each engine, for purposes of maintenance checks and readiness testing shall not exceed 100 hours per year unless approved by the Administrator of the United States Environmental Protection Agency [40 CFR §60.4211(e)], and  (4) Operational hours of use during emergency conditions shall not be limited provided maintenance of records of emergency use are consistent with Required Records below.</p> <p><b>Required Records:</b> (1) Manufacturer's engine certifications,  (2) Maintenance records, and  (3) Records of cumulative operating hours for each engine, calculated semiannually, retained for a minimum of 36 months.</p>	<p>Continuous</p>	<p><b>CDM:</b> Recordkeeping and inquiry of responsible personnel.</p>
<p><b>Condition:</b> Emissions of Toxic Air Pollutants (TAPs),</p>	<p>Continuous</p>	<p><b>CDM:</b> Calculations show that</p>

Requirement	Compliance Status	Compliance Determination Method																																													
<p>as identified in the table below, will not exceed SQERs of WAC 173-460-80(2)(e).</p> <table border="1"> <thead> <tr> <th>TAPs</th> <th>Chemical Abstracts Service Registry Number</th> <th>TAP Class</th> <th colspan="2">SQER</th> </tr> <tr> <th></th> <th></th> <th></th> <th>lb/yr</th> <th>lb/hr</th> </tr> </thead> <tbody> <tr> <td>Benzene</td> <td>71-43-2</td> <td>A</td> <td>20</td> <td></td> </tr> <tr> <td>Toluene</td> <td>108-88-3</td> <td>B</td> <td></td> <td>5</td> </tr> <tr> <td>Xylene</td> <td>1330-20-7</td> <td>B</td> <td></td> <td>5</td> </tr> <tr> <td>1,3-Butadiene</td> <td>106-99-0</td> <td>A</td> <td>0.5</td> <td></td> </tr> <tr> <td>Formaldehyde</td> <td>50-00-0</td> <td>A</td> <td>20</td> <td></td> </tr> <tr> <td>Acetaldehyde</td> <td>75-07-0</td> <td>A</td> <td>50</td> <td></td> </tr> <tr> <td>Acrolein</td> <td>107-02-08</td> <td>B</td> <td></td> <td>0.02</td> </tr> </tbody> </table> <p><b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not applicable.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Compliance will be demonstrated by calculation of the sum of TAP emissions from all engines employing air pollution emission factors of AP 42, Table 3.3-2, for engines less than 600 HP, and AP-42, Table 3.4-3, for engines 600 HP and higher.  <b>Required Records:</b> Calculations and dispersion analyses prepared semiannually in concert with cumulative operating hour calculations, retained for a minimum of 36 months. AP 42, fifth edition, shall be used for the calculation. Table 3.4-3 of AP-42 does not estimate emissions of 1,3-Butadiene for larger engines. An emission factor of zero shall be applied to 1,3-Butadiene for engines 600 HP or larger.</p>	TAPs	Chemical Abstracts Service Registry Number	TAP Class	SQER					lb/yr	lb/hr	Benzene	71-43-2	A	20		Toluene	108-88-3	B		5	Xylene	1330-20-7	B		5	1,3-Butadiene	106-99-0	A	0.5		Formaldehyde	50-00-0	A	20		Acetaldehyde	75-07-0	A	50		Acrolein	107-02-08	B		0.02		<p>emissions did not exceed SQERs for calendar year 2007.</p> <p><b>Comment:</b> Dispersion analyses not due during reporting period.</p>
TAPs	Chemical Abstracts Service Registry Number	TAP Class	SQER																																												
			lb/yr	lb/hr																																											
Benzene	71-43-2	A	20																																												
Toluene	108-88-3	B		5																																											
Xylene	1330-20-7	B		5																																											
1,3-Butadiene	106-99-0	A	0.5																																												
Formaldehyde	50-00-0	A	20																																												
Acetaldehyde	75-07-0	A	50																																												
Acrolein	107-02-08	B		0.02																																											
<p><b>Condition:</b> Emissions of Polyaromatic Hydrocarbons (PAHs) will not result in ambient concentrations exceeding 4.8E-04 ug/m<sup>3</sup> [WAC 173-460-080(3)].  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not applicable.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Compliance will be demonstrated by calculation of the sum of PAH TAP emissions from all engines employing air pollution emission factors of AP 42, Table 3.3-2, for engines less than 600 HP, and AP-42, Table 3.4-4, for engines 600 HP and higher.  <b>Required Records:</b> Calculations and dispersion analyses prepared semiannually in concert with cumulative operating hour calculations, retained for a minimum of 36 months. AP 42, fifth edition, shall be used for the calculation.</p>	Continuous	<p><b>CDM:</b> Calculations show that emissions did not exceed SQERs for calendar year 2007.</p> <p><b>Comment:</b> Dispersion analyses not due during reporting period.</p>																																													
<p><b>Condition:</b> Emissions of sulfur dioxide will not exceed two tons per year [WAC 173-400-110(5)(d)].  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not applicable.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Compliance will be demonstrated by use of fuel containing (1) no greater than 0.05 weight percent sulfur (500 parts per million by weight) from</p>	Continuous	<p><b>CDM:</b> Vendor documentation shows fuel oil delivered contained no greater than 0.05 weight percent sulfur.</p>																																													

Requirement	Compliance Status	Compliance Determination Method																
<p>installation to May 30, 2010 [40 CFR §60.4207(a), 40 CFR §80.510(a)], and (2) no greater than 0.015 weight percent sulfur (15 parts per million by weight) on and after June 1, 2010 [40 CFR §60.4207(b), 40 CFR §80.510(b)].</p> <p><b>Required Records:</b> Diesel fuel quality shall be documented by annual fuel analysis or vendor documentation of fuel purchases from retail outlet(s) that demonstrate compliance with diesel fuel quality standards of 40 CFR §80.510 for all purchases.</p>																		
<p><b>Condition:</b> Emission rates of installed engines shall not exceed values identified in table below [40 CFR §60.4205(b) and 40 CFR §89.112].</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Engine Rating</th> <th>g/KW-hr</th> <th>lb/HP-hr</th> </tr> </thead> <tbody> <tr> <td>Carbon Monoxide</td> <td>130 to 560 kW (174 to 751 HP)</td> <td>3.5</td> <td>5.8E-03</td> </tr> <tr> <td>Particulate Matter</td> <td>130 to 560 kW (174 to 741 HP)</td> <td>0.2</td> <td>3.3E-04</td> </tr> <tr> <td>Non-methane Hydrocarbons and Nitrogen Oxides</td> <td>130 to 560 kW (174 to 751 HP) &gt;560 kW (&gt;751 HP)</td> <td>4.0 6.4</td> <td>6.6E-03 1.1E-02</td> </tr> </tbody> </table> <p><b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not applicable.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Compliance shall be demonstrated by:</p> <ol style="list-style-type: none"> <li>(1) procuring and installing only engines certified to emission standards of 40 CFR §60.4205(b) for the same model year and maximum engine rating [40 CFR §60.4211(c)].</li> <li>(2) operating and maintaining the stationary compression ignition internal combustion engines and control devices according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer [40 CFR §60.4211(a)].</li> <li>(3) Installing and configuring the engines according to manufacturer specifications [40 CFR §60.4211(c)].</li> <li>(4) Maintaining records of engine certification as detailed in the Required Records below.</li> </ol> <p><b>Required Records:</b> (1) Manufacturer's engine certifications.  (2) Records of cumulative operating hours for each engine, calculated semi-annually, will be retained for a minimum of 36 months.  (3) Records of emergency use operational duration and the basis of the emergency.</p>	Pollutant	Engine Rating	g/KW-hr	lb/HP-hr	Carbon Monoxide	130 to 560 kW (174 to 751 HP)	3.5	5.8E-03	Particulate Matter	130 to 560 kW (174 to 741 HP)	0.2	3.3E-04	Non-methane Hydrocarbons and Nitrogen Oxides	130 to 560 kW (174 to 751 HP) >560 kW (>751 HP)	4.0 6.4	6.6E-03 1.1E-02	<p>Continuous</p>	<p><b>CDM:</b> Recordkeeping and inquiry of responsible personnel.</p>
Pollutant	Engine Rating	g/KW-hr	lb/HP-hr															
Carbon Monoxide	130 to 560 kW (174 to 751 HP)	3.5	5.8E-03															
Particulate Matter	130 to 560 kW (174 to 741 HP)	0.2	3.3E-04															
Non-methane Hydrocarbons and Nitrogen Oxides	130 to 560 kW (174 to 751 HP) >560 kW (>751 HP)	4.0 6.4	6.6E-03 1.1E-02															

**Permit:** DE07NWP-002, Amendment 1 **Issue Date:** 10-30-07 **Effective Date:** 10-30-07 **Date In AOP:** 12-05-07  
**NOC:** 100B Export Water Enhancements

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> Emissions of sulfur dioxide will not exceed two tons per year [WAC 173-400-110(5)(d)].  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Compliance will be demonstrated by use of fuel containing (1) no greater than 0.05 weight percent sulfur (500 parts per million by weight) from installation to May 30, 2010 [40 CFR §60.4207(a), 40 CFR §80.510(a)], and (2) no greater than 0.0015 weight percent sulfur (15 parts per million by weight) on and after June 1, 2010 [40 CFR §60.4207(b), 40 CFR §80.510(b)].  <b>Required Records:</b> Diesel fuel quality shall be documented by annual fuel analysis or vendor documentation of fuel purchases from retail outlet(s) that demonstrate compliance with diesel fuel quality standards of 40 CFR §80.510 for all purchases.</p>	<p>Continuous</p>	<p><b>CDM:</b> Vendor documentation shows fuel oil delivered contained no greater than 0.05 weight percent sulfur.   <b>Comment:</b> Requirement in (2) not yet effective.</p>

### WTP Construction Heaters & Dehumidifiers

Page in AOP: 1-083-xi

**Permit:** DE07NWP-004 **Issue Date:** 11-21-07 **Effective Date:** 11-21-07 **Date In AOP:** 12-05-07  
**NOC:** WTP Construction Site Heaters and Dehumidifiers

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> Emission Limits  1. Total Suspended Particulates emission shall not exceed 1.25 tons per year. [WAC 173-400-110(5)(d)].  2. PM-10 particulate emission shall not exceed 0.75 tons per year [WAC 173-400-110(5)(d)].  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> VE Surveys and/or EPA Method 9 (if needed).  <b>EPA Test Method Frequency:</b> Not specified.  <b>Periodic Monitoring:</b> Compliance shall be monitored by:  (1) Emission of visible emissions of no more than five percent opacity during normal operation of diesel-fired heaters.  (2) Diesel-fired heaters exceeding five percent opacity shall be removed from operation until maintenance of the unit results in visible emissions in compliance (no more than 5%).  (3) Compliance with visible emissions survey</p>	<p>Continuous</p>	<p><b>CDM:</b> Visible emissions survey records.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>requirements of Approval Condition 3.0 of the Approval Order DE07NWP-004. Visible emissions (VE) from diesel-fired heaters in normal operation (not start-up or shutdown) will be monitored through a VE survey described herein. A minimum representation of 20 percent of active diesel-fired heaters under this ORDER shall be subject to VE survey. If VEs from one of these emission units are observed for more than 10 consecutive minutes, an attempt to identify the cause(s) of the VEs will be made and those results recorded. The recorded entry also will identify any corrective actions taken and the likely frequency of a future reoccurrence. If the event is likely to be re-occurring, and can not be demonstrated to consist of water vapor, a determination of opacity will be made using EPA Method 9. A VE survey shall be conducted weekly for a period of three months. If weekly VE surveys do not demonstrate emissions in excess of Approval Condition 1.3.1, the VE survey frequency will reduce to once every three months for a period of six months. After nine months of no excess visible emissions, visible emission surveys will be performed for any diesel-fired heater subject to this ORDER only when visible emissions are observed during normal operation.</p> <p><b>Required Records:</b> (1) VE Surveys and/or EPA Method 9 results. (2) Maintenance records for any diesel-fired heater removed from service.</p>		
<p><b>Condition:</b> Emission Limits Sulfur Oxides (SOx) emission shall not exceed 2.0 tons per year [WAC 173-400-110(5)(d)]. <b>Model ID:</b> Not specified. <b>EPA Test Method:</b> Record-keeping. <b>EPA Test Method Frequency:</b> Per daily rolling summation and/or fuel shipment. <b>Periodic Monitoring:</b> Compliance shall be monitored by: (1) Combustion of distillate fuel oil No. 2 with a sulfur content no greater than 0.0015 wt percent (15 ppm) for diesel heaters. (2) Combustion of no greater than 933,100 gallons of distillate fuel oil per year, based upon a daily rolling summation. <b>Required Records:</b> Fuel analysis data and consumption rates, including supporting data and calculations.</p>	Continuous	<b>CDM:</b> Fuel use records and emissions calculations.
<p><b>Condition:</b> Emission Limits (1) Nitrogen Oxides (NOx) emission shall not exceed 16.2 tons per year [WAC 173-400-110(2)(a)]. (2) Total Volatile Organic Compounds emission shall not exceed 2.0 tons per year [WAC 173-400-110(5)(d)]. (3) Carbon Monoxide emissions shall not exceed 5.0 tons per year [WAC 173-400-110(5)(d)].</p>	Continuous	<b>CDM:</b> Fuel use records and emissions calculations.

Requirement	Compliance Status	Compliance Determination Method
<p>(4) Toxic Air Pollutant (TAP) emissions as specified in Table 1 of Approval Order DE07NWP-004 [WAC 173-460-070].</p> <p><b>Model ID:</b> Not specified.</p> <p><b>EPA Test Method:</b> Record-keeping.</p> <p><b>EPA Test Method Frequency:</b> Per daily rolling summation and/or fuel shipment.</p> <p><b>Periodic Monitoring:</b> Compliance shall be monitored by:</p> <p>(1) Operation in compliance with BACT/T-BACT (implementation of vendor-recommended combustion and maintenance practices).</p> <p>(2) Fuel Limitation: (a) combustion of no greater than 933,100 gallons of distillate fuel oil per year, based upon a daily rolling summation, and (b) combustion of no greater than 1,109,500 gallons of propane per year, based upon a daily rolling summation.</p> <p><b>Required Records:</b> Fuel analysis data and consumption rates, including supporting data and calculation.</p>		

**Permit:** AOP Table 1.6 - CUs with Opacity & SO<sub>2</sub> **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07  
**NOC:** Combustion Units with Opacity and SO<sub>2</sub> Requirements

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard]</p> <p>Reasonably available control technology (RACT).</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Not specified.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Permit terms considered RACT.</p> <p><b>Required Records:</b></p>	Continuous	<b>CDM:</b> NOC Approval requires application of BACT.

### Hanford Site Asbestos Landfill

Page in AOP: 1-084

**Permit:** AOP Table 1.7 - Asbestos Landfill **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07  
**NOC:** AOP Table 1.7 Miscellaneous Emission Units - Asbestos Landfill

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> 40 CFR 61.151(a)</p> <p>1. Either discharge no visible emissions to the outside air from an inactive waste disposal site subject to this paragraph: or</p> <p>2. Cover the asbestos-containing waste material with at least 15 centimeters (6 inches) of compacted</p>	Continuous	<p><b>CDM:</b> Recordkeeping and inquiry of responsible personnel.</p> <p><b>Comment:</b> Waste was originally covered with at least 60 centimeters of soil. The landfill is periodically</p>

Requirement	Compliance Status	Compliance Determination Method
<p>nonasbestos-containing material, and grow and maintain a cover of vegetation on the area adequate to prevent exposure of the asbestos-containing waste material. In desert areas where vegetation would be difficult to maintain, at least 8 additional centimeters (3 inches) of well-graded, nonasbestos crushed rock may be placed on top of the final cover instead of vegetation and maintained to prevent emissions: or</p> <p>3. Cover asbestos-containing waste with at least 60 centimeter of compacted nonasbestos-containing material, and maintain to prevent exposure.</p> <p><b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> None.  <b>Required Records:</b></p>		<p>visually inspected to verify cover material integrity and to ensure cover material is maintained to prevent exposure.</p>
<p><b>Condition:</b> 40 CFR 61.151(d)  Notify in writing at least 45 days prior to excavation. If construction will begin on a date other than the one in the original notice, notice of the new date must be provided at least 10 working days in advance.</p> <ol style="list-style-type: none"> <li>1. Notice shall contain starting and completion dates.</li> <li>2. Notice shall contain reason for disturbing the waste.</li> <li>3. Notice shall contain procedures to be used to control emissions.</li> <li>4. Notice shall contain a location for any temporary storage site and the final disposal site.</li> </ol> <p><b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> None  <b>Required Records:</b></p>	<p>Continuous</p>	<p><b>CDM:</b> Inquiry of responsible personnel.  Requirement was not triggered.</p>
<p><b>Condition:</b> WAC 173-400-040(1)  Permittee is considered to be in compliance if no complaints are forwarded or generated by Ecology.</p> <p><b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> None.  <b>Required Records:</b></p>	<p>Continuous</p>	<p><b>CDM:</b> No requests for complaint investigations were received from Ecology during the reporting period, as required by AOP Attachment 1 Section 2.2.</p>
<p><b>Condition:</b> WAC 173-400-040(6)  Monitor per Section 2.7, Tier 2.</p> <p><b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Ecology has determined, based on process knowledge, that these emission units do not emit significant levels of SO<sub>2</sub>. The permittee annually shall certify that the processes have not been modified to increase SO<sub>2</sub> emissions and no SO<sub>2</sub> monitoring is</p>	<p>Continuous</p>	<p><b>CDM:</b> The process has not been modified to increase SO<sub>2</sub> emissions.</p>

Requirement	Compliance Status	Compliance Determination Method
required. <b>Required Records:</b>		
<b>Condition:</b> WAC 173-400-040(3)(a) [Table 1.2 General Standard] Fugitive emissions. The permittee shall take reasonable precautions to prevent the release of air contaminants from any emissions unit engaging in materials handling, construction, demolition, or any other operation that is a source of fugitive emissions. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Pre-job planning to determine reasonable control measures. <b>Required Records:</b>	Continuous	<b>CDM:</b> Inquiry of knowledgeable personnel.  <b>Comment:</b> Section 2.3 of the "Compliance and Periodic Monitoring Provisions" requires "Construction projects with a potential to generate particulates will address fugitive emissions and fugitive dust control during pre-job planning and job safety analysis." There were no construction projects at the Hanford Site Asbestos Landfill.
<b>Condition:</b> WAC 173-400-040(8)(a) [Table 1.2 General Standard] Fugitive Dust. Requires reasonable precautions be taken to prevent fugitive dust from becoming airborne and to minimize dust generation. <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Pre-job planning to determine reasonable control measures. <b>Required Records:</b>	Continuous	<b>CDM:</b> Inquiry of knowledgeable personnel.  <b>Comment:</b> Section 2.3 of the "Compliance and Periodic Monitoring Provisions" requires "Construction projects with a potential to generate particulates will address fugitive emissions and fugitive dust control during pre-job planning and job safety analysis." There were no construction projects at the Hanford Site Asbestos Landfill.
<b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard] Reasonably available control technology (RACT) <b>Model ID:</b> Not applicable. <b>EPA Test Method:</b> Not specified. <b>EPA Test Method Frequency:</b> Not applicable. <b>Periodic Monitoring:</b> Permit terms considered RACT. <b>Required Records:</b>	Not Applicable	<b>CDM:</b> Applies only to regulatory order approval conditions determined to be less than RACT (RCW 70.94.154).

**G-6290**

Page in AOP: 1-084

**Permit:** AOP Table 1.7 - Gas Distribution **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07

**NOC:** AOP Table 1.7 Miscellaneous Emission Units - Gas Distribution

Requirement	Compliance Status	Compliance Determination Method
<b>Condition:</b> WAC 173-491-040(4)(b) All gasoline storage tanks shall be equipped with	Continuous	<b>CDM:</b> Visual inspection by maintenance personnel.

Requirement	Compliance Status	Compliance Determination Method
<p>submerged or bottom fill lines and fittings to vapor balance gasoline vapors with the delivery transport tank.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> None.  <b>Required Records:</b></p>		<p><b>Comment:</b> Drop Tubes part of original installation.</p>
<p><b>Condition:</b> WAC 173-491-040(4)(d)  The owner or operator shall not permit the loading of gasoline into a storage tank equipped with vapor balance fittings from a transport tank equipped with vapor balance fittings unless the vapor balance system is attached to the transport tank and operated satisfactorily.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> None.  <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> The vapor balance system is attached to the transport tank and operated properly when loading gasoline into a storage tank with vapor balance fittings.</p>
<p><b>Condition:</b> WAC 173-491-040(6)(d)  Recordkeeping  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> None  <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Records on file at RH Smith corporate office.   <b>Comment:</b> Transport trucks certified by fuel terminal annually.</p>
<p><b>Condition:</b> WAC 173-400-040(1)  Permittee is considered to be in compliance if no complaints are forwarded or generated by Ecology.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> None.  <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> No complaints forwarded or generated by Ecology.</p>
<p><b>Condition:</b> WAC 173-400-040(6)  Monitor per Section 2.7, Tier 2.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> None  <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> This emission unit is not a significant source of SO<sub>2</sub> emissions. It has not been modified to increase SO<sub>2</sub>.</p>
<p><b>Condition:</b> WAC 173-400-040(3)(a) [Table 1.2 General Standard]  Fugitive emissions.  The permittee shall take reasonable precautions to prevent the release of air contaminants from any emissions unit engaging in materials handling, construction, demolition, or any other operation that is a source of fugitive emissions.  <b>Model ID:</b> Not applicable.</p>	Continuous	<p><b>CDM:</b> Required use of drop tubes and vapor recovery equipment.</p>

Requirement	Compliance Status	Compliance Determination Method
<p><b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Pre-job planning to determine reasonable control measures.  <b>Required Records:</b></p>		
<p><b>Condition:</b> WAC 173-400-040(8)(a) [Table 1.2 General Standard]            Fugitive Dust.            Requires reasonable precautions be taken to prevent fugitive dust from becoming airborne and to minimize dust generation.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Pre-job planning to determine reasonable control measures.  <b>Required Records:</b></p>	Continuous	<b>CDM:</b> Dust is not generated under normal operating conditions.
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard]            Reasonably available control technology (RACT).  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Permit terms considered RACT.  <b>Required Records:</b></p>	Continuous	<b>CDM:</b> Permit terms are considered RACT and complied with all permit terms for this emission unit.

283-W

Page in AOP: 1-085

Permit: AOP Table 1.7 - 283-W Issue Date: 01-01-07 Date In AOP: 01-01-07

NOC: AOP Table 1.7 - 283-W Water Treatment Plant

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> 40 CFR 68.190(b)(3)            Evaluate 283-W for compliance with newly regulated substances above the threshold (revise Risk Management Plan if needed.)  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Not applicable.  <b>Required Records:</b></p>	Not Applicable	<b>CDM:</b> Recordkeeping. Requirement not triggered for revision since there was no newly regulated substances.
<p><b>Condition:</b> 40 CFR 68.190(b)(7)            Evaluate 283-W for change in Program Level within 6 months after any change.  <b>Model ID:</b> Not applicable.</p>	Not Applicable	<b>CDM:</b> Requirement not triggered since no change causing a change in program level.

Requirement	Compliance Status	Compliance Determination Method
<p><b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Not applicable.  <b>Required Records:</b></p>		
<p><b>Condition:</b> 40 CFR 68.190(c)  Evaluate 283-W for applicability of 40 CFR 68.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Not applicable.  <b>Required Records:</b></p>	<p>Not Applicable</p>	<p><b>CDM:</b> Requirement not triggered since still subject to 40 CFR 68.</p>
<p><b>Condition:</b> 40 CFR 68.190(b)(6)  Evaluate 283-W for change that requires a revised consequence analysis.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Not applicable.  <b>Required Records:</b></p>	<p>Not Applicable</p>	<p><b>CDM:</b> No change completed within 6 months of the reporting period.</p>
<p><b>Condition:</b> 40 CFR 68.95(a)  Confirm that the required emergency response program has been developed and implemented.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Not applicable.  <b>Required Records:</b></p>	<p>Continuous</p>	<p><b>CDM:</b> DOE/RL-99-38, Risk Management Program for the 283-W Water Treatment Facility; HNF-IP-0263-283W, Building Emergency Plan for 283-W Water Treatment Plant; HNF-RD-7647, Emergency Preparedness Program Requirements; DOE/RL-94-02, Hanford Emergency Management Plan; DOE-0223, RL Emergency Implementing Procedures; and HNF-PRO-15333, Environmental Protection Processes.</p>
<p><b>Condition:</b> 40 CFR 68.95(a)(4)  Confirm that the required procedures are in place to review and update the emergency response plan to reflect changes at the stationery source.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Not applicable.  <b>Required Records:</b></p>	<p>Continuous</p>	<p><b>CDM:</b> HNF-RD-7647, Emergency Preparedness Program Requirements and; HNF-IP-0263-283W, Building Emergency Plan for 283-W.</p>
<p><b>Condition:</b> 40 CFR 68.12(b)(3)  Confirm that emergency response actions have been coordinated with local emergency planning and response agencies.  <b>Model ID:</b> Not applicable.</p>	<p>Continuous</p>	<p><b>CDM:</b> DOE/RL-94-02, Hanford Emergency Management Plan.</p>

Requirement	Compliance Status	Compliance Determination Method
<p><b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Not applicable.  <b>Required Records:</b></p>		
<p><b>Condition:</b> 40 CFR 68.39(a) to (e)            Confirm that records are being maintained for the offsite consequence analysis.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Not applicable.  <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Records verification. Refer to DOE/RL-99-38, Risk Management Program for the 283-W Water Treatment Facility.</p>
<p><b>Condition:</b> WAC 173-400-040(1)            Permittee is considered to be in compliance if no complaints are forwarded or generated by Ecology.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Not applicable.  <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> No complaints forwarded to or generated by Ecology as specified in the AOP Attachment 1, Table 1.7, during the reporting period.</p>
<p><b>Condition:</b> WAC 173-400-040(6)            Monitor per Section 2.7, Tier 2.  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Not applicable.  <b>Required Records:</b></p>	Continuous	<p><b>CDM:</b> Ecology has determined that this emission unit does not emit significant levels of SO<sub>2</sub>. The process has not been modified to increase SO<sub>2</sub> emissions.</p>
<p><b>Condition:</b> WAC 173-400-040, 1st Paragraph [Table 1.2 General Standard]            Reasonably available control technology (RACT).  <b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Permit terms considered RACT.  <b>Required Records:</b></p>	Not Applicable	<p><b>CDM:</b> Applies only to regulatory order approval conditions determined to be less than RACT (RCW 70.94.154). This emission unit does not have regulatory order approval conditions.</p>

**APPENDIX B**

**AOP ATTACHMENT 2 REQUIREMENTS**

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**P-241C111-001**

WDOH Emission Unit ID : 1  
Page in AOP : EU0001-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b> Passive Breather Filter	Continuous	<b>CDM:</b> Field interviews.
<b>Required Sampling:</b> Smear survey on the inside surface of the ducting and downstream of the HEPA filter or on the outside of the screen covering the outlet of the vent <b>Sampling Frequency:</b> 1 per year <b>Radionuclide Requiring Measurement:</b> Levels below 10,000 dpm/100cm <sup>2</sup> beta/gamma and 200 dpm/100cm <sup>2</sup> alpha will verify low emissions.	Continuous	<b>CDM:</b> Annual Radiological Surveillance Task, Radiological Survey Reports, and field interviews.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3)	Continuous	<b>CDM:</b> Near Field Monitoring Program.
No active NOC approvals in the AOP for this certification period.		

**W-296P045-001**

WDOH Emission Unit ID : 50  
Page in AOP : EU0050-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Prefilter <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Field interviews. <b>Comment:</b> Portable exhauster 296-P-45 (EU ID 50) operated under the Removal of Liquid from Catch Tank 241-ER-311 NOC. 296-P-45 was not utilized under the Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations NOC.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Heater <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Field interviews. <b>Comment:</b> Portable exhauster 296-P-45 (EU ID 50) operated under the Removal of Liquid from Catch Tank 241-ER-311 NOC. 296-P-45 was not utilized under the Categorical Tank Farm Facility

Requirement	Compliance Status	Compliance Determination Method
		Waste Retrieval and Closure: Phase II Waste Retrieval Operations NOC.
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> 2 HEPAs in series	Continuous	<b>CDM:</b> Field interviews. <b>Comment:</b> Portable exhauster 296-P-45 (EU ID 50) operated under the Removal of Liquid from Catch Tank 241-ER-311 NOC. 296-P-45 was not utilized under the Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations NOC.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Field interviews, CH2M HILL notification procedure and notification logbook. <b>Comment:</b> Exhauster shut down three times during the reporting period; reported per the CH2M HILL notification procedure. Portable exhauster 296-P-45 (EU ID 50) operated under the Removal of Liquid from Catch Tank 241-ER-311 NOC. 296-P-45 was not utilized under the Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations NOC.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Demister <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Field interviews. <b>Comment:</b> Portable exhauster 296-P-45 (EU ID 50) operated under the Removal of Liquid from Catch Tank 241-ER-311 NOC. 296-P-45 was not utilized under the Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations NOC.
<b>Required Sampling:</b> Record sample collected biweekly <b>Sampling Frequency:</b> Continuous <b>Radionuclide Requiring Measurement:</b> Each radionuclide that could contribute greater than 10% of the potential TEDE.	Continuous	<b>CDM:</b> ABCASH Program. <b>Comment:</b> ABCASH Program, EDP code number E047. Portable exhauster 296-P-45 (EU ID 50) operated under the Removal of Liquid from Catch Tank 241-ER-311 NOC. 296-P-45 was not utilized under the Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations NOC.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(2) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114	Continuous	<b>CDM:</b> CH2M HILL NESHAP quality assurance program. <b>Comment:</b> Portable exhauster 296-P-45 (EU ID 50) operated under the Removal of Liquid from Catch Tank 241-ER-311

Requirement	Compliance Status	Compliance Determination Method
		NOC. 296-P-45 was not utilized under the Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations NOC.
<p align="center"> <b>Permit: AIR 06-1057 - A Issue Date:10-05-06 Effective Date:10-05-06 Obsolete Date: 03-23-07</b>  <b>NOC: Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations</b>  <b>WDOH NOC ID: 703 Date In AOP: 01-01-07 Page in AOP: EU0050-001</b>  <b>NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3</b> </p>		
<p align="center"> <b>Permit: AIR 06-1066 - A Issue Date:10-05-06 Effective Date:10-05-06 Obsolete Date: 10-30-07</b>  <b>NOC: Removal of Liquid from Catch Tank 241-ER-311</b>  <b>WDOH NOC ID: 718 Date In AOP: 01-01-07 Page in AOP: EU0050-005</b> </p>		
Requirement	Compliance Status	Compliance Determination Method
<p>The total abated emission limit for this Notice of Construction is limited to 1.47E-05 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice of Construction is limited to 1.47E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).</p>	Continuous	<p><b>CDM:</b> Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The action will include the operation of a 500 cfm portable exhauster connected to a riser in conjunction with a inlet HEPA filter to remove evaporate liquid in the 241-ER-311 Catch Tank. A small volume of the liquid may be pumped out during this activity. There may also be an insertion of a sleeve inside the existing risers to direct air flow closer to the liquid surface.</p> <p>During riser preparation controls will be established using as low as reasonable achievable control technology (ALARACT 1) "Demonstration for riser preparation. opening", ALARACT 4 "Demonstration for packaging and transportation of waste", ALARACT 6 "Demonstration for pit access", ALARACT 13 "Demonstration for installation, operation, and removal of tank equipment", ALARACT 14 "Demonstration for pit work", ALARACT 15, "Demonstration for size reduction of waste equipment for disposal.", and ALARACT 16 "Demonstration for work on potentially contaminated ventilation system components".</p> <p>A portable, 500 cfm ventilation system will be installed on a riser on the 241-ER-311 Catch Tank. The portable exhauster consists of a skid mounted air clean-up train, which includes a heater, a pre-filter, two HEPA filters in series, and a fan, prior to the stack. During exhauster operation air from the tank will be heated before passing through the pre-filter and two HEPA filters to ensure that condensation of air</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>stream moisture is minimized through this section. Drains in each of the filter and heater housings allow entry condensed liquid to flow away from the components and to be collected in a seal pot for removal.</p> <p>Ductwork will be used to connect the exhauster inlet to the tank riser. Ductwork will essentially be fabricated in conformance with ASME B31.3 Process Piping, and it will meet the requirements of ASME AG-1, Section SA, with the exceptions noted in RPP-1923, "General WAC 246-247 Technology Standards Exemption Justification for Waste Tank Ventilation Systems".</p> <p>A 500 cfm inlet HEPA filter in an ASME AG-1 compliant housing will be installed on a second riser on the 241-ER-311 to accommodate the inlet air stream created by the use of the portable exhauster. When the exhauster is not running, the inlet HEPA filter will serve as a tank barometric breather filter to provide abatement of particulate emissions from the tank.</p>		
<p>The Annual Possession Quantity is limited to the following radionuclides (Curies/year):</p> <p>Am-241      4.79E-04 Cs-137      9.36E+00 Pu-239/240 3.36E-04 Sr-89/90    2.88E+00</p>	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents/procedures, and/or database.
<p>Once every 24 hours a visual inspection of the HEPA filter housing shall be made, including the drain line and seal pot, to look for formation of liquid in the HEPA filter housing. If moisture is present or seal pot level is increasing DOH shall be notified and a path forward established to verify and maintain the integrity of the HEPA filters.</p>	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.
<p>All ventilation ductwork from the exit of the tank to the inlet of the exhauster filter housing shall be insulated.</p>	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.
<p>Relative Humidity shall be monitored, at least once every 7 days, to ensure the air stream does not exceed 70% relative humidity downstream of the heater and prior to the HEPA filters.</p>	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.
<p>Each HEPA filter shall be in-place tested annually in accordance with the requirements of ASME AG-1 Section TA. HEPA filters shall have a minimum efficiency of 99.95%.</p>	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.
<p>All ductwork shall be pressure tested in accordance with the requirements of ASME AG-1 Section SA.</p>	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.
<p>The emission unit stack monitoring system shall meet the requirements of ANSI/HPS N13.1-1999.</p>	Continuous	CDM: Field interviews, operating rounds, work control/planning/documents and procedures.

Requirement	Compliance Status	Compliance Determination Method
The emission unit shall not operate at a flow rate which will exceed the rated capacity of the inlet/breather filter installed on the tank.	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.
All ductwork connections shall have a radiological survey performed monthly to ensure ductwork connections are not degrading.	Continuous	<b>CDM:</b> Field interviews, operating rounds, work control/planning/documents and procedures.
The demister identified as required abatement technology is not required to be operational during liquid removal operations at the 241-ER-311 Catch Tank.	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.

Permit: AIR 07-305 - A **Issue Date:**03-23-07 **Effective Date:**03-23-07  
**NOC:** Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations  
**WDOH NOC ID:** 703 **Date In AOP:** 05-03-07 **Page in AOP:** EU0050-001  
**NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3**

Permit: AIR 07-1020 - A **Issue Date:**10-30-07 **Effective Date:**10-30-07  
**NOC:** Removal of Liquid from Catch Tank 241-ER-311  
**WDOH NOC ID:** 718 **Date In AOP:** 12-05-07 **Page in AOP:** EU0050-005

Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 1.47E-05 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice of Construction is limited to 1.47E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).	Continuous	<b>CDM:</b> Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The action will include the operation of a 500 cfm portable exhauster connected to a riser in conjunction with a inlet HEPA filter to remove evaporate liquid in the 241-ER-311 Catch Tank. A small volume of the liquid may be pumped out during this activity. There may also be an insertion of a sleeve inside the existing risers to direct air flow closer to the liquid surface.</p> <p>During riser preparation controls will be established using as low as reasonable achievable control technology (ALARACT 1) "Demonstration for riser preparation. opening", ALARACT 4 "Demonstration for packaging and transportation of waste", ALARACT 6 "Demonstration for pit access", ALARACT 13 "Demonstration for installation, operation, and removal of tank equipment", ALARACT 14 "Demonstration for pit work", ALARACT 15. "Demonstration for size reduction of waste equipment for disposal.", and ALARACT 16 "Demonstration for work on</p>	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.

Requirement	Compliance Status	Compliance Determination Method								
<p>potentially contaminated ventilation system components".</p> <p>A portable, 500 cfm ventilation system will be installed on a riser on the 241-ER-311 Catch Tank. The portable exhauster consists of a skid mounted air clean-up train, which includes a heater, a pre-filter, two HEPA filters in series, and a fan, prior to the stack. During exhauster operation air from the tank will be heated before passing through the pre-filter and two HEPA filters to ensure that condensation of air stream moisture is minimized through this section. Drains in each of the filter and heater housings allow entry condensed liquid to flow away from the components and to be collected in a seal pot for removal.</p> <p>Ductwork will be used to connect the exhauster inlet to the tank riser. Ductwork will essentially be fabricated in conformance with ASME B31.3 Process Piping, and it will meet the requirements of ASME AG-1, Section SA, with the exceptions noted in RPP-1923, "General WAC 246-247 Technology Standards Exemption Justification for Waste Tank Ventilation Systems".</p> <p>A 500 cfm inlet HEPA filter in an ASME AG-1 compliant housing will be installed on a second riser on the 241-ER-311 to accommodate the inlet air stream created by the use of the portable exhauster. When the exhauster is not running, the inlet HEPA filter will serve as a tank barometric breather filter to provide abatement of particulate emissions from the tank.</p>										
<p>The Annual Possession Quantity is limited to the following radionuclides (Curies/year):</p> <table border="0"> <tr> <td>Am-241</td> <td>4.79E-04</td> </tr> <tr> <td>Cs-137</td> <td>9.36E+00</td> </tr> <tr> <td>Pu-239/240</td> <td>3.36E-04</td> </tr> <tr> <td>Sr-89/90</td> <td>2.88E+00</td> </tr> </table>	Am-241	4.79E-04	Cs-137	9.36E+00	Pu-239/240	3.36E-04	Sr-89/90	2.88E+00	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents/procedures, and/or database.
Am-241	4.79E-04									
Cs-137	9.36E+00									
Pu-239/240	3.36E-04									
Sr-89/90	2.88E+00									
<p>Once every 24 hours a visual inspection of the HEPA filter housing shall be made, including the drain line and seal pot, to look for formation of liquid in the HEPA filter housing. If moisture is present or seal pot level is increasing DOH shall be notified and a path forward established to verify and maintain the integrity of the HEPA filters.</p>	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.								
<p>All ventilation ductwork from the exit of the tank to the inlet of the exhauster filter housing shall be insulated.</p>	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.								
<p>Relative Humidity shall be monitored, at least once every 7 days, to ensure the air stream does not exceed 70% relative humidity downstream of the heater and prior to the HEPA filters.</p>	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.								
<p>Each HEPA filter shall be in-place tested annually in accordance with the requirements of ASME AG-1 Section TA. HEPA filters shall have a minimum efficiency of 99.95%.</p>	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.								
<p>All ductwork shall be pressure tested in accordance with the requirements of ASME AG-1 Section SA.</p>	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and								

Requirement	Compliance Status	Compliance Determination Method
		procedures.
The emission unit stack monitoring system shall meet the requirements of ANSI/HPS N13.1-1999.	Continuous	<b>CDM:</b> Field interviews, operating rounds, work control/planning/documents and procedures.
The emission unit shall not operate at a flow rate which will exceed the rated capacity of the inlet/breather filter installed on the tank.	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.
All ductwork connections shall have a radiological survey performed monthly to ensure ductwork connections are not degrading.	Continuous	<b>CDM:</b> Field interviews, operating rounds, work control/planning/documents and procedures.
The demister identified as required abatement technology is not required to be operational during liquid removal operations at the 241-ER-311 Catch Tank.	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.

**P-296P022-001**

WDOH Emission Unit ID : 53  
Page in AOP : EU0053-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> 2 in series	Continuous	<b>CDM:</b> Field interviews.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Field interviews, operating procedures, CH2M HILL notification procedure and notification logbook. <b>Comment:</b> Exhauster shut down three times during the reporting period; reported per the CH2M HILL notification procedure.
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 4 week sample/ year <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> ABCASH Program. <b>Comment:</b> ABCASH EDP code number W191.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> CH2M HILL NESHAP quality assurance program.

Requirement	Compliance Status	Compliance Determination Method
No active NOC approvals in the AOP for this certification period.		

**P-296P028-001**

WDOH Emission Unit ID : 54

Page in AOP : EU0054-001

EMISSION UNIT DID NOT OPERATE DURING CY 2007 SEE TABLE 2

**P-296SY-001**

WDOH Emission Unit ID : 56

Page in AOP : EU0056-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Deentrainer <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Field interviews.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Heater <b>Required Units:</b> Non-Operational <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Field interviews.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Prefilter <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Field interviews.
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> In series	Continuous	<b>CDM:</b> Field interviews.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Field interviews, CH2M HILL notification procedure and notification logbook. <b>Comment:</b> Exhauster shut down multiple times during the reporting period; reported per the CH2M HILL notification procedure.
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 4 week sample/ year <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> ABCASH Program. <b>Comment:</b> ABCASH EDP code number W190.

Requirement	Compliance Status	Compliance Determination Method
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> CH2M HILL NESHAP quality assurance program.
No active NOC approvals in the AOP for this certification period.		

**W-296P043-001**  
 WDOH Emission Unit ID : 57  
 Page in AOP : EU0057-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Prefilter <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Field interviews. <b>Comment:</b> Portable exhauster 296-P-43 (EU ID 57) operated under the Installation and Operation of Waste Retrieval Systems in SST 241-S-112 NOC. 296-P-43 was not utilized under the Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations NOC or the 241-S-102 Installation and Operation of Waste Retrieval Systems NOC.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Heater <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Field interviews. <b>Comment:</b> Portable exhauster 296-P-43 (EU ID 57) operated under the Installation and Operation of Waste Retrieval Systems in SST 241-S-112 NOC. 296-P-43 was not utilized under the Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations NOC or the 241-S-102 Installation and Operation of Waste Retrieval Systems NOC.
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> 2 HEPAs in series	Continuous	<b>CDM:</b> Field interviews. <b>Comment:</b> Portable exhauster 296-P-43 (EU ID 57) operated under the Installation and Operation of Waste Retrieval Systems in SST 241-S-112 NOC. 296-P-43 was not utilized under the Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations NOC or the

Requirement	Compliance Status	Compliance Determination Method
		241-S-102 Installation and Operation of Waste Retrieval Systems NOC.
<p><b>Zone or Area:</b>  <b>Abatement Technology:</b> Fan  <b>Required Units:</b> 1  <b>Add'l Description:</b></p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL notification procedure and notification logbook.  <b>Comment:</b> Exhauster shut down three times during the reporting period; reported per the CH2M HILL notification procedure. Portable exhauster 296-P-43 (EU ID 57) operated under the Installation and Operation of Waste Retrieval Systems in SST 241-S-112 NOC. 296-P-43 was not utilized under the Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations NOC or the 241-S-102 Installation and Operation of Waste Retrieval Systems NOC.</p>
<p><b>Zone or Area:</b>  <b>Abatement Technology:</b> Demister  <b>Required Units:</b> 1  <b>Add'l Description:</b></p>	Continuous	<p><b>CDM:</b> Field interviews.  <b>Comment:</b> Portable exhauster 296-P-43 (EU ID 57) operated under the Installation and Operation of Waste Retrieval Systems in SST 241-S-112 NOC. 296-P-43 was not utilized under the Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations NOC or the 241-S-102 Installation and Operation of Waste Retrieval Systems NOC.</p>
<p><b>Required Sampling:</b> Record Sample collected biweekly.  <b>Sampling Frequency:</b> Continuous  <b>Radionuclide Requiring Measurement:</b> Each radionuclide that could contribute greater than 10% of the potential TEDE.</p>	Continuous	<p><b>CDM:</b> ABCASH Program.  <b>Comment:</b> ABCASH EDP code number E045. Portable exhauster 296-P-43 (EU ID 57) operated under the Installation and Operation of Waste Retrieval Systems in SST 241-S-112 NOC. 296-P-43 was not utilized under the Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations NOC or the 241-S-102 Installation and Operation of Waste Retrieval Systems NOC.</p>
<p><b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) &amp; WAC 246-247-075(2)  <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114</p>	Continuous	<p><b>CDM:</b> CH2M HILL NESHAP quality assurance program.  <b>Comment:</b> Portable exhauster 296-P-43 (EU ID 57) operated under the Installation and Operation of Waste Retrieval Systems in SST 241-S-112 NOC. 296-P-43 was not utilized under</p>

Requirement	Compliance Status	Compliance Determination Method
		the Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations NOC or the 241-S-102 Installation and Operation of Waste Retrieval Systems NOC.
<p>Permit: AIR 06-1057 - B <b>Issue Date:</b>10-05-06 <b>Effective Date:</b>10-05-06 <b>Obsolete Date:</b> 03-23-07  <b>NOC:</b> Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations  <b>WDOH NOC ID:</b> 703 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0057-007  NOC NOT UTILIZED DURING CY 2007 SEE <u>TABLE 3</u></p>		
<p>Permit: AIR 06-1048 - A <b>Issue Date:</b>10-05-06 <b>Effective Date:</b>10-05-06 <b>Obsolete Date:</b> 05-18-07  <b>NOC:</b> 241-S-102 Installation and Operation of Waste Retrieval Systems  <b>WDOH NOC ID:</b> 694 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0057-005  NOC NOT UTILIZED DURING CY 2007 SEE <u>TABLE 3</u></p>		
<p>Permit: AIR 06-1041 - A <b>Issue Date:</b>10-05-06 <b>Effective Date:</b>10-05-06  <b>NOC:</b> Installation and Operation of Waste Retrieval Systems in Single-Shell Tank (SST) 241-S-112  <b>WDOH NOC ID:</b> 686 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0057-001</p>		
Requirement	Compliance Status	Compliance Determination Method
<p>The total abated emission limit for this Notice of Construction is limited to 3.90E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice of Construction is limited to 7.51E+01 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).</p>	Continuous	<p><b>CDM:</b> Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The Salt Cake Dissolution Retrieval Demonstration Project in SST 241-S-112 uses water that is introduced in a controlled fashion to dissolve and mobilize solids in the tank. The resulting solution is then pumped and transferred to the Double-Shell Tank (DST) system. A portable exhauster will provide active ventilation for some dissolution activities and all waste transfer activities until structural safety considerations force shutdown, at which time passive ventilation shall be used.</p> <p>The following activities will be performed:  Pit  a. Opening the 241-S-112 Condenser Pit to remove the old cover plate and install a new cover plate to allow for the connection of a HEPA filter to the exhauster trunk for a portable exhauster.  b. Enter 241-S-C Valve Pit to disconnect the existing 241-S-112</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>HIHTL.</p> <p>c. Enter the 241-S-109 Valve Pit to remove the existing HIHTL that is no longer needed.</p> <p>d. Accessing the 241-S-112A Central Pump Pit to:</p> <ul style="list-style-type: none"> <li>- Install an instrument manifold,</li> <li>- Install a transfer pump, and</li> <li>- Replacement of the existing HIHTL that is not needed for this project with a new HIHTL.</li> </ul> <p>e. Enter the 241-S-A Valve Pit to:</p> <ul style="list-style-type: none"> <li>- Connect the hose-in-hose transfer line (HIHTL) from the 241-S-112 Tank to the DST receiver tank, and - Install the leak detection hardware.</li> </ul> <p>Pit work shall be performed in accordance with ALARACT 6 "TWRS ALARACT Demonstration for Pit Access" and ALARACT 14 "TWRS ALARACT Demonstration for Pit Work".</p> <p>Soil Excavation</p> <p>a. Excavation of soil inside the tank farm for the installation of an electrical and instrumentation conduit to monitor transfer progress.</p> <p>b. Excavation of soil outside the tank farm for conduit and transformer installation.</p> <p>c. Excavation of soil inside the tank farm for installation of a new raw water header installed between the 241-SY Tank Farm and the 241-S Tank Farm to the 241-S-112 Tank.</p> <p>d. Installation of a HIHTL to convey waste from Tank 241-S-112 to the DST transfer system.</p> <p>Soil excavation shall be performed in accordance with ALARACT 5 "TWRS ALARACT Demonstration for Soil Excavation (using hand tools)".</p> <p>In-Tank Equipment</p> <p>a: Installation of various motor controlled spray devices into (3) risers near the outside perimeter of the tank and an automatic indexing spray device will be installed on a centrally located riser.</p> <p>b. Remove Liquid Observation Well (LOW).</p> <p>c. Installation of Stilwell (Level Monitoring Device protection).</p> <p>Work shall be performed in accordance with ALARACT 1 "TWRS ALARACT Demonstration for Riser Preparation/Opening" and ALARACT 13 "TWRS ALARACT Demonstration for Installation, Operation and Removal of Tank Equipment".</p> <p>Water Addition/Dilution</p> <ul style="list-style-type: none"> <li>- Installation of a new heat traced and insulated raw water line installed between the 241-S Tank Farm and the 241-SY Tank Farm to the water distribution skid on top of Tank 241-S-112.</li> </ul> <p>Water addition and dilution for salt-cake dissolution shall use portable exhausters for active ventilation when water addition flow rate is above 80 gallons per minute, at less than 80 gallons per minute salt cake dissolution shall use either a breather HEPA filter for passive ventilation, or active ventilation.</p> <p>Waste Transfer</p> <ul style="list-style-type: none"> <li>- Installation of a progressive cavity pump and supporting equipment to recover and transport waste from Tank 241-S-112 to the DST System.</li> </ul> <p>Waste transfer activities shall use portable exhausters for active ventilation until structural safety considerations force shutdown, at which time passive ventilation shall be used.</p> <p>The major components of the exhauster are; stack, glycol heaters, 1 pre-filter, 2 HEPA filters, 1 exhaust fan, sampling system and a</p>		

Requirement	Compliance Status	Compliance Determination Method																																																																																																
<p>demister which is determined to be optional.</p> <p><b>Other</b> - Removal of the Standard Hydrogen Monitoring Probe.</p> <p>The completion of tank retrieval may also be aided by a Remote Water Lance (RWL) that is a high pressure water device, or hydrolaser. The system will consist of both ex-tank and in-tank components. The ex-tank components will be comprised of; high pressure water skid, operating controls, cables and hoses. The in-tank components will be comprised of umbilical, in-tank vehicle, high pressure nozzle(s).</p> <p>The high pressure water skid will provide the water at the desired pressure, not to exceed 37,000 psig. A conditioning system will be used to filter the raw water entering the skid to ensure that no abrasive materials are entrained in the water. The water volumetric flow rate will be on the order of 6 to 15 gpm. The operating controls will be located in a control trailer outside of the farm fence. The cables and hoses will connect the hydraulically powered in-tank vehicle with the ex-tank controls and water skid via the umbilical. The in-tank vehicle will house one to four high pressure water nozzles. The RWL will be operated with the nozzle end submerged to avoid aerosols in the tank. A rupture disc will be used to prevent reaching pressures above 37,000 psig.</p> <p>The in-tank vehicle, with umbilical, will be deployed through a 12 inch riser in tank 241-S-112 and will weigh on the order of 1,000 pounds plus the weight of the umbilical. A crane will be used to lower the vehicle and the full length of umbilical down into the tank. After the in-tank vehicle and umbilical are in the tank, a cover, with gasket, will be bolted to the riser flange to seal the riser opening. The equipment will be operated outside the tank farm fence.</p>																																																																																																		
<p>The Annual Possession Quantity is limited to the following radionuclides (Curies/year):</p> <table border="0"> <tr> <td>Ac-227</td><td>6.12E-03</td><td>Am-241</td><td>7.24E+01</td><td>Am-243</td><td>7.60E+01</td></tr> <tr> <td>Ba-137m</td><td>2.14E+05</td><td>C-14</td><td>3.59E+01</td><td>Cd-109</td><td>2.26E+02</td></tr> <tr> <td>Cm-242</td><td>1.14E-02</td><td>Cm-243</td><td>5.63E-01</td><td>Cm-244</td><td>1.35E+01</td></tr> <tr> <td>Co-60</td><td>6.47E+01</td><td>Cs-134</td><td>5.68E-01</td><td>Cs-137</td><td>2.26E+05</td></tr> <tr> <td>Eu-152</td><td>1.02E+01</td><td>Eu-154</td><td>2.05E+02</td><td>Eu-155</td><td>1.96E+02</td></tr> <tr> <td>H-3</td><td>3.08E+02</td><td>I-129</td><td>8.43E-01</td><td>Nb-93m</td><td>5.09E+01</td></tr> <tr> <td>Ni-59</td><td>1.08E+01</td><td>Ni-63</td><td>9.97E+02</td><td>Np-237</td><td>1.56E+00</td></tr> <tr> <td>Pa-231</td><td>1.59E-02</td><td>Pu-238</td><td>8.10E+00</td><td>Pu-239</td><td>6.08E+01</td></tr> <tr> <td>Pu-240</td><td>9.36E+00</td><td>Pu-241</td><td>5.78E-01</td><td>Pu-242</td><td>4.16E-04</td></tr> <tr> <td>Ra-226</td><td>5.98E-04</td><td>Ra-228</td><td>8.46E-02</td><td>Ru-106</td><td>1.84E-04</td></tr> <tr> <td>Sb-125</td><td>1.01E+02</td><td>Se-79</td><td>1.73E+00</td><td>Sm-151</td><td>4.27E+04</td></tr> <tr> <td>Sn-126</td><td>7.73E+00</td><td>Sr-90</td><td>1.07E+05</td><td>Tc-99</td><td>2.47E+02</td></tr> <tr> <td>Th-229</td><td>4.50E-03</td><td>Th-232</td><td>1.35E-03</td><td>U-232</td><td>2.78E-01</td></tr> <tr> <td>U-233</td><td>7.11E+00</td><td>U-234</td><td>4.65E+00</td><td>U-235</td><td>2.01E-02</td></tr> <tr> <td>U-236</td><td>2.51E-02</td><td>U-238</td><td>4.52E-01</td><td>Y-90</td><td>1.07E+05</td></tr> <tr> <td>Zr-93</td><td>6.26E+01</td><td></td><td></td><td></td><td></td></tr> </table>	Ac-227	6.12E-03	Am-241	7.24E+01	Am-243	7.60E+01	Ba-137m	2.14E+05	C-14	3.59E+01	Cd-109	2.26E+02	Cm-242	1.14E-02	Cm-243	5.63E-01	Cm-244	1.35E+01	Co-60	6.47E+01	Cs-134	5.68E-01	Cs-137	2.26E+05	Eu-152	1.02E+01	Eu-154	2.05E+02	Eu-155	1.96E+02	H-3	3.08E+02	I-129	8.43E-01	Nb-93m	5.09E+01	Ni-59	1.08E+01	Ni-63	9.97E+02	Np-237	1.56E+00	Pa-231	1.59E-02	Pu-238	8.10E+00	Pu-239	6.08E+01	Pu-240	9.36E+00	Pu-241	5.78E-01	Pu-242	4.16E-04	Ra-226	5.98E-04	Ra-228	8.46E-02	Ru-106	1.84E-04	Sb-125	1.01E+02	Se-79	1.73E+00	Sm-151	4.27E+04	Sn-126	7.73E+00	Sr-90	1.07E+05	Tc-99	2.47E+02	Th-229	4.50E-03	Th-232	1.35E-03	U-232	2.78E-01	U-233	7.11E+00	U-234	4.65E+00	U-235	2.01E-02	U-236	2.51E-02	U-238	4.52E-01	Y-90	1.07E+05	Zr-93	6.26E+01					Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures perform work under ALARACT controls per WDOH approval dated March 05, 2007.</p>
Ac-227	6.12E-03	Am-241	7.24E+01	Am-243	7.60E+01																																																																																													
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<p>Equipment removal and monitoring (pre and post-job surveys) shall be performed in accordance with ALARACT 13; equipment disposition shall be performed in accordance with ALARACT 4 and 15.</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>																																																																																																
<p>Radiological monitoring shall be performed in accordance with the latest revision of HNF-5183, Tank Farms Radiological Control Manual.</p>	Continuous	<p><b>CDM:</b> Field interviews, work packages, and radiological control program and procedures.</p>																																																																																																
<p>The Annual Possession Quantity and potential-to-emit to the MEI shall be tracked on a WDOH approved log.</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures perform work under ALARACT controls per WDOH</p>																																																																																																

Requirement	Compliance Status	Compliance Determination Method
		approval dated March 05, 2007.
The differential pressure across the demister, prefilter, primary HEPA filter, and secondary HEPA filter shall be monitored, recorded and tracked twice a shift during operation of the hydrolaser.	Continuous	<b>CDM:</b> Field interviews, operating rounds, work control/planning/documents and procedures.
The dose rate on the prefilter, primary HEPA filter, and secondary HEPA filter shall be monitored, recorded, and tracked twice a shift during operation of the hydrolaser.	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.
Each HEPA filter shall be in-place tested annually in accordance with the requirements of ASME AG-1. HEPA filters shall have a minimum efficiency of 99.95%.	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.
The operation of the hydrolaser may occur with the nozzle assemblies above or below the waste surface.	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.
Monitor and record the digital readout on the CAM unit one per shift during hydrolaser operation.	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.
After two weeks of operation of the hydrolaser, provide DOH with: a. The differential pressure readings across the demister, prefilter, primary HEPA filter, and secondary HEPA filter. b. Dose rate readings on the prefilter, primary HEPA filter, and secondary HEPA filter. c. Digital readout from the CAM.	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that the licensee need not certify compliance with conditions that convey a right, are a historical summary or fact, that pertain to actions to be completed in the future, or that pertain to actions required of the agency.
Permit: AIR 07-505 - A <b>Issue Date:</b> 05-18-07 <b>Effective Date:</b> 05-18-07 <b>NOC:</b> 241-S-102 Installation and Operation of Waste Retrieval Systems <b>WDOH NOC ID:</b> 694 <b>Date In AOP:</b> 07-26-07 <b>Page in AOP:</b> EU0057-005 <b>NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3</b>		
Permit: AIR 07-305 - B <b>Issue Date:</b> 03-23-07 <b>Effective Date:</b> 03-23-07 <b>NOC:</b> Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations <b>WDOH NOC ID:</b> 703 <b>Date In AOP:</b> 05-03-07 <b>Page in AOP:</b> EU0057-008 <b>NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3</b>		

**W-296P044-001**  
WDOH Emission Unit ID : 58  
Page in AOP : EU0058-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Prefilter <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Field interviews. <b>Comment:</b> Portable exhauster 296-P-44 (EU ID 58) operated under the 241-S-102 Installation and Operation of Waste Retrieval Systems NOC. Portable exhauster 296-P-44 was not utilized under the Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations NOC.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Heater <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Field interviews. <b>Comment:</b> Portable exhauster 296-P-44 (EU ID 58) operated under the 241-S-102 Installation and Operation of Waste Retrieval Systems NOC. Portable exhauster 296-P-44 was not utilized under the Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations NOC.
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> 2 HEPAs in series	Continuous	<b>CDM:</b> Field interviews. <b>Comment:</b> Portable exhauster 296-P-44 (EU ID 58) operated under the 241-S-102 Installation and Operation of Waste Retrieval Systems NOC. Portable exhauster 296-P-44 was not utilized under the Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations NOC.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Field interviews, CH2M HILL notification procedure and notification logbook. <b>Comment:</b> Exhauster shut down multiple times during the reporting period; reported per the CH2M HILL notification procedure. Portable exhauster 296-P-44 (EU ID 58) operated under the 241-S-102 Installation and Operation of Waste Retrieval Systems NOC. Portable exhauster 296-P-44 was not utilized

Requirement	Compliance Status	Compliance Determination Method
		under the Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations NOC.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Demister <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Field interviews. <b>Comment:</b> Portable exhauster 296-P-44 (EU ID 58) operated under the 241-S-102 Installation and Operation of Waste Retrieval Systems NOC. Portable exhauster 296-P-44 was not utilized under the Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations NOC.
<b>Required Sampling:</b> Record sample collected biweekly. <b>Sampling Frequency:</b> Continuous <b>Radionuclide Requiring Measurement:</b> Each radionuclide that could contribute greater than 10% of the potential TEDE.	Continuous	<b>CDM:</b> ABCASH Program. <b>Comment:</b> ABCASH Program, EDP code number E046. Portable exhauster 296-P-44 (EU ID 58) operated under the 241-S-102 Installation and Operation of Waste Retrieval Systems NOC. Portable exhauster 296-P-44 was not utilized under the Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations NOC.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(2) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114.	Continuous	<b>CDM:</b> CH2M HILL NESHAP quality assurance program. <b>Comment:</b> Portable exhauster 296-P-44 (EU ID 58) operated under the 241-S-102 Installation and Operation of Waste Retrieval Systems NOC. Portable exhauster 296-P-44 was not utilized under the Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations NOC.
Permit: AIR 06-1048 - B <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>Obsolete Date:</b> 05-18-07 <b>NOC:</b> 241-S-102 Installation and Operation of Waste Retrieval Systems <b>WDOH NOC ID:</b> 694 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0058-001		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 1.80E-01 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice	Continuous	<b>CDM:</b> Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for

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<p>The emission unit monitoring system shall have the following activities performed: [WAC 246-247-040(5)]</p> <ol style="list-style-type: none"> <li>Inspect pitot tube systems for leaks, at least annually.</li> <li>Inspect nozzles for alignment, presence of deposits,</li> </ol>	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.																																																																																																

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<p>damage to sharp-edges nozzles, or other potentially degrading factors (corrosion, physical damage, etc) at least annually.</p> <p>c. Check transport lines and if visible deposits are present perform cleaning, at least annually.</p> <p>d. Checks to ensure the tightness of all fittings and connections as well as a leak test of the sample system, at least annually.</p> <p>e. Check the response of stack flow rate monitoring and control system at least quarterly.</p> <p>f. A functional/calibration check of monitoring system instrumentation shall be performed at least annually.</p>		
<p>Each HEPA filter shall be in-place tested annually in accordance with the requirements of ASME AG-1. HEPA filters shall have a minimum efficiency of 99.95%</p>	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.
<p>Permit: AIR 06-1057 - C <b>Issue Date:</b>10-05-06 <b>Effective Date:</b>10-05-06 <b>Obsolete Date:</b> 03-23-07  <b>NOC:</b> Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations  <b>WDOH NOC ID:</b> 703 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0058-004  <b>NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3</b></p>		
<p>Permit: AIR 07-505 - B <b>Issue Date:</b>05-18-07 <b>Effective Date:</b>05-18-07  <b>NOC:</b> 241-S-102 Installation and Operation of Waste Retrieval Systems  <b>WDOH NOC ID:</b> 694 <b>Date In AOP:</b> 07-26-07 <b>Page in AOP:</b> EU0058-001</p>		
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<p>The total abated emission limit for this Notice of Construction is limited to 1.80E-01 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice of Construction is limited to 8.40E+01 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).</p>	Continuous	CDM: Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The salt cake dissolution activity associated with 241-S-102 shall include the following: pit work, soil excavation, in-tank equipment installation/removal, water dilution, and waste transfers.</p> <p>Pit Work (Diffuse and Fugitive):</p> <ul style="list-style-type: none"> <li>- Open the 241-S-102B Distributor pit and cut flange in riser with hold saw or plasma cutter, to install instrumentation manifold and new progressive cavity transfer pump (ALARACT 1, 6, 12, 13, 14);</li> <li>- Open the two 241-S-102 Condenser pits to replace two existing cover</li> </ul>	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.

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<p>plates with new cover plates. Connect the passive breather filter assembly and connect the trunk of the portable exhauster (ALARACT 4, 6, 14);</p> <ul style="list-style-type: none"> <li>- Open the 241-S-A Valve pit, and connect the HIHTL from the 241-S-102 tank to the DST system (ALARACT 6, 14).</li> </ul> <p>Soil Excavation (Diffuse and Fugitive):</p> <ul style="list-style-type: none"> <li>- Excavate trenches for tie-in of instrumentation and power systems (ALARACT 5);</li> <li>- Excavate for HIHTL placement from 241-S-102 to 241-S-A Valve pit (ALARACT 5).</li> </ul> <p>Other Equipment Installation/Removal (Diffuse and Fugitive):</p> <ul style="list-style-type: none"> <li>- Install motor controlled spray devices in three risers near the outside perimeter of tank 241-S-102 (ALARACT 1, 13);</li> <li>- Install automatic spray indexing device in a central riser (ALARACT 1, 13).</li> <li>- Remove motor controlled and automatic spray indexing devices if necessary (ALARACT 1, 13).</li> <li>- Place water distribution skid and connect to the raw water header between 241-SY and 241-S tank farms. Connect water distribution skid to spray devices.</li> <li>- Remove standard hydrogen monitoring system vapor probe (ALARACT 4, 15, 13);</li> <li>- Place and hook up exhauster and exhauster system;</li> <li>- Remove unused flammable gas cabinet (per Tank Farm Radcon Control Manual, HNF 5183);</li> <li>- Place Field Instrument Electrical Skid and connect associated cabling;</li> <li>- Install stilling well for Enraf Liquid Indicating Transmitter (ALARACT 1, 13);</li> <li>- Install camera monitoring system (ALARACT 1, 13);</li> <li>- Remove Liquid Observation Well if necessary (ALARACT 1, 13).</li> </ul> <p>Water Dilution and Waste Transfer:</p> <ul style="list-style-type: none"> <li>- Water shall be sprayed onto the surface of the in-tank salt cake to dissolve the cake;</li> <li>- A Remote Water Lance (RWL) may be used at pressures not to exceed 37,000 psig at a flow rate of 6 to 15 gallons per minute. The RWL will be operated with the nozzle submerged.</li> <li>- A High Pressure Mixer (HPW) may be used at pressures not to exceed 37,000 psig at at flow rate of 4 to 18 gallons per minute.</li> <li>- The new progressive cavity pump and HIHTL shall be used to transfer waste from tank 241-S-102 to the DST (ALARACT 11);</li> <li>- Operation and maintenance of the portable exhauster(s).</li> </ul> <p>Waste Transfer (S102):</p> <ul style="list-style-type: none"> <li>- The new progressive cavity pump and HIHTL shall be used to transfer waste from tank 241-S-102 to the DST (ALARACT 11).</li> </ul> <p>The completion of tank retrieval may also be aided by a Remote Water Lance (RWL) that is a high pressure water device, or hydro laser. Alternatively, a High Pressure Mixer (HPM) may be used in the same capacity. The systems will consist of both ex-tank and in-tank components. The ex-tank components will be comprised of; high pressure water systems, operating controls, cables and hoses. The in-Tank components will be comprised of; umbilical, in-tank vehicle; high pressure nozzle(s), or the high pressure mixer.</p> <p>The high pressure water system will provide the water at the desired pressure, not to exceed 37,000 psig. A conditioning system will be used to filter the raw water entering the skid to ensure that no abrasive materials are entrained in the water. The water volumetric flow rate will be on the order of 4 to 18 gpm for the HPM and the 6 to 15 gpm for the RWL. The operating controls will be located in a control trailer</p>		

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<p>outside of the tank farm fence. The cables and hoses will connect hydraulically powered in-tank vehicles with ex-tank controls and water skid via the umbilical. The HPM consists of an adjustable height pipe with tow pairs of opposed, high pressure, low volume water orifices located on the bottom of the pipe. The mixer is capable of being rotated 360 degrees and has an adjustable height range of approximately 7 feet. The positioning of the mixer is performed remotely using a hydraulic system. Additionally, the mixer has a single orifice on the bottom of the unit that can be used as an operational or installation aid. The in-tank vehicle will house one to four high pressure water nozzles. The RWL will be operated with the nozzle and submerged to avoid aerosols in the tank. A rupture disc will be rised to prevent reaching pressures above 37,000 pig.</p>																																																																																																		
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Requirement	Compliance Status	Compliance Determination Method
The heater shall have an automatic trip set point below 200 degrees F. [WAC 246-247-040(5), -060(5)]	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.
The emission unit monitoring system shall have the following activities performed: a. Inspect pitot tube systems for leaks, at least annually. b. Inspect nozzles for alignment, presence of deposits, damage to sharp-edges nozzles, or other potentially degrading factors (corrosion, physical damage, etc) at least annually. c. Check transport lines and if visible deposits are present perform cleaning, at least annually. d. Checks to ensure the tightness of all fittings and connections as well as a leak test of the sample system, at least annually. e. Check the response of stack flow rate monitoring and control system at least quarterly. f. A functional/calibration check of monitoring system instrumentation shall be performed at least annually. [WAC 246-247-040(5), -060(5)]	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.
Each HEPA filter shall be in-place tested annually in accordance with the requirements of ASME AG-1. HEPA filters shall have a minimum efficiency of 99.95%. [WAC 246-247-040(5), -060(5)]	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.

Permit: AIR 07-305 - C Issue Date:03-23-07 Effective Date:03-23-07  
 NOC: Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations  
 WDOH NOC ID: 703 Date In AOP: 05-03-07 Page in AOP: EU0058-005  
 NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3

**S-296S025-001**

WDOH Emission Unit ID : 59  
Page in AOP : EU0059-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Deentrainer <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	CDM: Field interviews.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Heater <b>Required Units:</b> 1 <b>Add'l Description:</b> Heater runs intermittently due to temperature Regulation	Continuous	CDM: Field interviews.

Requirement	Compliance Status	Compliance Determination Method
<b>Zone or Area:</b> <b>Abatement Technology:</b> Prefilter <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Field interviews.
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> In series	Continuous	<b>CDM:</b> Field interviews.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> <b>Add'l Description:</b> Emission unit operates intermittently.	Continuous	<b>CDM:</b> Field interviews, CH2M HILL notification procedure and notification logbook. <b>Comment:</b> Exhauster shut down three times during the reporting period; reported per the CH2M HILL notification procedure.
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 4 week sample/year <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> ABCASH program, CH2M HILL notification procedure, and notification logbook. <b>Comment:</b> ABCASH EDP code number W145. Record sampler shut down once; reported per the CH2M HILL notification procedure.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> CH2M HILL NESHAP quality assurance program.
No active NOC approvals in the AOP for this certification period.		

**S-6266-001**

WDOH Emission Unit ID : 62

Page in AOP : EU0062-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Prefilter <b>Required Units:</b> 2 <b>Add'l Description:</b> In parallel	Continuous	<b>CDM:</b> As-built drawing. H-6-13325
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2	Continuous	<b>CDM:</b> As-built drawing. H-6-13325

Requirement	Compliance Status	Compliance Determination Method
<b>Add'l Description:</b> In parallel		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 2 <b>Add'l Description:</b> In Parallel	Continuous	<b>CDM:</b> As-built drawing. H-6-13325
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 2 week sample/quarter <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> Review of the data in ABCASH.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528 current rev.) specifies both the hardware and method used to sample and the analytical methods used in the laboratory.

Permit: AIR 06-1029 - A **Issue Date:**10-05-06 **Effective Date:**10-05-06  
**NOC:** Use of Portable Tanks and Revised Source Term Description at WSCF  
**WDOH NOC ID:** 669 **Date In AOP:** 01-01-07 **Page in AOP:** EU0062-001

Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 2.80E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).	Continuous	<b>CDM:</b> Stack sampling and the Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>* Analytical Laboratory Building (696-W-1) - Solid, liquid, and vapor samples contaminated with low levels of radioactive material are processed, on a bench-scale basis, in fume hoods or other controlled air spaces in the building. Evaporation and wet chemistry also are used to prepare samples for analysis. Low-level waste drums are filled inside the laboratory building and transferred either to the Solid Waste Storage Building (described as follows) or other approved facilities on the Hanford Site, or the low-level waste drums are moved to various locations with WSCF.</p> <p>* Radiochemistry Laboratory (696-W-2) - This is a below grade counting room in the Analytical Laboratory Building with a separately controlled airspace within the building.</p> <p>* Environmental Data/Computer Center (6270) - This is a non-radiological building and will not be addressed further.</p> <p>* Environmental Sample Archive Building (6267) - This building provides for controlled storage, indexing, categorizing and retrieval of low-level contaminated samples. Storage is provided for up to 2,500 samples requiring refrigerated storage and up to 11,500 samples requiring ambient storage. This building also provides for temporary</p>	Continuous	<b>CDM:</b> The mission of the WSCF laboratory has not changed since the NOC was issued.

Requirement	Compliance Status	Compliance Determination Method
<p>storage of unvented drums or other low-level waste, packaged in accordance with applicable laboratory procedures. Less than 100 low-level waste packages are stored at any one time.</p> <p>* Mobile Laboratory Storage Facility (6269) - This structure houses up to five mobile laboratories and provides protection from adverse weather conditions for the instrumentation and computers inside the mobile laboratories. This area contains calibration laboratory instrumentation used in the mobile laboratories, and a sample preparation area for adding chemical buffers and preservatives to sample containers. This building provides temporary storage of drums, or other waste packages contained with low-levels of radioactive material. Less than 100 low-level waste packages are stored at any one time.</p> <p>* Solid Waste Storage Building (6265A) - This open-sided building shall provide for temporary storage of drums or other low-level waste packages. Less than 100 low-level waste packages are stored at any one time and will not be addressed further in this license, as these are unvented drums.</p> <p>* Contaminated Liquid Waste Retention Vault (6266A) - Consists of two 3,785 liter polyethylene tanks contained in a common concrete vault. The tanks are designed to receive low-level inorganic and radiologically contaminated liquid waste or sample excess from the analytical laboratory. The liquid routinely is transferred to an approved disposal facility on the Hanford Site using the portable tanker described as follows. This building also provides temporary storage of drums, or other waste packages contaminated with low-levels of radioactive material. Less than 100 low-level waste packages are stored at any one time.</p> <p>* Sample Equipment Cleaning Facility - This is a non-radiological building and will not be addressed further.</p> <p>* Portable Tanker(s) used for Wastewater Transport - Wastewater drums containing liquid waste contaminated with low-levels of radioactive material are stored temporarily at various locations within WSCF. In some cases, the contents of these drums are pumped into a portable tanker at the various locations for transport to other facilities. To accomplish the pumping, a small pump has its drop leg inserted into each drum through the bung hole or other opening, and flexible hose transfers the liquid to the tanker.</p>		
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application is 1.40E-02 mrem/year.</p> <p>Approved are the associated potential release rates (Curies/year) of:</p> <p>Alpha-0 3.30E-04 Liquid/Particulate Solid WAC 246-247-030 (21) (a)</p> <p>License PTE limit bounds 3.3E-04 Ci/yr 239Pu and release fraction of 0.001. Any radionuclide on the chart of the nuclides could be encountered during operation of the WSCF. The radionuclides specifically listed in the NODC application were chosen to conservatively represent all radionuclide emissions that may occur in particulate form. A small contribution from the gaseous radionuclides may be encountered. Although any radionuclide could be present, for conservatism all alpha is assumed to be 239Pu and all beta/gamma is assumed to be 90Sr for dose calculation estimates. Other radionuclides may be encountered and are approved so long as they are conservatively represented by the total alpha and total beta/gamma</p>	<p>Continuous</p>	<p><b>CDM:</b> WSCF keeps a running inventory of samples/radionuclides coming into and leaving the laboratory to ensure radionuclide limits are met.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>constituents. B/G-0 6.80E-03 Liquid/Particulate Solid WAC 246-247-030 (21) (a)</p> <p>License PTE limit bounds 6.8E-03 Ci/yr 90Sr and release fraction of 0.001. Any radionuclide on the chart of the nuclides could be encountered during operation of the WSCF. The radionuclides specifically listed in the NODC application were chosen to conservatively represent all radionuclide emissions that may occur in particulate form. A small contribution from the gaseous radionuclides may be encountered. Although any radionuclide could be present, for conservatism all alpha is assumed to be 239Pu and all beta/gamma is assumed to be 90Sr for dose calculation estimates. Other radionuclides may be encountered and are approved so long as they are conservatively represented by the total alpha and total beta/gamma constituents.</p> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the AIR Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification. DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>		
<p>The potential release rates of plutonium and strontium are considered conservative and noted that these radionuclides representative types of alpha and beta radiation that WSCF expects to handle. The WSCF needs to verify annually that plutonium and strontium are the most conservative radionuclides WSCF handles.</p>	Continuous	<p><b>CDM:</b> Annual certification by Facility Manager based on inventory control procedures.</p>

**S-6266-002**

WDOH Emission Unit ID : 63  
Page in AOP : EU0063-001

Requirement	Compliance Status	Compliance Determination Method
<p>For the time period of : (01-01-07 to 12-31-07)</p>		
<p><b>Zone or Area:</b> <b>Abatement Technology:</b> Prefilter <b>Required Units:</b> 2 <b>Add'l Description:</b> In parallel</p>	Continuous	<p><b>CDM:</b> As-built drawing. H-6-13331</p>
<p><b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA</p>	Continuous	<p><b>CDM:</b> As-built drawing. H-6-13331</p>

Requirement	Compliance Status	Compliance Determination Method
<b>Required Units: 2</b> <b>Add'l Description:</b> In parallel		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units: 1</b> <b>Add'l Description:</b> An additional standby fan recirculates the air flow back to Building (Bldg. 6266) or can vent it to the atmosphere.	Continuous	<b>CDM:</b> As-built drawing, H-6-13331
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 2 week sample/quarter <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> Review of the data in ABCASH.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> NESHAP Quality Assurance Project Plan for Radioactive Air Emissions" (HNF-EP-0528 current revision) specifies both the hardware and method used to sample and the analytical methods used in the laboratory.
<b>Permit: AIR 06-1029 - B Issue Date:10-05-06 Effective Date:10-05-06</b> <b>NOC: Use of Portable Tanks and Revised Source Term Description at WSCF</b> <b>WDOH NOC ID: 669 Date In AOP: 01-01-07 Page in AOP: EU0063-001</b>		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 2.80E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).	Continuous	<b>CDM:</b> Stack sampling and the Radionuclide Air Emissions Report for the Hanford Site Calendar Year 2007.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>* Analytical Laboratory Building (696-W-1) - Solid, liquid, and vapor samples contaminated with low levels of radioactive material are processed, on a bench-scale basis, in flume hoods or other controlled air spaces in the building. Evaporation and wet chemistry also are used to prepare samples for analysis. Low-level waste drums are filled inside the laboratory building and transferred either to the Solid Waste Storage Building (described as follows) or other approved facilities on the Hanford Site, or the low-level waste drums are moved to various locations with WSCF.</p> <p>* Radiochemistry Laboratory (696-W-2) - This is a below grade counting room in the Analytical Laboratory Building with a separately controlled airspace within the building.</p> <p>* Environmental Data/Computer Center (6270) - This is a non-radiological building and will not be addressed further.</p>	Continuous	<b>CDM:</b> The mission of the WSCF laboratory has not changed since the NOC was issued.

Requirement	Compliance Status	Compliance Determination Method
<p>* Environmental Sample Archive Building (6267) - This building provides for controlled storage, indexing, categorizing and retrieval of low-level contaminated samples. Storage is provided for up to 2,500 samples requiring refrigerated storage and up to 11,500 samples requiring ambient storage. This building also provides for temporary storage of unvented drums or other low-level waste, packaged in accordance with applicable laboratory procedures. Less than 100 low-level waste packages are stored at any one time.</p> <p>* Mobile Laboratory Storage Facility (6269) - This structure houses up to five mobile laboratories and provides protection from adverse weather conditions for the instrumentation and computers inside the mobile laboratories. This area contains calibration laboratory instrumentation used in the mobile laboratories, and a sample preparation area for adding chemical buffers and preservatives to sample containers. This building provides temporary storage of drums, or other waste packages contained with low-levels of radioactive material. Less than 100 low-level waste packages are stored at any one time.</p> <p>* Solid Waste Storage Building (6265A) - This open-sided building shall provide for temporary storage of drums or other low-level waste packages. Less than 100 low-level waste packages are stored at any one time and will not be addressed further in this license, as these are unvented drums.</p> <p>* Contaminated Liquid Waste Retention Vault (6266A) - Consists of two 3,785 liter polyethylene tanks contained in a common concrete vault. The tanks are designed to receive low-level inorganic and radiologically contaminated liquid waste or sample excess from the analytical laboratory. The liquid routinely is transferred to an approved disposal facility on the Hanford Site using the portable tanker described as follows. This building also provides temporary storage of drums, or other waste packages contaminated with low-levels of radioactive material. Less than 100 low-level waste packages are stored at any one time.</p> <p>* Sample Equipment Cleaning Facility - This is a non-radiological building and will not be addressed further.</p> <p>* Portable Tanker(s) used for Wastewater Transport - Wastewater drums containing liquid waste contaminated with low-levels of radioactive material are stored temporarily at various locations within WSCF. In some cases, the contents of these drums are pumped into a portable tanker at the various locations for transport to other facilities. To accomplish the pumping, a small pump has its drop leg inserted into each drum through the bung hole or other opening, and flexible hose transfers the liquid to the tanker.</p>		
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application is 1.40E-02 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Alpha-0    3.30E-04    Liquid/Particulate Solid WAC 246-247-030 (21) (a)</p> <p>License PTE limit bounds 3.3E-04 Ci/yr 239Pu and release fraction of 0.001. Any radionuclide on the chart of the nuclides could be encountered during operation of the WSCF. The radionuclides specifically listed in the NODC application were chosen to conservatively represent all radionuclide emissions that may occur in particulate form. A small contribution from the gaseous radionuclides may be encountered. Although any radionuclide could be present, for conservatism all alpha is assumed to be 239Pu and all beta/gamma is assumed to be 90Sr for dose calculation estimates. Other radionuclides</p>	<p>Continuous</p>	<p><b>CDM:</b> WSCF keeps a running inventory of samples/radionuclides coming into and leaving the laboratory to ensure radionuclide limits are met.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>may be encountered and are approved so long as they are conservatively represented by the total alpha and total beta/gamma constituents.</p> <p>B/G-0 6.80E-03 Liquid/Particulate Solid WAC 246-247-030 (21) (a) License PTE limit bounds 6.8E-03 Ci/yr 90Sr and release fraction of 0.001. Any radionuclide on the chart of the nuclides could be encountered during operation of the WSCF. The radionuclides specifically listed in the NODC application were chosen to conservatively represent all radionuclide emissions that may occur in particulate form. A small contribution from the gaseous radionuclides may be encountered. Although any radionuclide could be present, for conservatism all alpha is assumed to be 239Pu and all beta/gamma is assumed to be 90Sr for dose calculation estimates. Other radionuclides may be encountered and are approved so long as they are conservatively represented by the total alpha and total beta/gamma constituents.</p> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the AIR Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>		
<p>The potential release rates of plutonium and strontium are considered conservative and noted that these radionuclides representative types of alpha and beta radiation that WSCF expects to handle. The WSCF needs to verify annually that plutonium and strontium are the most conservative radionuclides WSCF handles.</p>	<p>Continuous</p>	<p><b>CDM:</b> Annual certification by Facility Manager, based on inventory control procedures.</p>

**P-296SX-001**

WDOH Emission Unit ID : 64

Page in AOP : EU0064-001

EMISSION UNIT DID NOT OPERATE DURING CY 2007 SEE TABLE 2

**P-296A042-001**  
WDOH Emission Unit ID : 93  
Page in AOP : EU0093-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 1 <b>Add'l Description:</b> 2 parallel flow path. Downtime to be negotiated with the department.	Continuous	<b>CDM:</b> Field interviews, CH2M HILL notification procedure and notification logbook. <b>Comment:</b> Exhauster shut down two times during the reporting period; reported per the CH2M HILL notification procedure.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Water Chiller <b>Required Units:</b> 1 <b>Add'l Description:</b> Downtime to be negotiated with the department.	Continuous	<b>CDM:</b> Field interviews.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Condenser <b>Required Units:</b> 1 <b>Add'l Description:</b> At common header. Downtime to be negotiated with the department	Continuous	<b>CDM:</b> Field interviews, CH2M HILL notification procedure and notification logbook. <b>Comment:</b> Condenser shut down one time during the reporting period; reported per the CH2M HILL notification procedure.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Moisture Separator <b>Required Units:</b> 1 <b>Add'l Description:</b> Downtime to be negotiated with the department.	Continuous	<b>CDM:</b> Field interviews.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Chiller Pump <b>Required Units:</b> 1 <b>Add'l Description:</b> Downtime to be negotiated with the department.	Continuous	<b>CDM:</b> Field interviews, CH2M HILL notification procedure and notification logbook. <b>Comment:</b> Chiller shut down two times during the reporting period; reported per the CH2M HILL notification procedure.
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEGA <b>Required Units:</b> 1 <b>Add'l Description:</b> 2 parallel flow paths. Downtime to be negotiated with the department.	Continuous	<b>CDM:</b> Field interviews, CH2M HILL notification procedure and notification logbook. <b>Comment:</b> The HEGA filter failed aerosol testing two times and halide testing two times during the reporting period; reported per the CH2M HILL notification procedure.
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2	Continuous	<b>CDM:</b> Field interviews, CH2M HILL notification procedure and notification logbook.

Requirement	Compliance Status	Compliance Determination Method
<b>Add'l Description:</b> Before and after the HEGA (gas absorber) 2 parallel flow paths. Downtime to be negotiated with the department.		<b>Comment:</b> Annual aerosol test of the HEPA filter was not performed on time during the reporting period; reported per the CH2M HILL notification procedure.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Heater <b>Required Units:</b> 1 <b>Add'l Description:</b> 2 parallel flow paths with 1 operational. Downtime to be negotiated with the department.	Continuous	<b>CDM:</b> Field interviews.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Cooling Water Pump <b>Required Units:</b> 1 <b>Add'l Description:</b> Downtime to be negotiated with the department.	Continuous	<b>CDM:</b> Field interviews.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Evaporative Tower <b>Required Units:</b> 1 <b>Add'l Description:</b> Downtime to be negotiated with the department.	Continuous	<b>CDM:</b> Field interviews.
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEME <b>Required Units:</b> 1 <b>Add'l Description:</b> Downtime to be negotiated with the department.	Continuous	<b>CDM:</b> Field interviews.
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> Continuous <b>Radionuclide Requiring Measurement:</b> Each radionuclide that could contribute greater than 10% of the potential TEDE	Continuous	<b>CDM:</b> ABCASH program, CH2M HILL notification procedure, and notification logbook. <b>Comment:</b> ABCASH EDP code number E147. Record sampler shut down twice and the CAM shut down once during the reporting period; reported per the CH2M HILL notification procedure.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(2) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B Method 114	Continuous	<b>CDM:</b> CH2M HILL NESHAP quality assurance program.
Permit: AIR 06-1018 Issue Date: 10-05-06 Effective Date: 10-05-06 NOC: 241-AY and 241-AZ Ventilation Upgrades WDOH NOC ID: 653 Date In AOP: 01-01-07 Page in AOP: EU0093-002		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of	Continuous	<b>CDM:</b> Field interviews, ABCASH,

Requirement	Compliance Status	Compliance Determination Method
<p>Construction is limited to 1.80E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice of Construction is limited to 3.20E+03 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).</p>		<p>and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The ventilation of the 241-AY and 241-AZ Tank Farms which each contain two double-shell tanks (DSTs). A DST consists of a concrete shell and dome, insulating concrete base, and two steel liners. The primary (inner) steel liner and outer steel liner are separated by a 0.76 meter annulus. Both liners are contained inside the shell. The tanks have a flat bottom with a useable depth of 9.28 meters, allowing a tank to contain 3,800,000 liters of waste.</p> <p>The 241-AY and 241-AZ tanks contain mixed waste in the form of liquids or contained solids (suspended or settled). As part of the treatment and storage process, the contents in each of the four tanks could be mixed periodically to control gas entrapment in the settled solids, to control temperature, for chemical treatment, or for waste retrieval. Contained solids are mobilized, as required, as part of this process by hydraulic action of the mixer pumps or by use of air lift circulators in each of the tanks. Mobilization of contained solids normally occurs in a single tank in each farm at a time. During such activities, as well as during storage, the ventilation system shall maintain the vapor space in each tank below atmospheric pressure.</p> <p>Air flow is from the tank to a glycol cooled recirculation system and to a common header. The common header is the point in the overall ventilation system at which ventilation flow is provided to the emissions control system. Also, a portion of each tank's exhaust can be recirculated to assist in maintaining temperature.</p> <p>The recirculation system takes vapor from the tank, cools and condenses it to remove vapor and some entrained particulate, further removes moisture via a separator, and returns a portion of the cooled vapor to the tank. This provides cooling for the tank while reducing air emissions. Nominal flow rates in the recirculation system vary from zero cubic meter per second (bypassed) to 0.25 cubic meter per second per tank, at standard temperature and pressure conditions. At the higher flow rate, approximately 0.05 cubic meter per second is provided to the emissions control system before the remaining 0.2 cubic meter per second is recirculated to the tank. Similar air flow from the other three tanks is combined in the common ventilation header connecting the discharges of the other recirculation coolant systems. The combined flow is discharged to the emissions control system. The recirculation system is considered part of the process because the collected material is returned to the tank. The common header is considered the emission source.</p> <p>When mixer pumps are operating in a tank the 0.25 cubic meter per second drawn from the tank may not be recirculated but may be combined with the flow from the other tanks for a total discharge to the emissions control system of 0.4 to 0.5 cubic meter per second. Numerous other combinations of discharge flow rates are possible but the combined annual average discharge flow rate to the emissions control system shall not be greater than 0.5 cubic meter per second. During system upset conditions, such as an automatic shutdown of</p>	<p>Continuous</p>	<p>CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>

Requirement	Compliance Status	Compliance Determination Method																																																																																										
<p>one exhaust train and start of the opposite train, discharge flow rates could reach 0.6 cubic meter per second for several seconds.</p> <p>The portion of the stream discharged to atmosphere shall flow through a condenser, high-efficiency mist eliminator, heater, two HEPA filters in series with a gas adsorption unit between the HEPAs. For the purpose of calculating abated emissions, only the HEPA filter control efficiencies are used. The annual average discharge flow rate is considered to be 0.5 cubic meter per second. Discharge flow rates can vary from 0.2 cubic meter per second to 0.5 cubic meter per second.</p>																																																																																												
<p>The Annual Possession Quantity is limited to the following radionuclides (Curies/year):</p> <table border="0"> <tr> <td>Ac-227</td><td>1.65 E-02</td><td>Am-241</td><td>7.34 E+04</td><td>Ba-137m</td><td>1.14 E+07</td></tr> <tr> <td>C-14</td><td>5.92 E+01</td><td>Cd-113m</td><td>4.00 E+03</td><td>Cm-242</td><td>4.34 E+01</td></tr> <tr> <td>Cm-243</td><td>1.00 E+01</td><td>Cm-244</td><td>2.44 E+02</td><td>Co-60</td><td>9.55 E+03</td></tr> <tr> <td>Cs-134</td><td>8.50 E+04</td><td>Cs-137</td><td>1.22 E+07</td><td>Eu-152</td><td>5.15 E+02</td></tr> <tr> <td>Eu-154</td><td>9.15 E+04</td><td>Eu-155</td><td>1.44 E+05</td><td>H-3</td><td>1.53E+04</td></tr> <tr> <td>I-129</td><td>9.61 E+00</td><td>Nb-93 m</td><td>2.46 E+02</td><td>Ni-59</td><td>8.57 E+01</td></tr> <tr> <td>Ni-63</td><td>9.00 E+03</td><td>Np-237</td><td>3.29 E+01</td><td>Pa-231</td><td>2.66 E-02</td></tr> <tr> <td>Pu-238</td><td>5.58 E+02</td><td>Pu-239</td><td>2.21 E+03</td><td>Pu-240</td><td>6.44 E+02</td></tr> <tr> <td>Pu-241</td><td>4.19 E+04</td><td>Pu-242</td><td>2.10 E-01</td><td>Ra-226</td><td>3.27 E-03</td></tr> <tr> <td>Ra-228</td><td>1.46 E-01</td><td>Ru-106</td><td>1.82 E+05</td><td>Sb-125</td><td>2.24 E+05</td></tr> <tr> <td>Se-79</td><td>9.76 E+01</td><td>Sm-151</td><td>3.37 E+05</td><td>Sn-126</td><td>1.55 E+02</td></tr> <tr> <td>Sr-90</td><td>1.79 E+07</td><td>Tc-99</td><td>2.11 E+03</td><td>Th-229</td><td>3.49 E-03</td></tr> <tr> <td>Th-232</td><td>1.45 E-02</td><td>U-232</td><td>6.15 E-01</td><td>U-233</td><td>2.36 E+00</td></tr> <tr> <td>U-234</td><td>4.61 E+00</td><td>U-235</td><td>1.79 E-01</td><td>U-236</td><td>3.29 E-00</td></tr> <tr> <td>U-238</td><td>3.54 E+00</td><td>Y-90</td><td>1.79 E+07</td><td>Zr-93</td><td>4.65 E+02</td></tr> </table>	Ac-227	1.65 E-02	Am-241	7.34 E+04	Ba-137m	1.14 E+07	C-14	5.92 E+01	Cd-113m	4.00 E+03	Cm-242	4.34 E+01	Cm-243	1.00 E+01	Cm-244	2.44 E+02	Co-60	9.55 E+03	Cs-134	8.50 E+04	Cs-137	1.22 E+07	Eu-152	5.15 E+02	Eu-154	9.15 E+04	Eu-155	1.44 E+05	H-3	1.53E+04	I-129	9.61 E+00	Nb-93 m	2.46 E+02	Ni-59	8.57 E+01	Ni-63	9.00 E+03	Np-237	3.29 E+01	Pa-231	2.66 E-02	Pu-238	5.58 E+02	Pu-239	2.21 E+03	Pu-240	6.44 E+02	Pu-241	4.19 E+04	Pu-242	2.10 E-01	Ra-226	3.27 E-03	Ra-228	1.46 E-01	Ru-106	1.82 E+05	Sb-125	2.24 E+05	Se-79	9.76 E+01	Sm-151	3.37 E+05	Sn-126	1.55 E+02	Sr-90	1.79 E+07	Tc-99	2.11 E+03	Th-229	3.49 E-03	Th-232	1.45 E-02	U-232	6.15 E-01	U-233	2.36 E+00	U-234	4.61 E+00	U-235	1.79 E-01	U-236	3.29 E-00	U-238	3.54 E+00	Y-90	1.79 E+07	Zr-93	4.65 E+02	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents/procedures, and/or database.
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Permit: AIR 06-1064 - A Issue Date:10-05-06 Effective Date:10-05-06  
**NOC: Installation and Operation of Waste Retrieval Systems in Tanks 241-AZ-101, 241-AZ-102, 241-AY-101, and 241-AY-102**  
**WDOH NOC ID: 714 Date In AOP: 01-01-07 Page in AOP: EU0093-004**  
**NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3**

**P-204AR-001**

Page in AOP : EU0096-001

EMISSION UNIT DID NOT OPERATE DURING CY 2007 SEE TABLE 2

**P-241S102-001**

WDOH Emission Unit ID : 134

Page in AOP : EU0134-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<p><b>Zone or Area :</b></p> <p><b>Abatement Technology :</b> HEPA</p> <p><b>Required Units :</b> 1</p> <p><b>Add'l Description:</b> Passive Breather Filter</p>	Intermittent	<p><b>CDM:</b> Field interviews, CH2M HILL notification procedure and notification logbook.</p> <p><b>Comment:</b> Annual aerosol test of the HEPA filter was not performed on time during the reporting period; reported per the CH2M HILL notification procedure.</p>
<b>Required Sampling:</b> Smear survey on the inside	Continuous	<b>CDM:</b> Annual Radiological Surveillance

Requirement	Compliance Status	Compliance Determination Method									
<p>surface of the ducting and downstream of the HEPA filter or on the outside of the screen covering the outlet of the vent. <b>Sampling Frequency:</b> 1 per year. <b>Radionuclide Requiring Measurement:</b> Levels below 10,000 dpm/100cm<sup>2</sup> beta/gamma and 200 dpm/100cm<sup>2</sup> alpha will verify low emissions.</p>		Task, RSRs, and field interviews.									
<p><b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) &amp; WAC 246-247-075(3)</p>	Continuous	<b>CDM:</b> Near Field Monitoring Program.									
<p><b>Permit:</b>AIR 06-1048 - C <b>Issue Date:</b>10-05-06 <b>Effective Date:</b>10-05-06 <b>Obsolete Date:</b> 05-18-07  <b>NOC:</b> 241-S-102 Installation and Operation of Waste Retrieval Systems  <b>WDOH NOC ID:</b> 694 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0134-001</p>											
<p>The total abated emission limit for this Notice of Construction is limited to 1.80E-01 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice of Construction is limited to 8.40E+01 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).</p>	Continuous	<b>CDM:</b> Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.									
<p>The Annual Possession Quantity is limited to the following radionuclides (Curies/year):</p> <table border="0"> <tr> <td>Am-241</td> <td>1.79E-03</td> <td> </td> </tr> <tr> <td>Cs-137</td> <td>1.49E-05</td> <td> </td> </tr> <tr> <td>Sr-90</td> <td>1.96E-03</td> <td> </td> </tr> </table>	Am-241	1.79E-03		Cs-137	1.49E-05		Sr-90	1.96E-03		Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures perform work under ALARACT controls per WDOH approval dated March 05, 2007.
Am-241	1.79E-03										
Cs-137	1.49E-05										
Sr-90	1.96E-03										
<p>The total abated emission limit for S102 (passive ventilation mode) under this Notice of Construction is limited to 3.0 E-04 to the Maximally Exposed Individual. The total unabated emission limit on the Potential-to-Emit for S102 (passive ventilation mode) under this Notice of Construction is limited to 3.0 E-02 mrem/year to the Maximally Exposed Individual [WAC 246-247-040(5)].</p>	Continuous	<b>CDM:</b> Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.									
<p>Radiological monitoring shall be performed in accordance with the latest revision of HNF-5183, Tank Farms Radiological Control Manual.</p>	Continuous	<p><b>CDM:</b> Field interviews, work packages, and radiological control program and procedures. CH2M HILL notification procedure and notification logbook.</p> <p><b>Comment:</b> Air sampler supporting 241-S-102 pump had three occurrences of readings above the reporting criteria.</p>									
<p>The tank shall be ventilated through the passive breather filter (consisting of a single HEPA filter) only when no water is being added to the tank via the spray</p>	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.									

Requirement	Compliance Status	Compliance Determination Method
<p>devices. If structural safety considerations force shutdown of the active ventilation system, WDOH shall be notified prior to resumption of spray water addition [WAC 246-247-040(5)].</p>		
<p>Each HEPA filter shall be in-place tested annually in accordance with the requirements of ASME AG-1. HEPA filters shall have a minimum efficiency of 99.95%</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>
<p><b>Permit:</b>AIR 07-505 - C <b>Issue Date:</b>05-18-07 <b>Effective Date:</b>05-18-07  <b>NOC:</b> 241-S-102 Installation and Operation of Waste Retrieval Systems  <b>WDOH NOC ID:</b> 694 <b>Date In AOP:</b> 07-26-07 <b>Page in AOP:</b> EU0134-001</p>		
<p>The total abated emission limit for this Notice of Construction is limited to 1.80E-01 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice of Construction is limited to 8.40E+01 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).</p>	Continuous	<p><b>CDM:</b> Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The salt cake dissolution activity associated with 241-S-102 shall include the following: pit work, soil excavation, in-tank equipment installation/removal, water dilution, and waste transfers.</p> <p><b>Pit Work (Diffuse and Fugitive):</b>  - Open the 241-S-102B Distributor pit and cut flange in riser with hold saw or plasma cutter, to install instrumentation manifold and new progressive cavity transfer pump (ALARACT 1, 6, 12, 13, 14);  - Open the two 241-S-102 Condenser pits to replace two existing cover plates with new cover plates. Connect the passive breather filter assembly and connect the trunk of the portable exhauster (ALARACT 4, 6, 14);  - Open the 241-S-A Valve pit, and connect the HIHTL from the 241-S-102 tank to the DST system (ALARACT 6, 14).</p> <p><b>Soil Excavation (Diffuse and Fugitive):</b>  - Excavate trenches for tie-in of instrumentation and power systems (ALARACT 5);  - Excavate for HIHTL placement from 241-S-102 to 241-S-A Valve pit (ALARACT 5).</p> <p><b>Other Equipment Installation/Removal (Diffuse and Fugitive):</b>  - Install motor controlled spray devices in three risers near the outside perimeter of tank 241-S-102 (ALARACT 1, 13);  - Install automatic spray indexing device in a central riser (ALARACT 1, 13),  - Remove motor controlled and automatic spray indexing devices if</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2MHILL work planning/controls/documents, and procedures.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>necessary (ALARACT 1, 13).</p> <ul style="list-style-type: none"> <li>- Place water distribution skid and connect to the raw water header between 241-SY and 241-S tank farms. Connect water distribution skid to spray devices.</li> <li>- Remove standard hydrogen monitoring system vapor probe (ALARACT 4, 15, 13);</li> <li>- Place and hook up exhauster and exhauster system;</li> <li>- Remove unused flammable gas cabinet (per Tank Farm Radcon Control Manual, HNF 5183);</li> <li>- Place Field Instrument Electrical Skid and connect associated cabling;</li> <li>- Install stilling well for Enraf Liquid Indicating Transmitter (ALARACT 1, 13);</li> <li>- Install camera monitoring system (ALARACT 1, 13);</li> <li>- Remove Liquid Observation Well if necessary (ALARACT 1, 13).</li> </ul> <p>Water Dilution and Waste Transfer:</p> <ul style="list-style-type: none"> <li>- Water shall be sprayed onto the surface of the in-tank salt cake to dissolve the cake;</li> <li>- A Remote Water Lance (RWL) may be used at pressures not to exceed 37,000 psig at a flow rate of 6 to 15 gallons per minute. The RWL will be operated with the nozzle submerged.</li> <li>- A High Pressure Mixer (HPW) may be used at pressures not to exceed 37,000 psig at at flow rate of 4 to 18 gallons per minute.</li> <li>- The new progressive cavity pump and HIHTL shall be used to transfer waste from tank 241-S-102 to the DST (ALARACT 11);</li> <li>- Operation and maintenance of the portable exhauster(s).</li> </ul> <p>Waste Transfer (S102):</p> <ul style="list-style-type: none"> <li>- The new progressive cavity pump and HIHTL shall be used to transfer waste from tank 241-S-102 to the DST (ALARACT 11).</li> </ul> <p>The completion of tank retrieval may also be aided by a Remote Water Lance (RWL) that is a high pressure water device, or hydro laser. Alternatively, a High Pressure Mixer (HPM) may be used in the same capacity. The systems will consist of both ex-tank and in-tank components. The ex-tank components will be comprised of; high pressure water systems, operating controls, cables and hoses. The in-tank components will be comprised of; umbilical, in-tank vehicle; high pressure nozzle(s), or the high pressure mixer.</p> <p>The high pressure water system will provide the water at the desired pressure, not to exceed 37,000 psig. A conditioning system will be used to filter the raw water entering the skid to ensure that no abrasive materials are entrained in the water. The water volumetric flow rate will be on the order of 4 to 18 gpm for the HPM and the 6 to 15 gpm for the RWL. The operating controls will be located in a control trailer outside of the tank farm fence. The cables and hoses will connect hydraulically powered in-tank vehicles with ex-tank controls and water skid via the umbilical. The HPM consists of an adjustable height pipe with two pairs of opposed, high pressure, low volume water orifices located on the bottom of the pipe. The mixer is capable of being rotated 360 degrees and has an adjustable height range of approximately 7 feet. The positioning of the mixer is performed remotely using a hydraulic system. Additionally, the mixer has a single orifice on the bottom of the unit that can be used as an operational or installation aid. The in-tank vehicle will house one to four high pressure water nozzles. The RWL will be operated with the nozzle and submerged to avoid aerosols in the tank. A rupture disc will be used to prevent reaching pressures above 37,000 psig.</p>		
<p>The Annual Possession Quantity is limited to the following radionuclides (Curies/year):</p>	<p>Continuous</p>	<p>CDM: Field interviews, CH2M HILL work planning/controls/documents, and</p>

Requirement	Compliance Status	Compliance Determination Method
Am-241 1.79E-03   Cs-137 1.49E-05   Sr-90 1.96E-03		procedures perform work under ALARACT controls per WDOH approval dated March 05, 2007.
The total abated emission limit for S102 (passive ventilation mode) under this Notice of Construction is limited to 3.0 E-04 to the Maximally Exposed Individual. The total unabated emission limit on the Potential-to-Emit for S102 (passive ventilation mode) under this Notice of Construction is limited to 3.0 E-02 mrem/year to the Maximally Exposed Individual [WAC 246-247-040(5), -060(5)].	Continuous	<b>CDM:</b> Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.
Radiological monitoring shall be performed in accordance with the latest revision of HNF-5183, Tank Farms Radiological Control Manual. [WAC 246-247-040(5), -060(5)].	Continuous	<b>CDM:</b> Field interviews, work packages, and radiological control program and procedures. CH2M HILL notification procedure and notification logbook.  <b>Comment:</b> Air sampler supporting 241-S-102 pump had three occurrences of readings above the reporting criteria.
The tank shall be ventilated through the passive breather filter (consisting of a single HEPA filter) only when no water is being added to the tank via the spray devices. If structural safety considerations force shutdown of the active ventilation system, WDOH shall be notified prior to resumption of spray water addition [WAC 246-247-040(5), -060(5)].	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.
Each HEPA filter shall be in-place tested annually in accordance with the requirements of ASME AG-1. HEPA filters shall have a minimum efficiency of 99.95%. [WAC 246-247-040(5), -060(5)].	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.

**P-242A-001**

WDOH Emission Unit ID : 141

Page in AOP : EU0141-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Prefilter <b>Required Units:</b> 1 <b>Add'l Description:</b> 2 parallel flow paths with 1 bank per flow path.	Continuous	<b>CDM:</b> Field interviews. Drawing H-2-69294

Requirement	Compliance Status	Compliance Determination Method
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> 2 parallel flow paths with 2 banks per flow path	Continuous	<b>CDM:</b> Field interviews. Drawing H-2-69294
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 1 <b>Add'l Description:</b> 2 parallel flow paths (Minimum 1 parallel path in operation)	Continuous	<b>CDM:</b> Field interviews. Drawing H-2-69294
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 4 week sample/ year <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> ABCASH program, CH2M HILL notification procedure, and notification logbook. <b>Comment:</b> ABCASH EDP code number E645. Record sampler shut down once during the reporting period; reported per the CH2M HILL notification procedure.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> CH2M HILL NESHAP quality assurance program.
<b>Permit:ALARACT 29 Issue Date:01-01-07</b> <b>NOC: 242-A Evaporator Maintenance Facility Shutdowns</b> <b>WDOH NOC ID: Date In AOP: 01-01-07 Page in AOP:</b>		
Requirement	Compliance Status	Compliance Determination Method
<b>1. Description of Activity/Requirements</b>  Scope will include planned maintenance facility shutdowns at 242-A Evaporator where electrical power to both 296-A-21 and 296-A-22 stacks are de-energized for greater than 24 hours.  The process of planned maintenance outages and facility upgrades that require de-energizing both the building stack (296-A-21) and vessel vent (296-A-22) for facility upgrades or maintenance will be performed. Building process areas will have the interior doors sealed with tape to help minimize diffuse and fugitive emissions to facility personnel and the outside ambient atmosphere pursuant to meeting WAC 246-247-130 to meet ALARACT compliance demonstration requirements. If entry to process areas is required then radiological controls will be done per HNF-5183 to minimize both time and provide controls for diffuse and	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, radiological control program and procedures.

Requirement	Compliance Status	Compliance Determination Method
fugitive emissions. No facility operational (double shell tank liquid minimization) activities will be performed during the time that neither the 296-A-21 and 296-A-22 stacks are not operating. Radiological containment practices and devices will be employed as applicable per the Containment Selection Guide Attachment A, in TFC-ESHQ-RP_RWP-C-02, latest revision.		
2. Radiological Controls a. Work with removable contamination will be contained per the latest revision of the Containment Selection Guide, Attachment A, in TFC-ESHQ-RP_RWP-C-02, latest revision. b. HPT coverage as specified in the Radiological Work Permit.	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.
3. Monitoring a. Radiological monitoring shall be in accordance with the latest revision of HNF-5183, Tank Farms Radiological Control Manual.	Continuous	<b>CDM:</b> Field interviews, work packages, and radiological control program and procedures.
4. Records/Documentation a. Radiological Work Permit. b. Radiological survey report(s).	Continuous	<b>CDM:</b> Field interviews, radiological surveys, RSRs, CH2M HILL work planning/controls/documents, and procedures.

**P-242A-002**

WDOH Emission Unit ID : 142  
Page in AOP : EU0142-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Heater <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Field interviews and asbuilt drawing. H-2-98998. <b>Comment:</b> Two back to back campaigns occurred in calendar year 2007, which started on June 26, 2007 and ended on September 4, 2007.
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> In series	Continuous	<b>CDM:</b> Field interviews and asbuilt drawing. H-2-98998. <b>Comment:</b> Two back to back campaigns occurred in calendar year 2007, which started on June 26, 2007 and ended on September 4, 2007.

Requirement	Compliance Status	Compliance Determination Method
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 1 <b>Add'l Description:</b> Fan operates during 242-A processing.	Continuous	<b>CDM:</b> Field interviews, asbuilt drawing. H-2-98998. CH2M HILL notification procedure and notification logbook. <b>Comment:</b> Exhauster shut down three times during the reporting period; reported per the CH2M HILL notification procedure. Two back to back campaigns occurred in calendar year 2007, which started on June 26, 2007 and ended on September 4, 2007.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Prefilter <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Field interviews and asbuilt drawing. H-2-98998. <b>Comment:</b> Two back to back campaigns occurred in calendar year 2007, which started on June 26, 2007 and ended on September 4, 2007.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Deentrainer <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Field interviews and asbuilt drawing. H-2-98998. <b>Comment:</b> Two back to back campaigns occurred in calendar year 2007, which started on June 26, 2007 and ended on September 4, 2007.
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> One week sample per quarter, and continuous sampling during campaign. <b>Radionuclide Requiring Measurement:</b> Campaign: TOTAL ALPHA, TOTAL BETA, 137Cs, 90Sr, 239Pu, 238Pu, 241Am, and each radionuclide that could contribute greater than 10% of the potential TEDE. Non-Campaign: Total Alpha, Total Beta.	Continuous	<b>CDM:</b> ABCASH Program. <b>Comment:</b> ABCASH EDP code number E643. Two back to back campaigns occurred in calendar year 2007, which started on June 26, 2007 and ended on September 4, 2007.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> During campaigns: 40 CFR 60, Appendix A, Method 2; 40 CFR 61, Appendix B, Method 114; During non-campaigns: 40 CFR 61, Appendix B, Method 114(3).	Continuous	<b>CDM:</b> CH2M HILL NESHAP quality assurance program.
Permit: AIR 06-1016 <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>NOC:</b> Operation of the 242-A Evaporator emission unit 296-A-22 <b>WDOH NOC ID:</b> 651 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0142-001		
The total abated emission limit for this Notice of Construction is limited to 1.00E-09 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice of Construction is limited to 3.20E-06 mrem/year to the	Continuous	<b>CDM:</b> Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.

Requirement	Compliance Status	Compliance Determination Method																																				
<p>Maximally Exposed Individual (WAC 246-247-030(21)).</p> <p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The 242-A Evaporator facility is used to reduce the volume of waste solutions that do not self-boil, and thus reduce the number of underground double-shell tanks required for waste storage. The 242-A Evaporator employs a conventional forced-circulation, vacuum evaporation system to concentrate radioactive waste solutions. Principal process components of the evaporator system are located in the 242-A Building. They include the reboiler, vapor-liquid separator, recirculation pump and pipe loop, slurry product pump, condensers, and vessel ventilation system.</p> <p>The evaporator system receives a mixed blend feed from the feed tank. The feed consists of unprocessed and processed waste and recycled liquid that are removed from storage tanks after solids have settled. The feed is pumped into the recirculation line and blended with the main product slurry stream, which flows to the reboiler via the recirculation pump. The mixture is heated in the reboiler. The vapor liquid separator is maintained at a reduced pressure. Under this reduced pressure, a fraction of the water in the heated slurry flashes to steam and is drawn through two wire mesh deentrainer pads into a vapor line that leads to the primary condenser. As evaporation takes place in the separator vessel, the slurry becomes concentrated. When the process solution has been concentrated to the parameters specified by the campaigns process memo, a fraction is withdrawn from the upper recirculation line, upstream of the feed addition point, and is either gravity drained or pumped by the slurry pump to underground storage tanks.</p> <p>Vapors removed from the vapor-liquid separator via the vapor line are condensed and routed to the condensate collection tank. The process condensate is discharged to the Liquid Effluent Retention Facility (LERF). Steam condensate is continuously monitored for excessive radiation, pH, and conductivity, and then discharged from the building to the 200 Area Treated Effluent Disposal Facility (TEDF). Upon detection of radioactive contamination, the radiation monitor will automatically divert the steam condensate stream to the feed tank. Cooling water from the condensers, which is also continuously monitored for excessive radiation, pH, and conductivity, is also discharged to the 200 Area TEDF. This used cooling water stream cannot be diverted, thus, if contamination is detected, an evaporator shutdown is required. Non-condensable vapors from the evaporator are filtered and discharged to the atmosphere via the vessel vent system. This system consists of a deentrainment pad, prefilter, heater, high-efficiency filter assembly, and vessel vent exhauster.</p>	<p>Continuous</p>	<p>CDM: Field interviews, CH2M HILL work planning/controls/ documents, and procedures.</p>																																				
<p>The Annual Possession Quantity is limited to the following radionuclides (Curies/year):</p> <table border="0"> <tr> <td>Am-241</td> <td>3.50E+04</td> <td>C-14</td> <td>1.80E+05</td> <td>Cm-244</td> <td>4.50E+02</td> </tr> <tr> <td>Co-60</td> <td>4.20E+04</td> <td>Cs-134</td> <td>5.20E+05</td> <td>Cs-137</td> <td>5.20E+07</td> </tr> <tr> <td>Eu-154</td> <td>1.70E+05</td> <td>Eu-155</td> <td>2.40E+05</td> <td>I-129</td> <td>9.10E+01</td> </tr> <tr> <td>Nb-94</td> <td>3.40E+03</td> <td>Pu-238</td> <td>4.50E+01</td> <td>Pu-239/240</td> <td>5.60E+03</td> </tr> <tr> <td>Pu-241</td> <td>5.20E+05</td> <td>Ra-226</td> <td>1.10E+03</td> <td>Ru-106</td> <td>1.80E+06</td> </tr> <tr> <td>Se-79</td> <td>2.70E+03</td> <td>Sr-90</td> <td>7.70E+06</td> <td>Tc-99</td> <td>7.00E+04</td> </tr> </table>	Am-241	3.50E+04	C-14	1.80E+05	Cm-244	4.50E+02	Co-60	4.20E+04	Cs-134	5.20E+05	Cs-137	5.20E+07	Eu-154	1.70E+05	Eu-155	2.40E+05	I-129	9.10E+01	Nb-94	3.40E+03	Pu-238	4.50E+01	Pu-239/240	5.60E+03	Pu-241	5.20E+05	Ra-226	1.10E+03	Ru-106	1.80E+06	Se-79	2.70E+03	Sr-90	7.70E+06	Tc-99	7.00E+04	<p>Continuous</p>	<p>CDM: Field interviews, CH2M HILL work planning/controls/ documents/ procedures, and/or database.</p>
Am-241	3.50E+04	C-14	1.80E+05	Cm-244	4.50E+02																																	
Co-60	4.20E+04	Cs-134	5.20E+05	Cs-137	5.20E+07																																	
Eu-154	1.70E+05	Eu-155	2.40E+05	I-129	9.10E+01																																	
Nb-94	3.40E+03	Pu-238	4.50E+01	Pu-239/240	5.60E+03																																	
Pu-241	5.20E+05	Ra-226	1.10E+03	Ru-106	1.80E+06																																	
Se-79	2.70E+03	Sr-90	7.70E+06	Tc-99	7.00E+04																																	

Requirement	Compliance Status	Compliance Determination Method
<b>Permit:ALARACT 29 Issue Date:01-01-07</b> <b>NOC: 242-A Evaporator Maintenance Facility Shutdowns</b> <b>WDOH NOC ID: Date In AOP: 01-01-07 Page in AOP:</b>		
<p>1. Description of Activity/Requirements</p> <p>Scope will include planned maintenance facility shutdowns at 242-A Evaporator where electrical power to both 296-A-21 and 296-A-22 stacks are de-energized for greater than 24 hours.</p> <p>The process of planned maintenance outages and facility upgrades that require de-energizing both the building stack (296-A-21) and vessel vent (296-A-22) for facility upgrades or maintenance will be performed. Building process areas will have the interior doors sealed with tape to help minimize diffuse and fugitive emissions to facility personnel and the outside ambient atmosphere pursuant to meeting WAC 246-247-130 to meet ALARACT compliance demonstration requirements. If entry to process areas is required then radiological controls will be done per HNF-5183 to minimize both time and provide controls for diffuse and fugitive emissions. No facility operational (double shell tank liquid minimization) activities will be performed during the time that neither the 296-A-21 and 296-A-22 stacks are not operating. Radiological containment practices and devices will be employed as applicable per the Containment Selection Guide Attachment A, in TFC-ESHQ-RP_RWP-C-02, latest revision.</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/ documents, radiological control program and procedures.</p>
<p>2. Radiological Controls</p> <p>a. Work with removable contamination will be contained per the latest revision of the Containment Selection Guide, Attachment A, in TFC-ESHQ-RP_RWP-C-02, latest revision.</p> <p>b. HPT coverage as specified in the Radiological Work Permit.</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/ documents, and procedures.</p>
<p>3. Monitoring</p> <p>a. Radiological monitoring shall be in accordance with the latest revision of HNF-5183, Tank Farms Radiological Control Manual.</p>	Continuous	<p><b>CDM:</b> Field interviews, work packages, and radiological control program and procedures.</p>
<p>4. Records/Documentation</p> <p>a. Radiological Work Permit.</p> <p>b. Radiological survey report(s).</p>	Continuous	<p><b>CDM:</b> Field interviews, radiological surveys, RSRs, CH2M HILL work planning/controls/documents, and procedures.</p>

**P-296P032-001**

WDOH Emission Unit ID : 145

Page in AOP : EU0145-001

EMISSION UNIT DID NOT OPERATE DURING CY 2007 SEE TABLE 2

**P-242AL44-001**

WDOH Emission Unit ID : 146

Page in AOP : EU0146-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Charcoal Filter <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> As-built drawings and facility walk downs.
<b>Required Sampling:</b> Near Field Environment Sampling <b>Sampling Frequency:</b> Air - every 2 weeks continuous/deposition - annually <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> Review of ABCASH data.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528, latest revision).
Permit: AIR 06-1045 - A <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>NOC:</b> Operation of the Liquid Effluent Retention Facility and the 200 Area Effluent Treatment Facility <b>WDOH NOC ID:</b> 690 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0146-001		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 4.59E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).	Continuous	<b>CDM:</b> The Annual Radioactive Air Emissions Report for the Hanford Site, Calendar Year 2007.
This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.  The operation of the Liquid Effluent Retention Facility/200 Area Effluent Treatment Facility (LERF/ETF), which includes the load-in station and load-in station filter skid.	Continuous	<b>CDM:</b> Review of facility and procedure change documents as specified in administrative procedures.  <b>Comment:</b> Facility design and procedure changes require documentation that includes environmental reviews to determine if the change is a modification of the emission unit.

Requirement	Compliance Status	Compliance Determination Method
<p>Incoming wastewater can be added directly to the ETF process or received at the LERF or the load-in station. The LERF is allowed to receive wastewaters via underground pipelines from generator facilities, via pipeline from the load-in station, or directly through a series of access ports located at each basin. The load-in station accommodates wastewater receipt via container (e.g., drums, carboys, tankers, etc.).</p> <p>The ETF wastewater treatment process shall be comprised of a main treatment train and a secondary treatment train. The main treatment train shall provide for the removal or destruction of dangerous and radioactive contaminants from incoming wastewater. After treatment, the effluent shall be transferred to the verification tanks where it is sampled then discharged. Treated effluent is comparable to deionized water and contains tritium, which cannot be economically removed. Contaminants removed in the main treatment train are concentrated in the secondary treatment train. The contaminants shall be heated and dried to a powder form or removed as sludge and dried by the addition of absorbents. These residues shall be containerized and disposed onsite as radioactive waste.</p> <p>Additional approval of the process for this activity is contained in the following Conditions/Limitations.</p>		
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 8.48E-02 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Alpha-0   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Alpha release rate is assumed to be Pu-239/240. The release rate assumes two full basins and the addition of waste water equivalent to ETFs annual operating capacity. In addition to the isotopes specifically listed as approved under this NOC, other radionuclides may be encountered and are approved so long as they are conservatively represented by the total alpha and total beta-gamma constituents.</p> <p>Am-241   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>B/G-0   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Beta/Gamma release rate is assumed to be Sr-90/Cs-137. The release rate assumes two full basins and the addition of waste water equivalent to ETF's annual operating capacity. In addition to the isotopes specifically listed as approved under this NOC, other radionuclides may be encountered and are approved so long as they are conservatively represented by the total alpha and total beta-gamma constituents.</p> <p>C-14   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than</p>	<p>Continuous</p>	<p><b>CDM:</b> Tracking radionuclide data as specified in administrative procedures.</p> <p><b>Comment:</b> The quantities of individual radionuclides are tracked based on sample results, flow rates, and process knowledge. The MEI dose and potential-to-emit are calculated and the results are placed in the facility record.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>10% of the unabated PTE and represents less than 25% of the abated dose.            Ce-144   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Cm-244   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Co-60   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Cs-134   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Eu-154   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Eu-155   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            H-3   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            I-129   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            K-40   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Mn-54   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Na-22   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Nb-94   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Np-237   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Pu-238   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Pu-241   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Ra-226   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated</p>		

Requirement	Compliance Status	Compliance Determination Method																																			
<p>dose.</p> <p>Ru-106   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Sb-125   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Se-79   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Tc-99   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>U-233   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>U-234   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>U-235   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>U-236   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>U-238   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Zn-65   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Zr-95   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <table border="0"> <tr> <td>Am-241</td> <td>C-14</td> <td>Ce-144</td> <td>Cm-244</td> <td>Co-60</td> </tr> <tr> <td>Cs-134</td> <td>Cs-137</td> <td>Eu-154</td> <td>Eu-155</td> <td>H-3</td> </tr> <tr> <td>I-29</td> <td>K-40</td> <td>Mn-54</td> <td>Na-22</td> <td>Nb-94</td> </tr> <tr> <td>Np-237</td> <td>Pu-238</td> <td>Pu-239/240</td> <td>Pu-241</td> <td>Ra-226</td> </tr> <tr> <td>Ru-106</td> <td>Sb-125</td> <td>Se-79</td> <td>Sr-90</td> <td>Tc-99</td> </tr> <tr> <td>U-233</td> <td>U-234</td> <td>U-235</td> <td>U-236</td> <td>U-238</td> </tr> <tr> <td>Zn-65</td> <td>Zr-95</td> <td></td> <td></td> <td></td> </tr> </table> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. WAC 246-247-110(9). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the</p>	Am-241	C-14	Ce-144	Cm-244	Co-60	Cs-134	Cs-137	Eu-154	Eu-155	H-3	I-29	K-40	Mn-54	Na-22	Nb-94	Np-237	Pu-238	Pu-239/240	Pu-241	Ra-226	Ru-106	Sb-125	Se-79	Sr-90	Tc-99	U-233	U-234	U-235	U-236	U-238	Zn-65	Zr-95					
Am-241	C-14	Ce-144	Cm-244	Co-60																																	
Cs-134	Cs-137	Eu-154	Eu-155	H-3																																	
I-29	K-40	Mn-54	Na-22	Nb-94																																	
Np-237	Pu-238	Pu-239/240	Pu-241	Ra-226																																	
Ru-106	Sb-125	Se-79	Sr-90	Tc-99																																	
U-233	U-234	U-235	U-236	U-238																																	
Zn-65	Zr-95																																				

Requirement	Compliance Status	Compliance Determination Method
applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.		
The emissions for this activity from the all LERF basins and diffuse/fugitive emissions are limited to 4.59E-02 mrem/year unabated and abated.	Continuous	<b>CDM:</b> The Annual Radioactive Air Emissions Report for the Hanford Site, Calendar Year 2007.
The LERF is approved to provide temporary storage, as well as flow and pH equalization, for wastewaters prior to treatment at ETF. The LERF shall consist of three high-density polyethylene double-lined basins, each with an operating capacity of 29.5 million liters. Each basin has a leachate collection system located between the primary and secondary composite liner systems and is also equipped with a floating low-density polyethylene cover firmly attached to the sidewalls to prevent unwanted material from entering the basins and to avoid evaporation of wastewater. To prevent the buildup of gas, each basin is passively vented through vent pipes. Gases exiting through a vent pipe shall be channeled through a carbon adsorption filter.	Continuous	<b>CDM:</b> As-built drawings, facility-specific procedures, and walk downs.

**P-242AL43-001**

WDOH Emission Unit ID : 147

Page in AOP : EU0147-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Charcoal Filter <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> As-built drawings and facility walk downs.
<b>Required Sampling:</b> Near Field Environment Sampling <b>Sampling Frequency:</b> Air - every 2 weeks continuous/deposition annually <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> Review of ABCASH data.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528, latest revision).

Requirement	Compliance Status	Compliance Determination Method
<p align="center">Permit: AIR 06-1045 - B <b>Issue Date:</b>10-05-06 <b>Effective Date:</b>10-05-06  <b>NOC:</b> Operation of the Liquid Effluent Retention Facility and the 200 Area Effluent Treatment Facility  <b>WDOH NOC ID:</b> 690 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0147-001</p>		
<p>The total abated emission limit for this Notice of Construction is limited to 4.59E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).</p>	Continuous	<p><b>CDM:</b> The Annual Radioactive Air Emissions Report for the Hanford Site, Calendar Year 2007.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The operation of the Liquid Effluent Retention Facility/200 Area Effluent Treatment Facility (LERF/ETF), which includes the load-in station and load-in station filter skid.</p> <p>Incoming wastewater can be added directly to the ETF process or received at the LERF or the load-in station. The LERF is allowed to receive wastewaters via underground pipelines from generator facilities, via pipeline from the load-in station, or directly through a series of access ports located at each basin. The load-in station accommodates wastewater receipt via container (e.g., drums, carboys, tankers, etc.).</p> <p>The ETF wastewater treatment process shall be comprised of a main treatment train and a secondary treatment train. The main treatment train shall provide for the removal or destruction of dangerous and radioactive contaminants from incoming wastewater. After treatment, the effluent shall be transferred to the verification tanks where it is sampled then discharged. Treated effluent is comparable to deionized water and contains tritium, which cannot be economically removed. Contaminants removed in the main treatment train are concentrated in the secondary treatment train. The contaminants shall be heated and dried to a powder form or removed as sludge and dried by the addition of absorbents. These residues shall be containerized and disposed onsite as radioactive waste.</p> <p>Additional approval of the process for this activity is contained in the following Conditions/Limitations.</p>	Continuous	<p><b>CDM:</b> Review of facility and procedure change documents as specified in administrative procedures.  <b>Comment:</b> Facility design and procedure changes require documentation that includes environmental reviews to determine if the change is a modification of the emission unit.</p>
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 8.48E-02 mrem/year. Approved are the associated potential release rates (Curies/year) of:  Alpha-0   Liquid/Particulate Solid   WAC 246-247-030(21)(a)</p>	Continuous	<p><b>CDM:</b> Tracking radionuclide data as specified in administrative procedures.  <b>Comment:</b> The quantities of individual</p>

Requirement	Compliance Status	Compliance Determination Method
<p>Alpha release rate is assumed to be Pu-239/240. The release rate assumes two full basins and the addition of waste water equivalent to ETF's annual operating capacity. In addition to the isotopes specifically listed as approved under this NOC, other radionuclides may be encountered and are approved so long as they are conservatively represented by the total alpha and total beta-gamma constituents.</p> <p>Am-241   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>B/G-0   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Beta/Gamma release rate is assumed to be Sr-90/Cs-137. The release rate assumes two full basins and the addition of waste water equivalent to ETF's annual operating capacity. In addition to the isotopes specifically listed as approved under this NOC, other radionuclides may be encountered and are approved so long as they are conservatively represented by the total alpha and total beta-gamma constituents.</p> <p>C-14   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ce-144   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cm-244   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Co-60   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cs-134   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Eu-154   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Eu-155   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>H-3   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>I-129   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>K-40   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Mn-54   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Na-22   Liquid/Particulate Solid   WAC 246-247-030(21)(a)</p>		<p>radionuclides are tracked based on sample results, flow rates, and process knowledge. The MEI dose and potential-to-emit are calculated and the results are placed in the facility record.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Nb-94   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Np-237   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Pu-238   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Pu-241   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ra-226   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ru-106   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Sb-125   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Se-79   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Tc-99   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>U-233   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>U-234   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>U-235   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>U-236   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>U-238   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Zn-65   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Zr-95   Liquid/Particulate Solid   WAC 246-247-030(21)(a)</p>		

Requirement	Compliance Status	Compliance Determination Method																																			
<p>Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <table border="0"> <tr> <td>Am-241</td> <td>C-14</td> <td>Ce-144</td> <td>Cm-244</td> <td>Co-60</td> </tr> <tr> <td>Cs-134</td> <td>Cs-137</td> <td>Eu-154</td> <td>Eu-155</td> <td>H-3</td> </tr> <tr> <td>I-29</td> <td>K-40</td> <td>Km-54</td> <td>Na-22</td> <td>Nb-94</td> </tr> <tr> <td>Np-237</td> <td>Pu-238</td> <td>Pu-239/240</td> <td>Pu-241</td> <td>Ra-226</td> </tr> <tr> <td>Ru-106</td> <td>Sb-125</td> <td>Se-79</td> <td>Sr-90</td> <td>Tc-99</td> </tr> <tr> <td>U-233</td> <td>U-234</td> <td>U-235</td> <td>U-236</td> <td>U-238</td> </tr> <tr> <td>Zn-65</td> <td>Zr-95</td> <td></td> <td></td> <td></td> </tr> </table> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. WAC 246-247-110(9). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>	Am-241	C-14	Ce-144	Cm-244	Co-60	Cs-134	Cs-137	Eu-154	Eu-155	H-3	I-29	K-40	Km-54	Na-22	Nb-94	Np-237	Pu-238	Pu-239/240	Pu-241	Ra-226	Ru-106	Sb-125	Se-79	Sr-90	Tc-99	U-233	U-234	U-235	U-236	U-238	Zn-65	Zr-95					
Am-241	C-14	Ce-144	Cm-244	Co-60																																	
Cs-134	Cs-137	Eu-154	Eu-155	H-3																																	
I-29	K-40	Km-54	Na-22	Nb-94																																	
Np-237	Pu-238	Pu-239/240	Pu-241	Ra-226																																	
Ru-106	Sb-125	Se-79	Sr-90	Tc-99																																	
U-233	U-234	U-235	U-236	U-238																																	
Zn-65	Zr-95																																				
<p>The emissions for this activity from the all LERF basins and diffuse/fugitive emissions are limited to 4.59E-02 mrem/year unabated and abated.</p>	Continuous	<p><b>CDM:</b> The Annual Radioactive Air Emissions Report for the Hanford Site, Calendar Year 2007.</p>																																			
<p>The LERF is approved to provide temporary storage, as well as flow and pH equalization, for wastewaters prior to treatment at ETF. The LERF shall consist of three high-density polyethylene double-lined basins, each with an operating capacity of 29.5 million liters. Each basin has a leachate collection system located between the primary and secondary composite liner systems and is also equipped with a floating low-density polyethylene cover firmly attached to the sidewalls to prevent unwanted material from entering the basins and to avoid evaporation of wastewater. To prevent the buildup of gas, each basin is passively vented through vent pipes. Gases exiting through a vent pipe shall be channeled through a carbon adsorption filter.</p>	Continuous	<p><b>CDM:</b> As-built drawings, facility-specific procedures, and facility walk downs.</p>																																			

**P-242AL42-001**  
WDOH Emission Unit ID : 148  
Page in AOP : EU0148-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Charcoal Filter <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> As-built drawings and facility walk downs.
<b>Required Sampling:</b> Near Field Environment Sampling <b>Sampling Frequency:</b> Air - every 2 weeks continuous/deposition annually <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> Review of ABCASH data.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528, latest revision).
Permit: AIR 06-1045 - C Issue Date:10-05-06 Effective Date:10-05-06 <b>NOC:</b> Operation of the Liquid Effluent Retention Facility and the 200 Area Effluent Treatment Facility <b>WDOH NOC ID:</b> 690 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0148-001		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 4.59E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).	Continuous	<b>CDM:</b> The Annual Radioactive Air Emissions Report for the Hanford Site, Calendar Year 2007.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The operation of the Liquid Effluent Retention Facility/200 Area Effluent Treatment Facility (LERF/ETF), which includes the load-in station and load-in station filter skid.</p> <p>Incoming wastewater can be added directly to the ETF process or received at the LERF or the load-in station. The LERF is allowed to receive wastewaters via underground pipelines from generator facilities, via pipeline from the load-in station, or directly through a series of access ports located at each basin. The load-in</p>	Continuous	<p><b>CDM:</b> Review of facility and procedure change documents as specified in administrative procedures.</p> <p><b>Comment:</b> Facility design and procedure changes require documentation that includes environmental reviews to determine if the change is a modification of the emission unit.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>station accommodates wastewater receipt via container (e.g., drums, carboys, tankers, etc.).</p> <p>The ETF wastewater treatment process shall be comprised of a main treatment train and a secondary treatment train. The main treatment train shall provide for the removal or destruction of dangerous and radioactive contaminants from incoming wastewater. After treatment, the effluent shall be transferred to the verification tanks where it is sampled then discharged. Treated effluent is comparable to deionized water and contains tritium, which cannot be economically removed. Contaminants removed in the main treatment train are concentrated in the secondary treatment train. The contaminants shall be heated and dried to a powder form or removed as sludge and dried by the addition of absorbents. These residues shall be containerized and disposed onsite as radioactive waste.</p> <p>Additional approval of the process for this activity is contained in the following Conditions/Limitations.</p>		
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 8.48E-02 mrem/year.</p> <p>Approved are the associated potential release rates (Curies/year) of:</p> <p>Alpha-0   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Alpha release rate is assumed to be Pu-239/240. The release rate assumes two full basins and the addition of waste water equivalent to ETF's annual operating capacity. In addition to the isotopes specifically listed as approved under this NOC, other radionuclides may be encountered and are approved so long as they are conservatively represented by the total alpha and total beta-gamma constituents.</p> <p>Am-241   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>B/G-0   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Beta/Gamma release rate is assumed to be Sr-90/Cs-137. The release rate assumes two full basins and the addition of waste water equivalent to ETF's annual operating capacity. In addition to the isotopes specifically listed as approved under this NOC, other radionuclides may be encountered and are approved so long as they are conservatively represented by the total alpha and total beta-gamma constituents.</p> <p>C-14   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ce-144   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cm-244   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than</p>	<p>Continuous</p>	<p><b>CDM:</b> Tracking radionuclide data as specified in administrative procedures.</p> <p><b>Comment:</b> The quantities of individual radionuclides are tracked based on sample results, flow rates, and process knowledge. The MEI dose and potential-to-emit are calculated and the results are placed in the facility record.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>10% of the unabated PTE and represents less than 25% of the abated dose.            Co-60   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Cs-134   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Eu-154   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Eu-155   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            H-3   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            I-129   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            K-40   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.              Mn-54   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Na-22   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Nb-94   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Np-237   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Pu-238   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Pu-241   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Ra-226   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Ru-106   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Sb-125   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than</p>		

Requirement	Compliance Status	Compliance Determination Method																																			
<p>10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Se-79   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Tc-99   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>U-233   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>U-234   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>U-235   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>U-236   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>U-238   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Zn-65   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Zr-95   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <table border="0"> <tr> <td>Am-241</td> <td>C-14</td> <td>Ce-144</td> <td>Cm-244</td> <td>Co-60</td> </tr> <tr> <td>Cs-134</td> <td>Cs-137</td> <td>Eu-154</td> <td>Eu-155</td> <td>H-3</td> </tr> <tr> <td>I-29</td> <td>K-40</td> <td>Mn-54</td> <td>Na-22</td> <td>Nb-94</td> </tr> <tr> <td>Np-237</td> <td>Pu-238</td> <td>Pu-239/240</td> <td>Pu-241</td> <td>Ra-226</td> </tr> <tr> <td>Ru-106</td> <td>Sb-125</td> <td>Se-79</td> <td>Sr-90</td> <td>Tc-99</td> </tr> <tr> <td>U-233</td> <td>U-234</td> <td>U-235</td> <td>U-236</td> <td>U-238</td> </tr> <tr> <td>Zn-65</td> <td>Zr-95</td> <td></td> <td></td> <td></td> </tr> </table> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. WAC 246-247-110(9). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>	Am-241	C-14	Ce-144	Cm-244	Co-60	Cs-134	Cs-137	Eu-154	Eu-155	H-3	I-29	K-40	Mn-54	Na-22	Nb-94	Np-237	Pu-238	Pu-239/240	Pu-241	Ra-226	Ru-106	Sb-125	Se-79	Sr-90	Tc-99	U-233	U-234	U-235	U-236	U-238	Zn-65	Zr-95					
Am-241	C-14	Ce-144	Cm-244	Co-60																																	
Cs-134	Cs-137	Eu-154	Eu-155	H-3																																	
I-29	K-40	Mn-54	Na-22	Nb-94																																	
Np-237	Pu-238	Pu-239/240	Pu-241	Ra-226																																	
Ru-106	Sb-125	Se-79	Sr-90	Tc-99																																	
U-233	U-234	U-235	U-236	U-238																																	
Zn-65	Zr-95																																				

Requirement	Compliance Status	Compliance Determination Method
The emissions for this activity from the all LERF basins and diffuse/fugitive emissions are limited to 4.59E-02 mrem/year unabated and abated.	Continuous	<b>CDM:</b> The Annual Radioactive Air Emissions Report for the Hanford Site, Calendar Year 2007.
The LERF is approved to provide temporary storage, as well as flow and pH equalization, for wastewaters prior to treatment at ETF. The LERF shall consist of three high-density polyethylene double-lined basins, each with an operating capacity of 29.5 million liters. Each basin has a leachate collection system located between the primary and secondary composite liner systems and is also equipped with a floating low-density polyethylene cover firmly attached to the sidewalls to prevent unwanted material from entering the basins and to avoid evaporation of wastewater. To prevent the buildup of gas, each basin is passively vented through vent pipes. Gases exiting through a vent pipe shall be channeled through a carbon adsorption filter.	Continuous	<b>CDM:</b> As-built drawings, facility walk downs, facility-specific procedures.

**P-296AW-001**

WDOH Emission Unit ID : 150

Page in AOP : EU0150-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Deentrainer <b>Required Units:</b> 1 <b>Add'l Description:</b> 2 parallel flow paths	Continuous	<b>CDM:</b> Field interviews.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Heater <b>Required Units:</b> 1 <b>Add'l Description:</b> 2 parallel flow paths	Continuous	<b>CDM:</b> Field interviews.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 2 <b>Add'l Description:</b> 2 parallel flow paths, 1 in operation at a time.	Continuous	<b>CDM:</b> Field interviews, CH2M HILL notification procedure and notification logbook. <b>Comment:</b> Exhauster shut down multiple times during the reporting period; reported per the CH2M HILL notification procedure.
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> 2 parallel flow paths with 2 HEPAs in series	Continuous	<b>CDM:</b> Field interviews.

Requirement	Compliance Status	Compliance Determination Method
<b>Zone or Area:</b> <b>Abatement Technology:</b> Prefilter <b>Required Units:</b> 1 <b>Add'l Description:</b> 2 parallel flow paths	Continuous	<b>CDM:</b> Field interviews.
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 4 week sample/ year <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> ABCASH Program. <b>Comment:</b> ABCASH EDP code number E270.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> CH2M HILL NESHAP quality assurance program.
No active NOC approvals in the AOP for this certification period.		

**P-296A028-001**

WDOH Emission Unit ID : 156

Page in AOP : EU0156-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> 2 filter in series for each train, trains may be operated independently or together	Continuous	<b>CDM:</b> Field interviews, engineering drawings, and operating procedures.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 1 <b>Add'l Description:</b> 1 for each train, trains may be operated independently or together	Continuous	<b>CDM:</b> Field interviews, engineering drawings, operating procedures, CH2M HILL notification procedure and notification logbook. <b>Comment:</b> Exhauster shut down two times during the reporting period; reported per the CH2M HILL notification procedure.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Deentrainer <b>Required Units:</b> 1 <b>Add'l Description:</b> 1 for each train	Continuous	<b>CDM:</b> Field interviews, engineering drawings, and operating procedures.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Heater <b>Required Units:</b> 1 <b>Add'l Description:</b> 1 for each train	Continuous	<b>CDM:</b> Field interviews, engineering drawings, and operating procedures.

Requirement	Compliance Status	Compliance Determination Method
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 4 week sample/ year <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> ABCASH Program. <b>Comment:</b> ABCASH EDP code number E272.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> CH2M HILL NESHAP quality assurance program.
No active NOC approvals in the AOP for this certification period.		

**P-242T-001**

WDOH Emission Unit ID : 162

Page in AOP : EU0162-001

EMISSION UNIT DID NOT OPERATE DURING CY 2007 SEE TABLE 2

**P-242S-001**

WDOH Emission Unit ID : 163

Page in AOP : EU0163-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> 2 in parallel with 2 in series (1 fan abandoned in place, only one flow path is available for operation).	Intermittent	<b>CDM:</b> Field interviews, CH2M HILL notification procedure and notification logbook. <b>Comment:</b> Aerosol testing of the breather filter was not performed on time during the reporting period; reported per the CH2M HILL notification procedure.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 1 <b>Add'l Description:</b> 2 parallel flow paths (1 fan abandoned in place, only one flow path is available for operation).	Continuous	<b>CDM:</b> Field interviews.
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 4 week sample/ year <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> ABCASH Program. <b>Comment:</b> ABCASH EDP code number W096.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3)	Continuous	<b>CDM:</b> CH2M HILL NESHAP quality assurance program.

Requirement	Compliance Status	Compliance Determination Method
<b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)		
No active NOC approvals in the AOP for this certification period.		

**R-1706KE-001**  
WDOH Emission Unit ID : 168  
Page in AOP : EU0168-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Verified by field inspection. A current DOP test sticker from Vent and Balance was observed.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 1 <b>Add'l Description:</b> Intermittent operation	Continuous	<b>CDM:</b> Verified by field inspection. With a review of entries in the log book kept by the switch by the fan recording when the fan is turned on was performed. <b>Comment:</b> The fan & sampler are turned on when work is performed within the laboratory hood.
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 4 week sample/year <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> Sampling is verified by information in ABCASH. HNF-EP-0835, Statement of Work for Services Provided by the Waste Sampling and Characterization facility for the Effluent and Environmental Monitoring Program during Calendar Year 2007, defines what analyses are performed and frequency.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> K Basins Closure Project Process Standard PS-400 Effluent and Emission (KW and Balance of Plant) Requirements and HNF-EP-0835, Statement of Work for Services Provided by the Waste Sampling and Characterization facility for the Effluent and Environmental Monitoring Program during Calendar Year 2007, defines what analysis are performed and frequency.

Requirement	Compliance Status	Compliance Determination Method
No active NOC approvals in the AOP for this certification period.		

**P-296A020-001**  
WDOH Emission Unit ID : 174  
Page in AOP : EU0174-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 4 <b>Add'l Description:</b> 2 HEPA's in series for each train, 2 trains	Continuous	<b>CDM:</b> Field interviews.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Field interviews, CH2M HILL notification procedure and notification logbook. <b>Comment:</b> Exhauster shut down once during the reporting period; reported per the CH2M HILL notification procedure.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Radial Damper <b>Required Units:</b> 1 <b>Add'l Description:</b> Set to allow only 2,000 CFM (1,000 CFM per annulus)	Continuous	<b>CDM:</b> Field interviews.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Heater <b>Required Units:</b> 2 <b>Add'l Description:</b> 1 per train, 2 trains	Continuous	<b>CDM:</b> Field interviews.
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 4 week sample/year <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> ABCASH Program. <b>Comment:</b> ABCASH EDP code number E197.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> CH2M HILL NESHAP quality assurance program.

Permit: AIR 06-1031 Issue Date:10-05-06 Effective Date:10-05-06 NOC: 241-AZ Tank Farm Annulus Exhauster Operation WDOH NOC ID: 671 Date In AOP: 01-01-07 Page in AOP: EU0174-001		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 1.56E-09 mrem/year to the Maximally Exposed Individual. The total unabated emission limit for this Notice of Construction is limited to 3.12E-06 mrem/year to the Maximally Exposed Individual.	Continuous	<b>CDM:</b> Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>Exhausting the annulus of the 241-AZ-101 and 241-AZ-102 double-shell tanks (DSTs). The inner shell is constructed from heat-treated, stress-relieved steel. The outer shell is constructed of non-stress-relieved steel. The outer shell is constructed of non-stress-relieved steel. The two shells are separated by a 2.5 foot annulus and are contained inside a concrete shell. The tanks have a usable waste volume of approximately 1,000,000 gallons each. The 296-A-20 stack exhauster ventilates the annular space of both 241-AZ-101 and 241-AZ-102. The 241-AZ annulus exhaust fan draws outside air into a common inlet filter assembly. The inlet filter assembly shall consist of two filter stages, a pre-filter bank, and an inlet filter. The air will pass through a distribution manifold and flow control valves into the annular space of both the 241-AZ-101 and 241-AZ-102 tanks, via underground ductwork. The flow control butterfly dampers can be adjusted to distribute air between the sides of the annuli and the air slots below the primary tanks. Exhaust air shall be drawn out of each annulus through underground ducting to individual aboveground exhaust HEPA filter banks (one for each tank), associated heaters, and isolation dampers. To allow for balancing flow between annuli or to allow isolation of an individual exhaust HEPA filter bank, dampers shall be installed upstream of each exhaust HEPA filter bank.</p>	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.
The Annual Possession Quantity is limited to the following radionuclides (Curies/year): Alpha-0      7.00E-05             Beta-0      2.99E-02	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents/ procedures, and/or database.
Flow rate through the HEPA filters shall not exceed the manufactures rating of those HEPA filters.	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.

**EP-318-01-S**  
WDOH Emission Unit ID : 175  
Page in AOP : EU0175-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> Exhaust Duct <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b> 12" x 24" x 24" HEPA filter installed in the exhaust duct from the fume hood in Room 126.	Continuous	<b>CDM:</b> Reviewed the HEPA Filter PM Results (PM-2037) & confirmed with Building Engineer.
<b>Zone or Area:</b> Exhaust Duct <b>Abatement Technology:</b> Exhaust Fan <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Reviewed the Exhaust Fan PM Results (PM-42524) & confirmed with Building Engineer.
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 2 week sample/year <b>Radionuclide Requiring Measurement:</b> Total Alpha and Total Beta	Continuous	<b>CDM:</b> Emission data is maintained in the Gaseous Emission Database (GED). A query of the database confirmed that all required samples were collected during the reporting period, including the start and end dates of sample periods.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> A NESHAPs Inventory of radioactive materials is conducted for PNNL facilities on an annual basis in accordance with PNNL-10855 Rev. 4, "Assessment of Unabated Facility Emission Potentials for Evaluating Airborne Radionuclide Monitoring Requirements at PNNL-2007". The "Pacific Northwest National Laboratory Effluent Management Quality Assurance Plan" (EM-QA-01) specifies quality assurance requirements. The "Airborne Radionuclide Emission Sample Analysis Statement of Work" (Rev. 7, April 2007) specifies radionuclide analysis methods.

Requirement	Compliance Status	Compliance Determination Method																								
Permit: AIR 06-1037 Issue Date:10-05-06 Effective Date:10-05-06 NOC: Calibration and Development Activities in the Radiological Calibrations Laboratory (318) WDOH NOC ID: 681 Date In AOP: 01-01-07 Page in AOP: EU0175-001																										
The total abated emission limit for this Notice of Construction is limited to 1.72E-05 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).	Continuous	CDM: Reviewed the radionuclide air emissions data for calendar year 2007 to verify total abated emissions are below the NOC limit.																								
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The 318 Building provides technical services such as internal dosimetry, external dosimetry, instrument calibration, repair, and testing in support of the Hanford and DOE missions. Research capabilities are also provided to support the development of radiation detection and measuring instruments.</p>	Continuous	CDM: Under the PNNL Standards-Based Management System (SBMS) each new research project is required to be reviewed via the Electronic Prep & Risk (EPR) assessment process. The reviews are recorded in the EPR database. Projects with potential air emissions were further reviewed by Effluent Management (EM) under the SBMS Airborne Emissions Subject Area, and the records retained by EM.																								
<p>The PTE for this project as determined under WAC 246-247-030(21a-e) [as specified in the application] is 1.72E-05 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Alpha-0 1.70E-06 Liquid/Particulate Solid            WAC 246-247-030 (21) (a)            Alpha release rate based on Am-241/Pu-239.</p> <p>B/G - 0 4.50E-07 Liquid/Particulate Solid            WAC 246-247-030 (21) (a)            Beta/gamma release rate based on Cs-137/Sr-90.</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <table border="0"> <tr> <td>Am-241</td> <td>Ba-133</td> <td>Co-57</td> <td>Co-60</td> <td>Cs-137</td> <td>Eu-154</td> </tr> <tr> <td>Eu-155</td> <td>H-3</td> <td>Hg-203</td> <td>Kr-85</td> <td>Mn-54</td> <td>Na-22</td> </tr> <tr> <td>Pu-239</td> <td>Ra-226</td> <td>Rn-220</td> <td>Rn-222</td> <td>Sb-125</td> <td>Sr-90</td> </tr> <tr> <td>Th-228</td> <td>U(Nat)-0</td> <td>Y-88</td> <td></td> <td></td> <td></td> </tr> </table> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the AIR Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>	Am-241	Ba-133	Co-57	Co-60	Cs-137	Eu-154	Eu-155	H-3	Hg-203	Kr-85	Mn-54	Na-22	Pu-239	Ra-226	Rn-220	Rn-222	Sb-125	Sr-90	Th-228	U(Nat)-0	Y-88				Continuous	CDM: A NESHAPs Inventory of radioactive materials is conducted for PNNL facilities on an annual basis in accordance with PNNL-10855 Rev. 4, "Assessment of Unabated Facility Emission Potentials for Evaluating Airborne Radionuclide Monitoring Requirements at PNNL-2007". Reviewed the 2007 NESHAPs radionuclide inventory assessment results to verify compliance.
Am-241	Ba-133	Co-57	Co-60	Cs-137	Eu-154																					
Eu-155	H-3	Hg-203	Kr-85	Mn-54	Na-22																					
Pu-239	Ra-226	Rn-220	Rn-222	Sb-125	Sr-90																					
Th-228	U(Nat)-0	Y-88																								

Requirement	Compliance Status	Compliance Determination Method
HEPA filters shall be individually tested, annually, to the requirements of ASME N510, and shall have a minimum efficiency of 99.95%.	Continuous	<b>CDM:</b> Efficiency testing and replacement of HEPA filters are performed in accordance with Air Balance procedures located on the F&O web page (e.g., AIR BAL-3, In Place Testing of Main Exhaust HEPA Filters).
The radionuclides in the Annual Possession Quantity are limited to the following physical forms:  Gas: H-3, Kr-85, Rn-220, Rn-222. Solid: Am-241, Ba-133, Co-57, Co-60, Cs-137, Eu-154, Eu-155, Hg-203, Mn-54, Na-22, Pu-239, Sb-125, Sr-90, U(Nat), Y-88. Particulates: Ra-226, Th-228.	Continuous	<b>CDM:</b> NESHAPS Inventory of radioactive materials is conducted for PNNL facilities on an annual basis in accordance with PNNL-10855 Rev 4, "Assessment of Unabated Facility Emission Potentials for Evaluating Airborne Radionuclide Monitoring Requirements at PNNL-2007". This report was reviewed to verify the potential to emit.

**P-296W004 001**

WDOH Emission Unit ID : 193  
Page in AOP : EU0193-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> Redundant systems in parallel consisting of two banks each	Continuous	<b>CDM:</b> Verified by engineering drawing and operational readiness review.  <b>Comment:</b> Drawing number kept in regulatory file.
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> Redundant systems in parallel consisting of two banks each	Continuous	<b>CDM:</b> Verified by engineering drawing and operational readiness review.  <b>Comment:</b> Drawing number kept in regulatory file.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Prefilter <b>Required Units:</b> 1 <b>Add'l Description:</b> Prefilter for each HEPA housing	Continuous	<b>CDM:</b> Verified by engineering drawing and operational readiness review.  <b>Comment:</b> Drawing number kept in regulatory file.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 4 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Verified by engineering drawing and operational readiness review.  <b>Comment:</b> Drawing number kept in regulatory file.

Requirement	Compliance Status	Compliance Determination Method
<p><b>Required Sampling:</b> Record Sample  <b>Sampling Frequency:</b> Continuous, Collect samples biweekly at a minimum  <b>Radionuclide Requiring Measurement:</b> Each radionuclide that could contribute greater than 10% of the potential TEDE</p>	Continuous	<p><b>CDM:</b> Review of data in ABCASH. HNF-EP-0835 Statement of Work for Services Provided by the WSCF for the Effluent and Environmental Monitoring program.</p>
<p><b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) &amp; WAC 246-247-075(2)  <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 60 Appendiix A, Method 2; 40 CFR 61, Appendix B, Method 114; 61.93(b)(2)(ii) ANSI N13.1</p>	Continuous	<p><b>CDM:</b> Maintenance procedure WRP-99001 Stack Airflow Test; NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528 Latest Revision).</p>
<p>Permit: AIR 06-1006 - A <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-02-06 <b>Obsolete Date:</b> 03-29-07  <b>NOC:</b> Construction and Operation of the Waste Receiving and Processing (WRAP)  <b>WDOH NOC ID:</b> 638 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0193-001</p>		
Requirement	Compliance Status	Compliance Determination Method
<p>The total abated emission limit for this Notice of Construction is limited to 5.63E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).</p>	Continuous	<p><b>CDM:</b> The Annual Radioactive Air Emissions Report for the Hanford Site, Calendar Year 2007.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>At the WRAP FACILITY--  Examining, assaying, characterizing, treating, verifying, and repackaging solid radioactive material and mixed waste to enable treatment, storage, or disposal of low-level waste (LLW), transuranic (TRU) waste, TRU mixed waste, and low-level mixed waste (LLMW) in contact handled (CH) containers where the external surface dose rate does not exceed 200 millirem per hour.  At SHIPPING AND RECEIVING (200 Area Diffuse/Fugitive Emissions)--  Containers delivered to and transferred/shipped from the shipping and receiving shall be unloaded, visually inspected, bar code labeled, and radiologically surveyed with information pertaining to each container entered into the data management system.</p> <p>Following visual inspection, transfer incoming drums to the NDE/NDA area for further characterization using the process described for the NDE/NDA below.</p> <p>Once characterized, verified, and/or certified, the certified TRU waste must be loaded into a transuranic package transporter (TRUPACT-2) shipping cask for shipment to the Waste Isolation Pilot Plant (WIPP) in New Mexico. Verified LLW shall be transferred for disposal onsite. Mixed waste must be moved to an offsite treatment or permitted storage facility, or to an onsite treatment, disposal, and/or storage unit. Radioactive material that fails verification shall be returned to the generator, processed to correct the problem, or sent to another facility for further reprocessing.</p> <p>During NONDESTRUCTIVE</p>	Continuous	<p><b>CDM:</b> NOC Application (DOE/RL-2000-34) and process descriptions are contained in procedures. Process did not change during reporting period.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>EXAMINATION/NONDESTRUCTIVE ASSAY SYSTEMS (200 Area Diffuse/Fugitive Emissions)-- The NDE/NDA shall used to examine and to certify LLW, LLMW, TRU, and TRU mixed waste container contents without opening the containers.</p> <p>In the PROCESS AREA (296-W-4 Emission Unit)-- The process area consists of four glovebox lines: a TRU waste process glovebox, a TRU waste restricted waste management (RWM) glovebox, a LLW process glovebox (with supercompaction capability that also can be used for TRU waste processing), and a LLW RWM glovebox. The following is allowed in the process gloveboxes: drums opened, contents sorted and sampled, if necessary, noncompliant items removed and transferred to the RWM gloveboxes, and remaining compliant waste repackaged into new drums.</p> <p>Incoming drums generally shall be opened in gloveboxes. However, loosening of a lid or replace a damaged lid outside of a glovebox is allowed.</p> <p>In the TRANSURANIC WASTE PROCESS LINE-- The TRU waste process glovebox line consists of stainless steel modular gloveboxes bolted together in a linear configuration. Windows shall be gasketed and bolted to the glovebox wall, and gloveports shall be fitted to the glovebox wall and windows to accept push-through type gloves. Glovebox ventilation shall be the once-through type. Air shall be drawn from the process room, through a nontestable high-efficiency process filter, and into the glovebox. The air shall be exhausted from the glovebox through another nontestable high-efficiency process filter to the combined glovebox exhaust system.</p> <p>Process operations shall be performed inside of the gloveboxes by using the gloves and/or remote controlled manipulators. Drums shall be loaded into the glovebox through airlock and sealed-type entry systems.</p> <p>In the TRANSURANIC WASTE RESTRICTED WASTE MANAGEMENT LINE-- The TRU waste RWM glovebox line consists of stainless steel. Window, gloveport, ventilation, and manipulator features shall comply to those described for the TRU waste process line glovebox. Glovebox ventilation shall be the once-through type. Air shall be drawn from the process room, through a nontestable high-efficiency process filter, and into the glovebox. The air shall be exhausted from the glovebox through another nontestable high-efficiency process filter to the combined glovebox exhaust system.</p> <p>The treatment and repackaging operations that occur in the TRU waste RWM glovebox is limited to the following.</p> <p>Aerosol cans are depressurized and drained. The drained liquids are treated within the gloveboxes or retained in containers, which are sent to storage outside of the WRAP Facility. Vapors from the aerosol cans shall pass through a series of demisters for removal of entrained liquids, and shall be vented to the glovebox exhaust.</p> <p>Miscellaneous inorganic liquids shall be sampled for characterization, neutralized if required, and solidified using stabilizing additives.</p> <p>Miscellaneous organic liquids shall be sampled for characterization, treated within the gloveboxes or repackaged for transfer to storage facilities pending future treatment.</p> <p>Corrosive materials shall be neutralized. After neutralization, the</p>		

Requirement	Compliance Status	Compliance Determination Method
<p>materials shall be solidified or loaded out for storage or treatment outside the WRAP Facility.</p> <p>Other treatment such as mercury amalgamation, stabilization of heavy metals, and macroencapsulation are allowed to be performed.</p> <p>Radioactive material shall be repackaged to meet acceptance criteria of the receiving facility.</p> <p>Radioactive material is sampled.</p> <p>The empty aerosol cans and other treated LLW packages will be loaded into new drums and routed to the LLW process glovebox for compaction or loaded out of the RWM glovebox for storage, disposal, or additional treatment.</p> <p>In the LOW-LEVEL WASTE PROCESS LINE-- The LLW process glovebox line consists of stainless steel modular gloveboxes bolted together in a linear configuration. Glovebox ventilation shall be of the once-through type. Air shall be drawn from the process room, through a nontestable high-efficiency process filter, and into the glovebox. The air shall be exhausted from the glovebox through another nontestable high-efficiency process filter to the combined glovebox exhaust system.</p> <p>Drums shall enter the glovebox through an airlock entry system. Noncompliant items shall be bar code labeled and transferred to the LLW RWM glovebox using a reusable transfer system. Compliant waste shall be compacted and repackaged into new drums.</p> <p>The LLW process glovebox will be modified to support CH-TRU processing, and include the capability for supercompaction. A one-trip drum exit port will be installed on the LLW glovebox. An improved drum tipper will be used to enable sorting capability, and a commercial non-destructive assay system for glovebox material balance control will be installed.</p> <p>In the LOW-LEVEL WASTE RESTRICTED WASTE MANAGEMENT PROCESS LINE.- The operations in the LLW RWM process line is limited those as described for the operations in the TRU waste RWM line.</p>		
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 1.13E+02 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Alpha-0 1.00E+01 Liquid/Particulate Solid WAC 246-247-030(21)(a) License PTE limit bounds 1.00E+01 Ci/yr 241Am and release fraction of 0.001. Any radionuclide on the chart of the nuclides could be encountered during WRAP Process Area activities. The radionuclides specifically listed in the NOC application were chosen to conservatively represent all radionuclide emissions that may occur in particulate form. A small contribution from the gaseous radionuclides may be encountered. Although any radionuclide could be present, for conservatism all alpha is assumed to be 241Am and all beta/gamma is assumed to be 90Sr for dose calculation estimates. Other radionuclides may be encountered and are approved so long as they are conservatively represented by the total alpha and total beta-gamma constituents.</p> <p>B/G-0 1.50E+02 Liquid/Particulate Solid WAC 246-247-030(21)(a) License PTE limit bounds 1.50E+02 Ci/yr 90Sr and release fraction of 0.001. Any radionuclide on the chart of the nuclides could be encountered during WRAP Process Area activities. The radionuclides specifically listed in the NOC application were chosen to</p>	Continuous	CDM: Verified the basis of the PTE calculation in the NOC application and ensure continued compliance via facility Data Management System (DMS) tracking per operational procedure WRP1-OP-0503.

Requirement	Compliance Status	Compliance Determination Method
<p>conservatively represent all radionuclide emissions that may occur in particulate form. A small contribution from the gaseous radionuclides may be encountered. Although any radionuclide could be present, for conservatism all alpha is assumed to be 241Am and all beta/gamma is assumed to be 90Sr for dose calculation estimates. Other radionuclides may be encountered and are approved so long as they are conservatively represented by the total alpha and total beta-gamma constituents.</p> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. WAC 246-247-110(9). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>		
<p>Permit: AIR 07-308 - A <b>Issue Date:</b>03-29-07 <b>Effective Date:</b>03-29-07  <b>NOC:</b> Construction and Operation of the Waste Receiving and Processing (WRAP)  <b>WDOH NOC ID:</b> 638 <b>Date In AOP:</b> 05-03-07 <b>Page in AOP:</b> EU0193-001</p>		
Requirement	Compliance Status	Compliance Determination Method
<p>The total abated emission limit for this Notice of Construction is limited to 5.63E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).</p>	Continuous	<b>CDM:</b> Annual Radioactive Air Emissions Report for the Hanford Site, Calendar Year 2007.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p><b>At the WRAP FACILITY--</b> Examining, assaying, characterizing, treating, verifying, and repackaging solid radioactive material and mixed waste to enable treatment, storage, or disposal of low-level waste (LLW), transuranic (TRU) waste, TRU mixed waste, and low-level mixed waste (LLMW) in contact handled (CH) containers where the external surface dose rate does not exceed 200 millirem per hour. CH containers are defined as packages having surface dose rates of less than 200 millirem per hour. Remote-handled (RH) containers (i.e., containers where the external surface dose rate is equal to or greater than 200 millirem per hour) also are processed and stored at WRAP in accordance with the approved safety analysis.</p> <p><b>At SHIPPING AND RECEIVING (200 Area Diffuse/Fugitive Emissions)--</b> Containers delivered to and transferred/shipped from the shipping and receiving shall be unloaded, visually inspected, bar code labeled, and radiologically surveyed with information pertaining to each container</p>	Continuous	<b>CDM:</b> NOC application (DOE/RL-2000-34) and process descriptions are contained in procedures. Process did not change during reporting period.

Requirement	Compliance Status	Compliance Determination Method
<p>entered into the data management system.</p> <p>Following visual inspection, transfer incoming drums to the NDE/NDA area for further characterization using the process described for the NDE/NDA below.</p> <p>Once characterized, verified, and/or certified, the certified TRU waste must be loaded into a transuranic package transporter (TRUPACT-2) shipping cask for shipment to the Waste Isolation Pilot Plant (WIPP) in New Mexico. Verified LLW shall be transferred for disposal onsite. Mixed waste must be moved to an offsite treatment or permitted storage facility, or to an onsite treatment, disposal, and/or storage unit. Radioactive material that fails verification shall be returned to the generator, processed to correct the problem, or sent to another facility for further reprocessing.</p> <p>During NONDESTRUCTIVE EXAMINATION/NONDESTRUCTIVE ASSAY SYSTEMS (200 Area Diffuse/Fugitive Emissions)-- The NDE/NDA shall used to examine and to certify LLW, LLMW, TRU, and TRU mixed waste container contents without opening the containers.</p> <p>In the PROCESS AREA (296-W-4 Emission Unit)-- The process area consists of four glovebox lines: a TRU waste process glovebox, a TRU waste restricted waste management (RWM) glovebox, a LLW process glovebox (with supercompaction capability that also can be used for TRU waste processing), and a LLW RWM glovebox. The following is allowed in the process gloveboxes: drums opened, contents sorted and sampled, if necessary, noncompliant items removed and transferred to the RWM gloveboxes, and remaining compliant waste repackaged into new drums.</p> <p>Incoming drums generally shall be opened in gloveboxes. However, loosening of a lid or replace a damaged lid outside of a glovebox is allowed.</p> <p>In the TRANSURANIC WASTE PROCESS LINE-- The TRU waste process glovebox line consists of stainless steel modular gloveboxes bolted together in a linear configuration. Windows shall be gasketed and bolted to the glovebox wall, and gloveports shall be fitted to the glovebox wall and windows to accept push-through type gloves. Glovebox ventilation shall be the once-through type. Air shall be drawn from the process room, through a nontestable high-efficiency process filter, and into the glovebox. The air shall be exhausted from the glovebox through another nontestable high-efficiency process filter to the combined glovebox exhaust system.</p> <p>Process operations shall be performed inside of the gloveboxes by using the gloves and/or remote controlled manipulators. Drums shall be loaded into the glovebox through airlock and sealed-type entry systems.</p> <p>In the TRANSURANIC WASTE RESTRICTED WASTE MANAGEMENT LINE-- The TRU waste RWM glovebox line consists of stainless steel. Window, gloveport, ventilation, and manipulator features shall comply to those described for the TRU waste process line glovebox. Glovebox ventilation shall be the once-through type. Air shall be drawn from the process room, through a nontestable high-efficiency process filter, and into the glovebox. The air shall be exhausted from the glovebox through another nontestable high-efficiency process filter to the combined glovebox exhaust system.</p>		

Requirement	Compliance Status	Compliance Determination Method
<p>The treatment and repackaging operations that occur in the TRU waste RWM glovebox is limited to the following.</p> <p>Aerosol cans are depressurized and drained. The drained liquids are treated within the gloveboxes or retained in containers, which are sent to storage outside of the WRAP Facility. Vapors from the aerosol cans shall pass through a series of demisters for removal of entrained liquids, and shall be vented to the glovebox exhaust.</p> <p>Miscellaneous inorganic liquids shall be sampled for characterization, neutralized if required, and solidified using stabilizing additives.</p> <p>Miscellaneous organic liquids shall be sampled for characterization, treated within the gloveboxes or repackaged for transfer to storage facilities pending future treatment.</p> <p>Corrosive materials shall be neutralized. After neutralization, the materials shall be solidified or loaded out for storage or treatment outside the WRAP Facility.</p> <p>Other treatment such as mercury amalgamation, stabilization of heavy metals, and macroencapsulation are allowed to be performed.</p> <p>Radioactive material shall be repackaged to meet acceptance criteria of the receiving facility.</p> <p>Radioactive material is sampled.</p> <p>The empty aerosol cans and other treated LLW packages will be loaded into new drums and routed to the LLW process glovebox for compaction or loaded out of the RWM glovebox for storage, disposal, or additional treatment.</p> <p>In the LOW-LEVEL WASTE PROCESS LINE-- The LLW process glovebox line consists of stainless steel modular gloveboxes bolted together in a linear configuration. Glovebox ventilation shall be of the once-through type. Air shall be drawn from the process room, through a nontestable high-efficiency process filter, and into the glovebox. The air shall be exhausted from the glovebox through another nontestable high-efficiency process filter to the combined glovebox exhaust system.</p> <p>Drums shall enter the glovebox through an airlock entry system. Noncompliant items shall be bar code labeled and transferred to the LLW RWM glovebox using a reusable transfer system. Compliant waste shall be compacted and repackaged into new drums.</p> <p>The LLW process glovebox will be modified to support CH-TRU processing, and include the capability for supercompaction. A one-trip drum exit port will be installed on the LLW glovebox. An improved drum tipper will be used to enable sorting capability, and a commercial non-destructive assay system for glovebox material balance control will be installed.</p> <p>In the LOW-LEVEL WASTE RESTRICTED WASTE MANAGEMENT PROCESS LINE-- The operations in the LLW RWM process line is limited those as described for the operations in the TRU waste RWM line.</p>		
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 1.13E+02 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p>	<p>Continuous</p>	<p>CDM: Verified the basis of the PTE calculation in the NOC application and insure continued compliance via facility</p>

Requirement	Compliance Status	Compliance Determination Method
<p>Alpha-0 1.00E+01 Liquid/Particulate Solid WAC 246-247-030(21)(a) License PTE limit bounds 1.00E+01 Ci/yr 241Am and release fraction of 0.001. Any radionuclide on the chart of the nuclides could be encountered during WRAP Process Area activities. The radionuclides specifically listed in the NOC application were chosen to conservatively represent all radionuclide emissions that may occur in particulate form. A small contribution from the gaseous radionuclides may be encountered. Although any radionuclide could be present, for conservatism all alpha is assumed to be 241Am and all beta/gamma is assumed to be 90Sr for dose calculation estimates. Other radionuclides may be encountered and are approved so long as they are conservatively represented by the total alpha and total beta-gamma constituents.</p> <p>B/G-0 1.50E+02 Liquid/Particulate Solid WAC 246-247-030(21)(a) License PTE limit bounds 1.50E+02 Ci/yr 90Sr and release fraction of 0.001. Any radionuclide on the chart of the nuclides could be encountered during WRAP Process Area activities. The radionuclides specifically listed in the NOC application were chosen to conservatively represent all radionuclide emissions that may occur in particulate form. A small contribution from the gaseous radionuclides may be encountered. Although any radionuclide could be present, for conservatism all alpha is assumed to be 241Am and all beta/gamma is assumed to be 90Sr for dose calculation estimates. Other radionuclides may be encountered and are approved so long as they are conservatively represented by the total alpha and total beta-gamma constituents.</p> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. WAC 246-247-110(9). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>		<p>Data Management System (DMS) tracking per operational procedure WRP1-OP-0503.</p>

**P-241S112-001**

WDOH Emission Unit ID : 203

Page in AOP : EU0203-001

Requirement	Compliance Status	Compliance Determination Method
<p>For the time period of : (01-01-07 to 12-31-07)</p>		
<p><b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b> Passive Breather Filter (Radial breather filter installed on February 27, 2007)</p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews.</p>

Requirement	Compliance Status	Compliance Determination Method
<p><b>Required Sampling:</b> Smear survey on the inside surface of the ducting and downstream of the HEPA filter or on the outside of the screen covering the outlet of the vent.  <b>Sampling Frequency:</b> 1 per year.  <b>Radionuclide Requiring Measurement:</b> Levels below 10,000 dpm/100cm<sup>2</sup> beta/gamma and 200 dpm/100cm<sup>2</sup> alpha will verify low emissions.</p>	Continuous	CDM: Annual Radiological Surveillance Task, RSRs, and field interviews.
<p><b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) &amp; WAC 246-247-075(3)</p>	Continuous	CDM: Near Field Monitoring Program.

Permit: AIR 06-1041 - B    **Issue Date:**10-05-06    **Effective Date:**10-05-06  
**NOC:** Installation and Operation of Waste Retrieval Systems in Single-Shell Tank (SST) 241-S-112  
**WDOH NOC ID:** 686    **Date In AOP:** 01-01-07    **Page in AOP:** EU0203-001

Requirement	Compliance Status	Compliance Determination Method
<p>The total abated emission limit for this Notice of Construction is limited to 3.90E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice of Construction is limited to 7.51E+01 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).</p>	Continuous	CDM: Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The Salt Cake Dissolution Retrieval Demonstration Project in SST 241-S-112 uses water that is introduced in a controlled fashion to dissolve and mobilize solids in the tank. The resulting solution is then pumped and transferred to the Double-Shell Tank (DST) system. A portable exhauster will provide active ventilation for some dissolution activities and all waste transfer activities until structural safety considerations force shutdown, at which time passive ventilation shall be used.</p> <p>The following activities will be performed:</p> <p>Pit</p> <p>a. Opening the 241-S-112 Condenser Pit to remove the old cover plate and install a new cover plate to allow for the connection of a HEPA filter to the exhauster trunk for a portable exhauster.</p> <p>b. Enter 241-S-C Valve Pit to disconnect the existing 241-S-112 HIHTL.</p> <p>c. Enter the 241-S-109 Valve Pit to remove the existing HIHTL that is no longer needed.</p> <p>d. Accessing the 241-S-112A Central Pump Pit to:</p> <ul style="list-style-type: none"> <li>- Install an instrument manifold,</li> <li>- Install a transfer pump, and</li> <li>- Replacement of the existing HIHTL that is not needed for this project with a new HIHTL.</li> </ul> <p>e. Enter the 241-S-A Valve Pit to:</p> <ul style="list-style-type: none"> <li>- Connect the hose-in-hose transfer line (HIHTL) from the 241-S-112</li> </ul>	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/ documents, and procedures.

Requirement	Compliance Status	Compliance Determination Method
<p>Tank to the DST receiver tank, and - Install the leak detection hardware. Pit work shall be performed in accordance with ALARACT 6 "TWRS ALARACT Demonstration for Pit Access" and ALARACT 14 "TWRS ALARACT Demonstration for Pit Work".</p> <p>Soil Excavation a. Excavation of soil inside the tank farm for the installation of an electrical and instrumentation conduit to monitor transfer progress. b. Excavation of soil outside the tank farm for conduit and transformer installation. c. Excavation of soil inside the tank farm for installation of a new raw water header installed between the 241-SY Tank Farm and the 241-S Tank Farm to the 241-S-112 Tank. d. Installation of a HIHTL to convey waste from Tank 241-S-112 to the DST transfer system.</p> <p>Soil excavation shall be performed in accordance with ALARACT 5 "TWRS ALARACT Demonstration for Soil Excavation (using hand tools)".</p> <p>In-Tank Equipment a: Installation of various motor controlled spray devices into (3) risers near the outside perimeter of the tank and an automatic indexing spray device will be installed on a centrally located riser. b. Remove Liquid Observation Well (LOW). c. Installation of Stilwell (Level Monitoring Device protection).</p> <p>Work shall be performed in accordance with ALARACT 1 "TWRS ALARACT Demonstration for Riser Preparation/Opening" and ALARACT 13 "TWRS ALARACT Demonstration for Installation, Operation and Removal of Tank Equipment".</p> <p>Water Addition/Dilution - Installation of a new heat traced and insulated raw water line installed between the 241-S Tank Farm and the 241-SY Tank Farm to the water distribution skid on top of Tank 241-S-112.</p> <p>Water addition and dilution for salt-cake dissolution shall use portable exhausters for active ventilation when water addition flow rate is above 80 gallons per minute, at less than 80 gallons per minute salt cake dissolution shall use either a breather HEPA filter for passive ventilation, or active ventilation.</p> <p>Waste Transfer - Installation of a progressive cavity pump and supporting equipment to recover and transport waste from Tank 241-S-112 to the DST System.</p> <p>Waste transfer activities shall use portable exhausters for active ventilation until structural safety considerations force shutdown, at which time passive ventilation shall be used. The major components of the exhauster are; stack, glycol heaters, 1 pre-filter, 2 HEPA filters, 1 exhaust fan, sampling system and a demister which is determined to be optional.</p> <p>Other - Removal of the Standard Hydrogen Monitoring Probe.</p> <p>The completion of tank retrieval may also be aided by a Remote Water Lance (RWL) that is a high pressure water device, or hydrolaser. The system will consist of both ex-tank and in-tank components. The ex-tank components will be comprised of; high pressure water skid, operating controls, cables and hoses. The in-tank components will be comprised of umbilical, in-tank vehicle, high pressure nozzle(s).</p>		

Requirement	Compliance Status	Compliance Determination Method																																																																																																
<p>The high pressure water skid will provide the water at the desired pressure, not to exceed 37,000 psig. A conditioning system will be used to filter the raw water entering the skid to ensure that no abrasive materials are entrained in the water. The water volumetric flow rate will be on the order of 6 to 15 gpm. The operating controls will be located in a control trailer outside of the farm fence. The cables and hoses will connect the hydraulically powered in-tank vehicle with the ex-tank controls and water skid via the umbilical. The in-tank vehicle will house one to four high pressure water nozzles. The RWL will be operated with the nozzle end submerged to avoid aerosols in the tank. A rupture disc will be used to prevent reaching pressures above 37,000 psig.</p> <p>The in-tank vehicle, with umbilical, will be deployed through a 12 inch riser in tank 241-S-112 and will weigh on the order of 1,000 pounds plus the weight of the umbilical. A crane will be used to lower the vehicle and the full length of umbilical down into the tank. After the in-tank vehicle and umbilical are in the tank, a cover, with gasket, will be bolted to the riser flange to seal the riser opening. The equipment will be operated outside the tank farm fence.</p>																																																																																																		
<p>The Annual Possession Quantity is limited to the following radionuclides (Curies/year):</p> <table border="0"> <tr> <td>Ac-227</td><td>6.12E-03</td><td>Am-241</td><td>7.24E+01</td><td>Am-243</td><td>7.60E+01</td></tr> <tr> <td>Ba-137m</td><td>2.14E+05</td><td>C-14</td><td>3.59E+01</td><td>Cd-109</td><td>2.26E+02</td></tr> <tr> <td>Cm-242</td><td>1.14E-02</td><td>Cm-243</td><td>5.63E-01</td><td>Cm-244</td><td>1.35E+01</td></tr> <tr> <td>Co-60</td><td>6.47E+01</td><td>Cs-134</td><td>5.68E-01</td><td>Cs-137</td><td>2.26E+05</td></tr> <tr> <td>Eu-152</td><td>1.02E+01</td><td>Eu-154</td><td>2.05E+02</td><td>Eu-155</td><td>1.96E+02</td></tr> <tr> <td>H-3</td><td>3.08E+02</td><td>I-129</td><td>8.43E-01</td><td>Nb-93m</td><td>5.09E+01</td></tr> <tr> <td>Ni-59</td><td>1.08E+01</td><td>Ni-63</td><td>9.97E+02</td><td>Np-237</td><td>1.56E+00</td></tr> <tr> <td>Pa-231</td><td>1.59E-02</td><td>Pu-238</td><td>8.10E+00</td><td>Pu-239</td><td>6.08E+01</td></tr> <tr> <td>Pu-240</td><td>9.36E+00</td><td>Pu-241</td><td>5.78E+01</td><td>Pu-242</td><td>4.16E-04</td></tr> <tr> <td>Ra-226</td><td>5.98E-04</td><td>Ra-228</td><td>8.46E-02</td><td>Ru-106</td><td>1.84E-04</td></tr> <tr> <td>Sb-125</td><td>1.01E+02</td><td>Se-79</td><td>1.73E+00</td><td>Sm-151</td><td>4.27E+04</td></tr> <tr> <td>Sn-126</td><td>7.73E+00</td><td>Sr-90</td><td>1.07E+05</td><td>Tc-99</td><td>2.47E+02</td></tr> <tr> <td>Th-229</td><td>4.50E-03</td><td>Th-232</td><td>1.35E-03</td><td>U-232</td><td>2.78E-01</td></tr> <tr> <td>U-233</td><td>7.11E+00</td><td>U-234</td><td>4.65E+00</td><td>U-235</td><td>2.01E-02</td></tr> <tr> <td>U-236</td><td>2.51E-02</td><td>U-238</td><td>4.52E-01</td><td>Y-90</td><td>1.07E+05</td></tr> <tr> <td>Zr-93</td><td>6.26E+01</td><td></td><td></td><td></td><td></td></tr> </table>	Ac-227	6.12E-03	Am-241	7.24E+01	Am-243	7.60E+01	Ba-137m	2.14E+05	C-14	3.59E+01	Cd-109	2.26E+02	Cm-242	1.14E-02	Cm-243	5.63E-01	Cm-244	1.35E+01	Co-60	6.47E+01	Cs-134	5.68E-01	Cs-137	2.26E+05	Eu-152	1.02E+01	Eu-154	2.05E+02	Eu-155	1.96E+02	H-3	3.08E+02	I-129	8.43E-01	Nb-93m	5.09E+01	Ni-59	1.08E+01	Ni-63	9.97E+02	Np-237	1.56E+00	Pa-231	1.59E-02	Pu-238	8.10E+00	Pu-239	6.08E+01	Pu-240	9.36E+00	Pu-241	5.78E+01	Pu-242	4.16E-04	Ra-226	5.98E-04	Ra-228	8.46E-02	Ru-106	1.84E-04	Sb-125	1.01E+02	Se-79	1.73E+00	Sm-151	4.27E+04	Sn-126	7.73E+00	Sr-90	1.07E+05	Tc-99	2.47E+02	Th-229	4.50E-03	Th-232	1.35E-03	U-232	2.78E-01	U-233	7.11E+00	U-234	4.65E+00	U-235	2.01E-02	U-236	2.51E-02	U-238	4.52E-01	Y-90	1.07E+05	Zr-93	6.26E+01					Continuous	CDM: Field interviews, CH2M HILL work planning/controls/ documents, and procedures perform work under ALARACT controls per WDOH approval dated March 05, 2007.
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Pre and post-job surveys shall be made in accordance with ALARACT(s) 5, 6 and 13 during pit work activities, soil excavation activities, and for equipment removal and/or installation.	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.																																																																																																
Radiological monitoring shall be performed in accordance with the latest revision of HNF-5183, Tank Farms Radiological Control Manual.	Continuous	CDM: Field interviews, work packages, and radiological control program and procedures.																																																																																																
The Annual Possession Quantity and potential-to-emit to the MEI shall be tracked on a WDOH approved log.	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/ documents, and procedures perform work under ALARACT controls per WDOH approval dated March 05, 2007.																																																																																																
The radionuclides listed in the Annual Possession Quantity are limited to the physical forms of liquid or particulate solid.	Continuous	CDM: Field interviews.																																																																																																
When the portable exhauster is not in use the tank shall be ventilated through the passive breather filter consisting of a single HEPA filter.	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.																																																																																																

Requirement	Compliance Status	Compliance Determination Method
Each HEPA filter shall be in-place tested annually in accordance with the requirements of ASME AG-1. HEPA filters shall have a minimum efficiency of 99.95%.	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.

**P-296AP-001**

WDOH Emission Unit ID : 204

Page in AOP : EU0204-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Deentrainer <b>Required Units:</b> 1 <b>Add'l Description:</b> 2 parallel flow paths	Continuous	CDM: Field interviews.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Heater <b>Required Units:</b> 1 <b>Add'l Description:</b> 2 parallel flow paths	Continuous	CDM: Field interviews.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Prefilter <b>Required Units:</b> 1 <b>Add'l Description:</b> 2 parallel flow paths	Continuous	CDM: Field interviews.
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> 2 parallel flow paths with 2 HEPAs in series	Continuous	CDM: Field interviews.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 1 <b>Add'l Description:</b> 2 parallel flow paths, 1 in operation at a time	Continuous	CDM: Field interviews, CH2M HILL notification procedure and notification logbook. <b>Comment:</b> Exhauster shut down two times during the reporting period; reported per the CH2M HILL notification procedure.
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 2 week sample/quarter <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	CDM: ABCASH Program. <b>Comment:</b> ABCASH EDP code number E013.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	CDM: CH2M HILL NESHAP quality assurance program.

Requirement	Compliance Status	Compliance Determination Method
<p>Permit: AIR 06-1027 <b>Issue Date:</b>10-05-06 <b>Effective Date:</b>10-05-06  <b>NOC:</b> Installation and Operation of Waste Retrieval System in Tanks 241-AP-102 and 241-AP-104  <b>WDOH NOC ID:</b> 666 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0204-001</p>		
<p>The total abated emission limit for this Notice of Construction is limited to 2.17E-05 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice of Construction is limited to 4.50E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).</p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>Install and operate a waste retrieval system (one mixer pump and other required equipment) in the 241-AP-102 and the 241-AP-104 tanks. The pumps will operate in a batch mode as needed. The waste capacity of the tanks will not be altered, nor will the ventilation system.</p> <p>The 241-AP-102 and 241-AP-104 tanks are 75-foot diameter double-shell tanks (DST) constructed from the latest generation of tank designs, with a reinforced concrete shell and dome, and an insulating concrete base. A heat-treated, stress relieved, primary steel liner and a non-stress-relieved, outer steel liner are separated by a 2.5 foot annulus and contained inside the concrete shell. The tanks have a flat bottom with a usable waste depth of approximately 35 feet (1,160,000 gallons).</p> <p>Current design calls for modifications to the AP-102 and AP-105 tanks and associated equipment to allow installation and removal of waste retrieval system equipment, and shall be limited to the following major components.</p> <p><b>New In-Tank Equipment:</b>  Installation of one mixer pump in each tank for mobilizing the settled solids. The pumps will be equipped with an approximate 300-horse power motor with a variable speed drive to allow operation from approximately 60 percent speed to 100 percent speed. The pump will be capable of pumping waste at a flow rate of approximately 5,200 gallons per minute through each of two, horizontally opposed, discharge nozzles, located approximately 18 inches above the bottom of the tank.</p> <p>Installation of a high-pressure spray wash system on top of each of the 42-inch risers used for the mixer pumps. The spray wash system will be used for future decontamination of the mixer pumps as they are removed from the tank.</p> <p>Installation of one transfer pump in each tank for the transfer of waste. The pumps will be capable of maintaining a variable waste transfer at a top rate of up to 140 gallons per minute.</p> <p>Installation of one closed circuit television for each tank.</p> <p><b>New Ancillary Equipment and Buildings:</b>  Construction of an annex to the existing 241-AP-271 Instrument Building to house retrieval instrumentation/electrical equipment and operator stations.</p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>Installation of electrical power and instrument cables and other utility tie-ins and/or upgrades (e.g.,sanitary and raw water, and telecommunications).</p> <p>Upgrade of Existing Pits Installation of new, double-contained waste transfer piping, water and diluent piping to and from the process pits, and 8-inch diameter annulus ventilation piping. A total of approximately 1,400 linear feet of piping will be installed approximately 5 feet underground.</p> <p>Installation of jumpers inside existing AP02A, AP02D, and AP04A AP Farm pits.</p> <p>Installation of three new sets of pit cover blocks for the AP02A, AP02D, AP04A pits.</p> <p>Removal, Decontamination and Demolition of Existing Equipment:</p> <p>Removal of one mixer pump from AP-102.</p> <p>Removal of one transfer pump from AP-102 and one transfer pump from AP-104.</p> <p>Removal of a slurry distributor from AP-104.</p> <p>Removal of a drop-leg jumper from AP-102.</p> <p>Relocation of a dip tube assembly to a different riser (AP-104).</p> <p>Removal of jumpers form each of the three pits, central pump pit cover blocks, and pump pit cover blocks.</p> <p>Removal of an existing 2-inch waste line, approximately 15 linear feet.</p> <p>Use of equipment and containers for removal, cleaning, decontamination, transport, storage, and burial of in-tank components and soil.</p> <p>Removal of existing 8-inch-diameter annulus ventilation piping, approximately 32 feet.</p> <p>Construction Activities with the Potential to Emit are: Construction activities with the potential to emit include soil excavation, work in pump pits, pipe cutting, removal of, and installation of in-tank equipment. Some of these activities are described in, and will be done in accordance with, an applicable Tank Farm ALARACT demonstration, HNF-4327 latest revision, Control of Airborne Radioactive Emissions for Frequently Performed TWRS Work Activities. The specific activities and corresponding ALARACT demonstration are called out as they apply in the following text.</p> <p>If needed or chosen for use during these activities, the Regulated Guzzler, a Portable/Temporary Radioactive Air Emission Unit, and a HEPA Filtered Vacuum Radioactive Air Emission Unit may be used in accordance with the latest revisions of their NOCs (98-EAP-037, DOE/RL-96-75, and DOE/RL-97-50 respectively).</p> <p>The AP Tank Farm is posted and maintained as a radiological buffer area, free of surface contamination (entrance is made in street clothes). There are no recorded spills or leaks. Therefore, encountering contamination is not expected during soil excavation activities. Because of the possibility of encountering previously undetected subsurface contamination, all work is performed in accordance with the Hanford Site Radiological Control Manual and the RPP As Low As</p>		

Requirement	Compliance Status	Compliance Determination Method
<p>Reasonably Achievable (ALARA) Program requirements. These requirements are carried out through the activity work packages and associated radiological work permit (RWP).</p> <p><b>Soil Excavation:</b> Soil will be excavated inside and outside the AP Tank Farm to install new piping and construct a new pump pit. A total of approximately 1,000 cubic yards shall be excavated, which includes approximately 600 cubic yards inside the tank farm. Backfill shall be made with the original removed soil or controlled density fill (sand, water and a small amount of cement).</p> <p>Soil excavation activities inside the tank farm fence will be performed in accordance with ALARACT Demonstration 5, TWRS ALARACT Demonstration for Soil Excavation (Using Hand Tools). Clean soil piles may be moved from one place to another within the tank farm with heavy equipment (backhoe, front-end loader, etc.). Soil excavation outside the tank farm fence also may be performed with heavy equipment. The Regulated Guzzler may also be used as described in its NOC for use in the A Tank Farm Complex (98-EAP-037).</p> <p><b>Pipe Cutting:</b> One existing 2-inch diameter waste transfer line will be cut and replaced with a new 3-inch diameter waste transfer line. The cuts will be made, inside a glove bag, using appropriate equipment such as a sawzall or tri-tool. The tie-ins will be made at the new pit nozzles. If any welding is required, the glove bag will be removed and the weld made.</p> <p>One 12-inch diameter tank riser will be cut to fit into the new pit being constructed. The riser will be opened and an expandable plug will be installed in the riser to maintain containment of the vapor space and prevent material from falling into the tank while the work takes place. In order to perform the cut without a glove bag, the riser will be surveyed/smeared to verify removable contamination levels are equal to or less than 10,000 dpm/100 cm<sup>2</sup> beta gamma and 200 dpm/100 cm<sup>2</sup> alpha. The cut will be made above the plug with equipment such as a tri-tool or sawzall. If a glove bag is used, it will be removed. The plug will be removed and a flange welded in place. Then the top of the riser flange will be sealed with a temporary shield plug.</p> <p>Approximately thirty-two feet of 8-inch diameter annulus ventilation pipe will be cut and rerouted. The cuts will be made, inside a glove bag, using appropriate equipment such as a sawzall or tri-tool. The glove bag will be removed and the tie-ins will be made by welding.</p> <p>If needed or chosen for use during these activities, a Portable/Temporary Radioactive Air Emission Unit, and a HEPA Filtered Vacuum Radioactive Air Emission Unit may be used in accordance with the latest revisions of their NOCs (DOE/RL-96-75, and DOE/RL-97-50 respectively).</p> <p><b>Pit Work:</b> Work to be performed in pump pits includes replacing three existing sets of cover blocks with newly designed cover blocks, core drilling (core drills will be performed as necessary), installing new nozzles, removing existing jumpers, and installing riser extensions (total of two, 42-inch diameter).</p> <p>Pit access and work will be performed in accordance with ALARACT Demonstrations 6 and 14, TWRS ALARACT Demonstration for Pit Access, and TWRS ALARACT Demonstration for Pit Work. Activities not covered in these ALARACTs are described below.</p>		

Requirement	Compliance Status	Compliance Determination Method
<p>If needed or chosen for use during these activities, a Portable/Temporary Radioactive Air Emission Unit, and a HEPA Filtered Vacuum Radioactive Air Emission Unit may be used in accordance with the latest revisions of their NOCs (DOE/RL-96-75, and DOE/RL-97-50 respectively).</p> <p>At the start of the pit work, the cover blocks will be lifted off and radiologically surveyed to determine appropriate disposal protocol and packaged for disposal. A new cover block will be installed when all work in the pit has been completed.</p> <p>Core drilling will be performed below grade level, on the outside of the pit. The hole will be drilled from the outside to the inside, with the temporary pit cover in place. The drilling bit will be water-cooled. Nozzle installation will generally proceed immediately after the hole is completed. If immediate nozzle installation is not possible, the hole will be temporarily sealed with a plug, tape, or equivalent device, until the nozzle can be installed.</p> <p>Installation of new nozzles in existing pits will take place in an open pit. All parts of the nozzle will be assembled ahead of time, and will be lowered into position as a single unit. The piping in the back of the nozzle will be threaded through the hole (from the inside of the pit to the outside) and pulled tight into place from the outside of the pit. Grout shall be used to secure and seal the nozzle into place. The front opening of the nozzle, inside the pit, will be fitted with a temporary cap/seal until a jumper is connected to it. Once the nozzle(s) is installed, the temporary pit cover will be replaced until other work inside the pit requires its removal.</p> <p>Installation of the 42-inch diameter riser extensions will take place in an open pit. Only the risers that will house a mixer pump will have an extension installed. The depth-verification shield plug left in/on the riser from the previously removed mixer pump shall be removed and replaced with the riser extension that has a temporary shield plug inserted at the bottom end. The riser will be open during this step which takes approximately thirty minutes. The extension will be sealed to the cover block with metal bellows. The extensions shall be equipped with spray wash rings that will provide a means of decontamination for future mixer pump removals. They will also provide confinement between the pump and the inside of the pit during future pump removals, which will be possible without removing the pit cover blocks.</p> <p><b>Removal of In-Tank Equipment</b> Various in-tank equipment will be removed from both tanks to make room for the water retrieval equipment, or to be replaced with equivalent equipment built to withstand the mixer pump jet forces. The existing flexible receiver equipment will be used to remove and decontaminate, to acceptable levels, a mixer pump (from a 42-inch riser) and two transfer pumps (from 12-inch risers). The remaining equipment will be removed from 4-inch, 12-inch, and 42-inch risers using the general bag out process (sleeving equipment with plastic or piping as it is removed).</p> <p>Equipment removal will be performed in accordance with ALARACT Demonstration 13, TWRS ALARACT Demonstration for Installation, Operation, and Removal of Tank Equipment. Activities not covered in this ALARACT are described below.</p> <p>If needed or chosen for use during these activities, a Portable/Temporary Radioactive Air Emission Unit, and a HEPA Filtered Vacuum Radioactive Air Emission Unit may be used in accordance with the latest revisions of their NOCs (DOE/RL-96-75, and DOE/RL-97-50 respectively).</p>		

Requirement	Compliance Status	Compliance Determination Method
<p>Decontamination of removed equipment is not anticipated, the fewer decontamination activities undertaken the less exposure possibilities there are to the worker and the environment. Contingency decontamination plans, however, are in place if needed. The most likely equipment to be decontaminated would be sections of the flexible receiver. If contingency decontamination is required a two-roomed decontamination tent will be set up within the tank farm fence. Decontamination work will take place in one room and the other will be maintained "clean".</p> <p><b>Flexible Receiver Bagging Process</b> Use of the flexible receiver involves connecting to and disconnecting from a tank riser or pit; lifting/removing the equipment; washing down/decontaminating the equipment; and bagging the equipment. The flexible receiver can be used in a manual or a completely automated mode. Various flexible receiver equipment includes a washer assembly, a radiation monitoring and camera assembly, a bag cinch and cut assembly, a secondary bag seal assembly, and an appropriately sized receiving bag.</p> <p>The connection process to risers in a concrete pit is different than that to risers outside at, or below, grade level. For risers in pits, the cover block is removed and replaced with the flex receiver platform. The gap between the pit and the platform is sealed with plastic and tape. There is one opening in the platform that is directly above the equipment/riser. The equipment is lifted off the riser, to slightly above the platform, long enough to position the split plates that will support the equipment when it is lowered back down the platform. Generally this step takes less than fifteen minutes and during this time the riser is open around the equipment as it is raised. The equipment is lowered to rest/seal on the split plates. In some instances a gasket may be used between the split plates and the equipment to enhance the seal. At this point confinement is considered restored and work can take place on the upper portion of the piece of equipment, if needed, to prepare it for removal. Once the preparatory work is complete, the equipment is raised slightly to remove the split plates and then lowered back down to rest/seal on the riser. An adapter spool piece assembly (includes the spool piece, the spray wash unit, and alignment bellows) is placed over and around the riser, and the equipment setting on top of the riser. The adapter spool piece is equipped with a rubber seal on the bottom, which provides a seal against the floor of the pit, and the alignment bellows are bolted to the platform providing a seal against the platform. An impact limiter is installed on top of the platform, around the opening, as a precaution if the equipment free falls during the remote bagging process. The piece of equipment is again raised to rest/seal on the impact limiter. Subsequent confinement is provided by the gaskets between equipment/assembly pieces and the rubber seal on the bottom of the adapter spool piece. The remainder of the flex receiver equipment is bolted into place above the impact liner.</p> <p>For risers that cannot accommodate an adapter spool piece (outside risers), a split spool piece is used to bolt the flex receiver equipment to the riser flange. In this instance, a seal against a floor cannot be made, so a glove bag is used to confine contamination. A glove bag, with the spool piece in it, is sealed around the riser, the riser is opened, the equipment is raised slightly to allow installation of the split spool piece onto the riser flange. Generally this step takes less than fifteen minutes and during this time the riser is open (within the glove bag) around the equipment as it's raised. The equipment is lowered back down to rest/seal on the split spool piece and the spray wash unit is bolted to the split spool piece. The remainder of the flex receiver equipment, in its entirety, is swung into position, the bottom component is slipped into the glove bag and then bolted to the spray wash unit within the glove bag.</p>		

Requirement	Compliance Status	Compliance Determination Method
<p>After the riser connection process has been completed, the equipment is slowly lifted through the riser (approximately 1 foot per minute). The washing process takes place concurrently with lifting and uses preheated water pressurized up to 3,000 pounds per square inch. Washing takes place outside of the vapor space and the run-off is returned to the tank through the riser.</p> <p>After a section of the equipment has been washed it is pulled through the radiation monitoring assembly. Here, spectrum analysis is performed on the equipment and it is viewed via the camera to determine if the washing process needs to be repeated. This process will be repeated until the equipment shows no visual signs of waste residue.</p> <p>Once washed and dripped dry, the equipment is pulled into the flex receiver bag (herculite-type), which expands as the equipment is hoisted up into it. Once the equipment is completely in the bag, an absorbent mat is attached inside the bag. The mat can absorb up to 8 gallons of liquid, if needed. Next, a mechanical sealing device cinches the bag closed with wire rope and crimps the bottom of the bag in two places, one below the other. The bag is then cut between the two crimps, leaving a sealed top section containing the equipment, and a sealed bottom section sealing the riser opening. The bag is then hoisted into position for secondary bagging of the first seal. Secondary bagging involves lowering the bagged equipment, sealed end first, into another bag that fits around the bottom of the first bag. The secondary bag is also cinched closed with wire rope. The portion of the first bag that was cinched at the riser is then removed and disposed of and the riser is closed. From here the equipment is ready for waste packaging for storage and/or burial.</p> <p><b>LLCE Waste Packaging Process</b> The waste packaging process takes place immediately after the equipment bagging process. It is called the Long Length Contaminated Equipment (LLCE) Disposal System and was designed specifically for application at Hanford Tank Farms. It packages non-contact, remote handled, radioactive waste, for storage or burial. In general, the process involves pushing the LLCE into a storage/burial container (polyethylene piping, various diameters and lengths) and filling the container with lightweight grout (perlite concrete) to attain a greater than or equal to 90 percent filled container. Cold testing has shown that it takes approximately two hours to fill the largest container and dissection of the container has demonstrated that the voids around the bagged LLCE are filled 100 percent.</p> <p>The previously bagged equipment is placed into the skid assembly of the tilt trailer (vertical position). The skid assembly is lowered to the horizontal position and the equipment is slowly pushed into the container already in place on the transport trailer. The endcap is welded closed, using electrical current to fuse the polyethylene together, and leak tested in place. A vent penetration is installed at the top of the end cap for venting displaced air while filling. Another penetration is also put into the endcap for installation of the "trimmie tube" (distributes grout evenly into the container). The vent penetration is fitted with, or piped to, a high-efficiency particulate air (HEPA) filter to satisfy ALARA requirements. At the storage/burial area, the container is removed from the transport trailer and placed for storage or burial.</p> <p><b>In-Tank Equipment Installation</b> Equipment installation will be performed in accordance with TWRS ALARACT Demonstration 13, Installation, Operation, and Removal of Tank Equipment.</p> <p><b>Waste Staging and Retrieval Process Overview</b></p>		

Requirement	Compliance Status	Compliance Determination Method																																																																																																
<p>The retrieval process at the AP-102 and AP-104 tanks will provide feed stock to a waste treatment facility. The low activity waste received from the source tanks may be conditioned and/or diluted to deliver compliant waste. Mixing and dilution may also take place at the source tanks to meet the waste specifications of AP-102 and -104, i.e., solids content must be within a predetermined amount. Incoming waste will be staged in the tank(s) until enough has been accumulated to send, and the treatment facility is ready to receive, a batch. The mixer pump will then be operated to maintain waste uniformity during staging and to mix the waste for a short period of time before transferring it. The mixer pump will be operated at full speed until waste samples verify that adequate mixing has been achieved. Waste samples will be collected in accordance with TWRS ALARACT Demonstration 7, Tank Waste Grab Sampling. If dilution/conditioning is needed, the pH and temperature of the diluent will be adjusted. Once the waste is verified acceptable, the transfer lines will be preheated/flushed with diluent, and a transfer to the treatment facility will follow. After the transfer, the lines will be flushed again with diluent.</p>																																																																																																		
<p>The Annual Possession Quantity is limited to the following radionuclides (Curies/year):</p> <table border="0"> <tr> <td>Ac-227</td><td>5.65E-03</td><td>Am-241</td><td>2.48E+04</td><td>Am-243</td><td>3.11E-02</td></tr> <tr> <td>Ba-137m</td><td>2.20E+06</td><td>C-14</td><td>2.04E+02</td><td>Cd-113m</td><td>5.65E+02</td></tr> <tr> <td>Cm-242</td><td>9.87E-01</td><td>Cm-243</td><td>4.85E+00</td><td>Cm-244</td><td>1.54E+01</td></tr> <tr> <td>Ce-60</td><td>7.59E+02</td><td>Cs-134</td><td>2.65E+02</td><td>Cs-137</td><td>2.32E+06</td></tr> <tr> <td>Eu-152</td><td>4.07E+01</td><td>Eu-154</td><td>3.73E+03</td><td>Eu-155</td><td>4.73E+03</td></tr> <tr> <td>H-3</td><td>1.41E+03</td><td>I-129</td><td>1.10E+01</td><td>Nb-93m</td><td>7.76E+01</td></tr> <tr> <td>Ni-59</td><td>1.30E+01</td><td>Ni-63</td><td>1.28E+03</td><td>Np-237</td><td>3.10E+01</td></tr> <tr> <td>Pa-231</td><td>2.50E-02</td><td>Pu-238</td><td>3.48E+02</td><td>Pu-239</td><td>8.17E+02</td></tr> <tr> <td>Pu-240</td><td>2.25E+02</td><td>Pu-241</td><td>8.33E+03</td><td>Pu-242</td><td>3.19E-02</td></tr> <tr> <td>Ra-226</td><td>4.81E+00</td><td>Ra-228</td><td>2.05E+00</td><td>Ru-106</td><td>1.39E+01</td></tr> <tr> <td>Sb-125</td><td>1.33E+03</td><td>Se-79</td><td>2.19E+01</td><td>Sm-151</td><td>7.72E+04</td></tr> <tr> <td>Sn-126</td><td>3.32E+01</td><td>Sr-90</td><td>5.54E+05</td><td>Tc-99</td><td>1.46E+04</td></tr> <tr> <td>Th-229</td><td>4.74E-02</td><td>Th-232</td><td>2.32E-01</td><td>U-232</td><td>6.32E+00</td></tr> <tr> <td>U-233</td><td>2.42E+01</td><td>U-234</td><td>1.01E+01</td><td>U-235</td><td>3.90E-01</td></tr> <tr> <td>U-236</td><td>7.00E-01</td><td>U-238</td><td>8.79E+00</td><td>Y-90</td><td>5.54E+05</td></tr> <tr> <td>Zr-93</td><td>1.06E+02</td><td></td><td></td><td></td><td></td></tr> </table>	Ac-227	5.65E-03	Am-241	2.48E+04	Am-243	3.11E-02	Ba-137m	2.20E+06	C-14	2.04E+02	Cd-113m	5.65E+02	Cm-242	9.87E-01	Cm-243	4.85E+00	Cm-244	1.54E+01	Ce-60	7.59E+02	Cs-134	2.65E+02	Cs-137	2.32E+06	Eu-152	4.07E+01	Eu-154	3.73E+03	Eu-155	4.73E+03	H-3	1.41E+03	I-129	1.10E+01	Nb-93m	7.76E+01	Ni-59	1.30E+01	Ni-63	1.28E+03	Np-237	3.10E+01	Pa-231	2.50E-02	Pu-238	3.48E+02	Pu-239	8.17E+02	Pu-240	2.25E+02	Pu-241	8.33E+03	Pu-242	3.19E-02	Ra-226	4.81E+00	Ra-228	2.05E+00	Ru-106	1.39E+01	Sb-125	1.33E+03	Se-79	2.19E+01	Sm-151	7.72E+04	Sn-126	3.32E+01	Sr-90	5.54E+05	Tc-99	1.46E+04	Th-229	4.74E-02	Th-232	2.32E-01	U-232	6.32E+00	U-233	2.42E+01	U-234	1.01E+01	U-235	3.90E-01	U-236	7.00E-01	U-238	8.79E+00	Y-90	5.54E+05	Zr-93	1.06E+02					Continuous	CDM: Field interviews, CH2M HILL work planning/controls/ documents/ procedures, and/or database.
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<p>Each HEPA filter shall be in-place tested annually in accordance with the requirements of ASME AG-1. HEPA filters shall have a minimum efficiency of 99.95%.</p>	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/ documents, and procedures.																																																																																																
<p>All pit work must be performed in accordance with TWRS ALARACT Demonstrations 6 and 14 for Pit Access and, ALARACT Demonstrations for Pit Work.</p>	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/ documents, and procedures.																																																																																																
<p>If the wind speeds exceed 30 miles per hour the work in the glove bags will stop. If sustained wind speed exceeds 25 miles per hour pit work must stop. Records of wind speeds reading must be kept and made available to DOH, if requested.</p>	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/ documents, and procedures.																																																																																																
<p>Pipe cuts will be made using a sawzall or tri-tool. If removable contamination on only cutting surface is greater than or equal to 10,000 dpm/100cm<sup>2</sup> beta/gamma and 200 dpm/100cm<sup>2</sup> alpha it must be cut and prepared in a glove bag for welding. If contamination levels are below these levels cutting maybe done outside of a glove bag. Expandable foam and fixatives are approved to fix smearable contamination.</p>	Continuous	CDM: Field interviews, radiological surveys, RSRs, CH2M HILL work planning/controls/documents, and procedures.																																																																																																
<p>Prior to cutting an expandable plug must be in place</p>	Continuous	CDM: Field interviews, CH2M HILL																																																																																																

Requirement	Compliance Status	Compliance Determination Method
when a riser is opened in order to maintain constant vapor space and prevent material from falling into the tank during cutting.		work planning/controls/documents, and procedures.
Sample collection flow rate shall be approximately 120 +/- 12 cubic feet per hour.	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.
The use of the regulated Guzzler, Portable/Temporary Radioactive Air Emission Unit and HEPA filtered vacuum radioactive emissions units may be used as needed as prescribed by DOH in their latest approved revision.	Continuous	CDM: Field interviews. Comment: The Guzzler was not used by CH2M HILL in 2007.

**P-296A041-001**  
WDOH Emission Unit ID : 205  
Page in AOP : EU0205-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Heater <b>Required Units:</b> 1 <b>Add'l Description:</b> 2 parallel flow paths with 1 heater	Continuous	CDM: Field interviews.
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> 2 parallel flow paths with 2 HEPAs in series	Continuous	CDM: Field interviews.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 1 <b>Add'l Description:</b> 2 parallel flow paths, minimum of 1 in operation at a time; annulus exhauster	Continuous	CDM: Field interviews, CH2M HILL notification procedure and notification logbook. Comment: Exhauster shut down once during the reporting period; reported per the CH2M HILL notification procedure.
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 4 week sample/ year <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	CDM: ABCASH program. Comment: ABCASH EDP code number E015.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	CDM: Field Monitoring Program.

Requirement	Compliance Status	Compliance Determination Method
No active NOC approvals in the AOP for this certification period.		

**P-296P031-001**  
WDOH Emission Unit ID : 210  
Page in AOP : EU0210-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Prefilter <b>Required Units:</b> 4 <b>Add'l Description:</b> 1 bank	Continuous	<b>CDM:</b> Field walk downs and drawings. H-2-95739 and H-2-96072
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 8 <b>Add'l Description:</b> 2 banks of 4 HEPAs each	Continuous	<b>CDM:</b> Field walk downs and drawings. H-2-95739 and H-2-96072
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Field walk downs and drawings. H-2-96072
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> Continuous <b>Radionuclide Requiring Measurement:</b> All radionuclides which could contribute greater than 0.1 mrem/yr to the MEI, or represents greater than 10% of the unabated PTE or represents greater than 25% of the abated dose.	Continuous	<b>CDM:</b> Analytical results in ABCASH
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(2) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B Method 114.	Continuous	<b>CDM:</b> Required sampling and NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528)
No active NOC approvals in the AOP for this certification period.		

**P-296A043-001**  
WDOH Emission Unit ID : 216  
Page in AOP : EU0216-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Prefilter <b>Required Units:</b> 1 <b>Add'l Description:</b> 2 parallel flow paths; only 1 flow path normally operates at a time	Continuous	<b>CDM:</b> Field interviews, engineering drawings, and operating procedures.
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b> 2 parallel flow paths; only 1 flow path normally operates at a time	Continuous	<b>CDM:</b> Field interviews, engineering drawings, and operating procedures.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 1 <b>Add'l Description:</b> 2 parallel flow paths; only 1 flow path normally operates at a time; either fan can be used with either filter train.	Continuous	<b>CDM:</b> Field interviews, engineering drawings, and operating procedures.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Isolation Damper <b>Required Units:</b> 1 <b>Add'l Description:</b> Allows for operation of one flow path at a time.	Continuous	<b>CDM:</b> Field interviews, engineering drawings, and operating procedures.
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 4 week sample/ year <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> ABCASH Program.  <b>Comment:</b> ABCASH EDP code number E148.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> CH2M HILL NESHAP quality assurance program.
No active NOC approvals in the AOP for this certification period.		

**P-296A018-001**  
WDOH Emission Unit ID : 217  
Page in AOP : EU0217-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> In series	Continuous	<b>CDM:</b> Field interviews.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 1 <b>Add'l Description:</b> Annulus exhauster AY 101, intermittent operations.	Continuous	<b>CDM:</b> Field interviews, CH2M HILL notification procedure and notification logbook. <b>Comment:</b> Exhauster shut down once during the reporting period; reported per the CH2M HILL notification procedure.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Heater <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Field interviews.
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 4 week sample/ year <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> ABCASH program, CH2M HILL notification procedure, and notification logbook. <b>Comment:</b> ABCASH EDP code number E060. Annual calibration of the record sampler loop instruments was not performed on time during the reporting period; reported per the CH2M HILL notification procedure.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> CH2M HILL NESHAP quality assurance program.
No active NOC approvals in the AOP for this certification period.		

**P-296A019-001**  
WDOH Emission Unit ID : 218  
Page in AOP : EU0218-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> In series	Continuous	<b>CDM:</b> Field interviews.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 1 <b>Add'l Description:</b> Annulus Exhauster	Continuous	<b>CDM:</b> Field interviews, CH2M HILL notification procedure and notification logbook. <b>Comment:</b> Exhauster shut down once during the reporting period; reported per the CH2M HILL notification procedure.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Heater <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Field interviews.
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 4 week sample/ year <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> ABCASH Program. <b>Comment:</b> ABCASH EDP code number E061.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075[3] <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> CH2M HILL NESHAP quality assurance program.
No active NOC approvals in the AOP for this certification period.		

**P-296AN-001**  
WDOH Emission Unit ID : 227  
Page in AOP : EU0227-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Deentrainer <b>Required Units:</b> 1 <b>Add'l Description:</b> Normally 1 unit is operated for each	Continuous	<b>CDM:</b> Field interviews and engineering/construction drawings.

Requirement	Compliance Status	Compliance Determination Method
fan in operation. If both fans are in operation both deentrainers should be in operation. Either unit may support either train. Located upstream of the split in flow path to individual trains.		<b>Comment:</b> This emission unit was not utilized for construction activities.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Heater <b>Required Units:</b> 1 <b>Add'l Description:</b> 1/train, 2 trains	Continuous	<b>CDM:</b> Field interviews and engineering/construction drawings. <b>Comment:</b> This emission unit was not utilized for construction activities.
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> 2 HEPA banks in Series/train, 2 trains	Continuous	<b>CDM:</b> Field interviews and engineering/construction drawings. <b>Comment:</b> This emission unit was not utilized for construction activities.
<b>Zone or Area:</b> <b>Abatement Technolog :</b> Fan <b>Required Units:</b> 1 <b>Add'l Description:</b> 1/train, 2 trains	Continuous	<b>CDM:</b> Field interviews, engineering/construction drawings, CH2M HILL notification procedure and notification logbook. <b>Comment:</b> Exhauster shut down once during the reporting period; reported per the CH2M HILL notification procedure. This emission unit was not utilized for construction activities.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Prefilter <b>Required Units:</b> 2 <b>Add'l Description:</b> 1/train, 2 trains	Continuous	<b>CDM:</b> Field interviews and engineering/construction drawings. <b>Comment:</b> This emission unit was not utilized for construction activities.
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 4 week sample/year. <b>Radionuclide Requiring Measurement:</b> Total Alpha Total Beta	Continuous	<b>CDM:</b> ABCASH Program. <b>Comment:</b> ABCASH EDP code number E901. This emission unit was not utilized for construction activities.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93 (b)(4)(i)& WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> CH2M HILL NESHAP quality assurance program. <b>Comment:</b> This emission unit was not utilized for construction activities.

Permit: AIR 06-1028 **Issue Date:**10-05-06 **Effective Date:**10-05-06  
**NOC:** Installation and Operation of a Waste Retrieval System in Tanks 241-AN-101,102,103, 104, 105, 106  
AND 107

**WDOH NOC ID:** 668 **Date In AOP:** 01-01-07 **Page in AOP:** EU0227-001  
NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3

**P-296A030-001**  
WDOH Emission Unit ID : 228  
Page in AOP : EU0228-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Deentrainer <b>Required Units:</b> 1 <b>Add'l Description:</b> 1 in each train	Continuous	<b>CDM:</b> Field interviews.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Heater <b>Required Units:</b> 1 <b>Add'l Description:</b> 1 in each train	Continuous	<b>CDM:</b> Field interviews.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 1 <b>Add'l Description:</b> 2 parallel flow paths; only 1 flow path normally operates at a time; however both trains may be operated at the same time	Continuous	<b>CDM:</b> Field interviews, CH2M HILL notification procedure and notification logbook. <b>Comment:</b> Exhauster shut down twice during the reporting period; reported per the CH2M HILL notification procedure.
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> 2 parallel flow paths; only 1 flow path normally operates at a time; however both trains may be operated at the same time	Continuous	<b>CDM:</b> Field interviews.
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 4 week sample/year <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> ABCASH program, CH2M HILL notification procedure, and notification logbook. <b>Comment:</b> ABCASH EDP code number E903. Record sampler shut down once during the reporting period; reported per the CH2M HILL notification procedure.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93 (b)(4)(i)& WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> CH2M HILL NESHAP quality assurance program.
No active NOC approvals in the AOP for this certification period.		

**C-106 Sluicing**

WDOH Emission Unit ID : 236

Page in AOP : EU0236-001

EMISSION UNIT DID NOT OPERATE DURING CY 2007 SEE TABLE 2

**S-296S021-001**

WDOH Emission Unit ID : 254

Page in AOP : EU0254-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 3 <b>Add'l Description:</b> In series for both the primary and backup exhaust systems (222-S Lab Hot Cells)	Continuous	<b>CDM:</b> Field interviews and asbuilt drawings. H-2-46710, H-2-46514, H-2-81072, and H-2-830965.
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b> For both primary and backup exhaust systems (222-S Lab Complex)	Continuous	<b>CDM:</b> Field interviews and asbuilt drawings. H-2-46710, H-2-46514, H-2-81072, and H-2-830965.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 3 <b>Add'l Description:</b> Primary exhaust operated in parallel, serves both hot cell addition & main lab.	Continuous	<b>CDM:</b> Field interviews and asbuilt drawings. H-2-46710, H-2-46514, H-2-81072, and H-2-830965.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 1 <b>Add'l Description:</b> Backup exhaust operates independently or in parallel with primary exhaust.	Continuous	<b>CDM:</b> Field interviews and asbuilt drawings. H-2-46710, H-2-46514, H-2-81072, and H-2-830965.
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> Continuous <b>Radionuclide Requiring Measurement:</b> Each radionuclide that could contribute greater than 10% of the potential TEDE.	Continuous	<b>CDM:</b> ABCASH program, CH2M HILL notification procedure, and notification logbook. <b>Comment:</b> ABCASH EDP code number S289. Record sampler shut down once during the reporting period; reported per the CH2M HILL notification procedure.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93 (b)(4)(i)& WAC 246-247-075(2) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B Method 114	Continuous	<b>CDM:</b> CH2M HILL NESHAP quality assurance program.

Requirement	Compliance Status	Compliance Determination Method
<p align="center">Permit: AIR 06-1005 Issue Date:10-05-06 Effective Date:10-05-06 Obsolete Date: 10-30-07            NOC: 222-S Lab Hot Cell Expansion            WDOH NOC ID: 637 Date In AOP: 01-01-07 Page in AOP: EU0254-001</p>		
<p>The total abated emission limit for this Notice of Construction is limited to 6.60E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for Notice of Construction is limited to 6.00E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).</p>	Continuous	<p>CDM: Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The Environmental Hot Cell Expansion to provide a new addition to the 222-S Laboratory. This expansion will provide a seven compartment hot cell to support the increased demand for analytical services.</p> <p>Emissions from the hot cell will be exhausted through the existing stack at the 222-S Facility (registered stack number 296-S-21). Approximately 1200 cubic feet per minute will be emitted from the hot cell. Prior to being emitted to the atmosphere, the hot cell exhaust shall pass through two sets of existing High-Efficiency Particulate Air (HEPA) Filters (double HEPAs at both the 222-SC and 222-SB Facilities), in addition to one of the three new single-stage HEPA filters adjoining the hot cell. HEPA Filters are tested in place to ensure that they remove at least 99.5 percent of particles ranging in size from 0.1 micron to 3.0 microns, with a mean particle size of 0.5 micron.</p> <p>The hot cell will examine both solid and liquid samples; approximately 43 samples/month will be solids, and approximately 12 samples/month will be liquid. Each solid sample will weigh up to 625 g, with a maximum specific gravity of 5.0. Each liquid sample will be approximately 125 ml. It was assumed that the specific gravity would be 2.0. Each of the samples (both liquid and solid) will have a maximum radionuclide concentration of 2000 uCi/g Sr-90 and 1000 uCi/g Cs-137. Based on these assumptions, the annual solid inventory for the hot cell is 645 Ci Sr-90 and 322.5 Ci Cs-137, and the annual liquid inventory is 72 Ci Sr-90 and 36 Ci Cs-137.</p>	Continuous	<p>CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>
<p>The Annual Possession Quantity is limited to the following radionuclides (Curies/year):            Cs-137    3.59E+02         Sr-90    7.17E+02     </p>	Continuous	<p>CDM: Field interviews, CH2M HILL work planning/controls/documents/ procedures, and/or database.</p>

Permit: AIR 07-1021 Issue Date:10-30-07 Effective Date:10-30-07 NOC: 222-S Lab Hot Cell Expansion WDOH NOC ID: 637 Date In AOP: 12-05-07 Page in AOP: EU0254-001		
Requirement	Compliance Status	Compliance Determination Method
<p>The total abated emission limit for this Notice of Construction is limited to 6.60E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for Notice of Construction is limited to 6.00E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).</p>	Continuous	<p>CDM: Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The Environmental Hot Cell Expansion to provide a new addition to the 222-S Laboratory. This expansion will provide a seven compartment hot cell to support the increased demand for analytical services.</p> <p>Emissions from the hot cell will be exhausted through the existing stack at the 222-S Facility (registered stack number 296-S-21). Approximately 1200 cubic feet per minute will be emitted from the hot cell. Prior to being emitted to the atmosphere, the hot cell exhaust shall pass through two sets of existing High-Efficiency Particulate Air (HEPA) Filters (HEPAs at both the 222-SC and 222-SB Facilities), in addition to one of the three new single-stage HEPA filters adjoining the hot cell. HEPA Filters are tested in place to ensure that they remove at least 99.5 percent of particles ranging in size from 0.1 micron to 3.0 microns, with a mean particle size of 0.5 micron.</p> <p>The hot cell will examine both solid and liquid samples; approximately 43 samples/month will be solids, and approximately 12 samples/month will be liquid. Each solid sample will weigh up to 625 g, with a maximum specific gravity of 5.0. Each liquid sample will be approximately 125 ml. It was assumed that the specific gravity would be 2.0. Each of the samples (both liquid and solid) will have a maximum radionuclide concentration of 2000 uCi/g Sr-90 and 1000 uCi/g Cs-137. Based on these assumptions, the annual solid inventory for the hot cell is 645 Ci Sr-90 and 322.5 Ci Cs-137, and the annual liquid inventory is 72 Ci Sr-90 and 36 Ci Cs-137.</p>	Continuous	<p>CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>
<p>The Annual Possession Quantity is limited to the following radionuclides (Curies/year):</p> <p>Cs-137    3.59E+02         Sr-90    7.17E+02</p>	Continuous	<p>CDM: Field interviews, CH2M HILL work planning/controls/documents /procedures, and/or database.                      Comment: None</p>

**P-2025E ETF**  
WDOH Emission Unit ID : 301  
Page in AOP : EU0301-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> Vessel Off-Gas System <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 3 <b>Add'l Description:</b> 1 heater and 2 filters in series, with 2 parallel fans (minimum of 1 in operations). VOG discharges into Building Ventilation	Continuous	<b>CDM:</b> As-built drawings and facility walk downs.
<b>Zone or Area:</b> Vessel Off-Gas System <b>Abatement Technology:</b> Fan <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> As-built drawings and facility walk downs.
<b>Zone or Area:</b> Building Ventilation System <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> 3 parallel flowpaths each with 1 filter and 1 fan; minimum 2 in operation.	Continuous	<b>CDM:</b> As-built drawings and facility walk downs.
<b>Zone or Area:</b> Building Ventilation System <b>Abatement Technology:</b> Fan <b>Required Units:</b> 2 <b>Add'l Description:</b> Serves both areas	Continuous	<b>CDM:</b> As-built drawings and facility walkdowns.
<b>Required Sampling:</b> Monitoring stations N498, N499, N972, and N999 <b>Sampling Frequency:</b> 4 week sample/ year <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> Review of ABCASH data, facility procedures. <b>Comment:</b> ABCASH EDP Number E036 for record sampler, Near Facility monitoring EDP codes are N498, N499, N972, and N999.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93 (b)(4)(i)& WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> NESHAP Quality Assurance Plan for Radioactive Emissions (HNF-EP-0528, latest revision).
Permit: AIR 06-1045 - D <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>NOC:</b> Operation of the Liquid Effluent Retention Facility and the 200 Area Effluent Treatment Facility <b>WDOH NOC ID:</b> 690 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0301-001		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 4.59E-02 mrem/year to the	Continuous	<b>CDM:</b> The Annual Radioactive Air Emissions Report for the Hanford Site,

Requirement	Compliance Status	Compliance Determination Method
<p>Maximally Exposed Individual (WAC 246-247-040(5)).</p>		<p>Calendar Year 2007.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The operation of the Liquid Effluent Retention Facility/200 Area Effluent Treatment Facility (LERF/ETF), which includes the load-in station and load-in station filter skid.</p> <p>Incoming wastewater can be added directly to the ETF process or received at the LERF or the load-in station. The LERF is allowed to receive wastewaters via underground pipelines from generator facilities, via pipeline from the load-in station, or directly through a series of access ports located at each basin. The load-in station accommodates wastewater receipt via container (e.g., drums, carboys, tankers, etc.).</p> <p>The ETF wastewater treatment process shall be comprised of a main treatment train and a secondary treatment train. The main treatment train shall provide for the removal or destruction of dangerous and radioactive contaminants from incoming wastewater. After treatment, the effluent shall be transferred to the verification tanks where it is sampled then discharged. Treated effluent is comparable to deionized water and contains tritium, which cannot be economically removed. Contaminants removed in the main treatment train are concentrated in the secondary treatment train. The contaminants shall be heated and dried to a powder form or removed as sludge and dried by the addition of absorbents. These residues shall be containerized and disposed onsite as radioactive waste.</p> <p>Additional approval of the process for this activity is contained in the following Conditions/Limitations.</p>	<p>Continuous</p>	<p><b>CDM:</b> Review of facility and procedure change documents as specified in administrative procedures.</p> <p><b>Comment:</b> Facility design and procedure changes require documentation that includes environmental reviews to determine if the change is a modification of the emission unit.</p>
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 8.48E-02 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Alpha-0   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Alpha release rate is assumed to be Pu-239/240. ETF release rates are based on ETF operating capacity + 5 million gallon storage capacity (54.3 million gallons/yr plus 5.0 million gallons = 59.3 million gallons/yr). In addition to the isotopes specifically listed as approved under this NOC, other radionuclides may be encountered and are approved so long as they are conservatively represented by the total alpha and total beta-gamma constituents.</p> <p>Am-241   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>B/G-0   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Beta/Gamma release rate is assumed to be Sr-90/Cs-137. ETF release rates are based on ETF operating capacity + 5 million gallon storage capacity (54.3 million gallons/yr plus 5.0 million gallons = 59.3 million gallons/yr). In addition to the isotopes specifically listed as approved under this NOC, other radionuclides may be encountered and are approved so long as they are conservatively represented by the total alpha and total beta-gamma constituents.</p> <p>C-14   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p>	<p>Continuous</p>	<p><b>CDM:</b> In accordance with administrative procedures, the quantities of individual radionuclides are tracked based on sample results, flowrates, and process knowledge. The MEI dose and potential-to-emit are calculated and the results are placed in the facility record.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>Ce-144   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cm-244   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Co-60   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cs-134   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Eu-154   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Eu-155   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>H-3   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>I-129   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>K-40   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Mn-54   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Na-22   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Nb-94   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Np-237   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Pu-238   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Pu-241   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ra-226   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ru-106   Liquid/Particulate Solid   WAC 246-247-030(21)(a)</p>		

Requirement	Compliance Status	Compliance Determination Method																																			
<p>Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Sb-125   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Se-79   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Tc-99   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>U-233   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>U-234   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>U-235   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>U-236   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>U-238   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Zn-65   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Zr-95   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <table border="0"> <tr> <td>Am-241</td> <td>C-14</td> <td>Ce-144</td> <td>Cm-244</td> <td>Co-60</td> </tr> <tr> <td>Cs-134</td> <td>Cs-137</td> <td>Eu-154</td> <td>Eu-155</td> <td>H-3</td> </tr> <tr> <td>I-29</td> <td>K-40</td> <td>Mn-54</td> <td>Na-22</td> <td>Nb-94</td> </tr> <tr> <td>Np-237</td> <td>Pu-238</td> <td>Pu-239/240</td> <td>Pu-241</td> <td>Ra-226</td> </tr> <tr> <td>Ru-106</td> <td>Sb-125</td> <td>Se-79</td> <td>Sr-90</td> <td>Tc-99</td> </tr> <tr> <td>U-233</td> <td>U-234</td> <td>U-235</td> <td>U-236</td> <td>U-238</td> </tr> <tr> <td>Zn-65</td> <td>Zr-95</td> <td></td> <td></td> <td></td> </tr> </table> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. WAC 246-247-110(9). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or</p>	Am-241	C-14	Ce-144	Cm-244	Co-60	Cs-134	Cs-137	Eu-154	Eu-155	H-3	I-29	K-40	Mn-54	Na-22	Nb-94	Np-237	Pu-238	Pu-239/240	Pu-241	Ra-226	Ru-106	Sb-125	Se-79	Sr-90	Tc-99	U-233	U-234	U-235	U-236	U-238	Zn-65	Zr-95					
Am-241	C-14	Ce-144	Cm-244	Co-60																																	
Cs-134	Cs-137	Eu-154	Eu-155	H-3																																	
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Ru-106	Sb-125	Se-79	Sr-90	Tc-99																																	
U-233	U-234	U-235	U-236	U-238																																	
Zn-65	Zr-95																																				

Requirement	Compliance Status	Compliance Determination Method
electronic mail but not solely by copies of documents.		
The emissions for this activity from the 296-E-1 stack are limited to 3.89-02 mrem/year unabated and 1.95E-05 mrem/year abated.	Continuous	<b>CDM:</b> The Annual Radioactive Air Emissions Report for the Hanford Site, Calendar Year 2007.
The following activities are approved for the 296-E-1 Emission Unit Point-Source Emissions:  -ETF operations and maintenance. -Containerized wastewater additions to the ETF process. -Leaks into the ETF secondary containment. -Secondary waste packaging and storage.	Continuous	<b>CDM:</b> Field Walk downs, Facility specific procedures.

**P-213W-001**

WDOH Emission Unit ID : 308

Page in AOP : EU0308-001

EMISSION UNIT DID NOT OPERATE DURING CY 2007 SEE TABLE 2

**P-291U001-001**

WDOH Emission Unit ID : 310

Page in AOP : EU0310-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Sandfilter <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Field walk downs and drawings. H-2-825451 and H-2-827361
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 2 <b>Add'l Description:</b> In parallel, only 1 operates at a time	Continuous	<b>CDM:</b> Field walk downs and drawings. H-2-825451 and H-2-827361  <b>Comment:</b> Timely notification of short disruptions made to WDOH
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 4 week sample / year <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> Analytical results in ABCASH.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93 (b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> Appendix B, Method 114(3)	Continuous	<b>CDM:</b> Required sampling and NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528).

Requirement	Compliance Status	Compliance Determination Method
<p><b>Permit:</b>ALARACT 28 <b>Issue Date:</b>01-01-07  <b>NOC:</b> Shutdown of Stack System(s) (Maintenance and incidental)  <b>WDOH NOC ID:</b> <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b></p>		
<p><b>1. Description of Activity/Requirements</b>  The listed facilities are currently under Surveillance and Maintenance (S&amp;M) status, meaning active processing has ceased with radioactive feed materials no longer brought in. Surveillances and maintenance activities are performed in these facilities including, but not limited to minor activities such as exterior and interior inspections; checking for door security, for any unauthorized building intrusions, and for structural integrity; water intrusion cleanup; waste handling/removal; maintaining radiological airborne control zones; animal or insect intrusion abatement; maintaining operating systems and building integrity, eliminating utilities when possible; identifying and reducing hazards; and housekeeping. The primary ventilation systems and associated record sampling systems operate at each facility as described in the Hanford Site Air Operating Permit. At certain times to support these various S&amp;M activities, or related to maintenance or replacement-in-kind, any one of these primary ventilation systems may be shut down for a period exceeding two days duration. The four ventilation systems which may be shut down are: 332 REDOX, 402 B-Plant, 369 PUREX, 310 U-Plant.</p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews, and work planning/control documents and procedures.</p>
<p><b>2. Radiological Controls</b>  It was agreed that an As Low As Reasonably Achievable Control Technology (ALARACT) demonstration is appropriate to address control and monitoring of potential radioactive air emissions during these extended periods of shutdown.</p> <p>During shutdown periods exceeding two days, the following controls will be implemented:</p> <p>Inform the Washington Department of Health (WDOH) by telecon or email at the start of each use of this ALARACT action or as soon as it is realized that the systems will be shutdown for more than two days.</p> <p>To provide assurance that containment of airborne contamination is maintained during the subject periods of shutdown, Fluor Hanford (or successor)</p> <p>Contractor Radiological Control Technicians (RCTs) will perform daily (during normal work days i.e., not weekends or holidays) radiological swipe surveys on a</p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews, contact log and radiological surveys.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>representative few normally accessible outer facility doors. If an increase in removable (smearable) contamination is detected at any of these locations during the period of shutdown, notify the WDOH and describe containment measures to be taken.</p> <p>During the subject periods of shutdown, to avoid situations which might encourage increased diffuse or fugitive emissions, no activities will be conducted inside the facility except those approved for unfiltered containment in accordance with established Radiological Control criteria.</p> <p>If the fans are not restarted within the scheduled time discussed with WDOH, WDOH will be contacted, and continued monitoring and/or airborne controls will be discussed.</p>		
<p><b>3. Monitoring</b> It was agreed that an As Low As Reasonably Achievable Control Technology (ALARACT) demonstration is appropriate to address control and monitoring of potential radioactive air emissions during these extended periods of shutdown.</p>	Continuous	<b>CDM:</b> ALARACT documents completed as discussed/directed with WDOH.
<p><b>4. Records/Documentation</b> None.</p>	Continuous	<b>CDM:</b> Contact log and radiological surveys.

**P-291T001-001**

WDOH Emission Unit ID : 314

Page in AOP : EU0314-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<p><b>Zone or Area:</b> <b>Abatement Technology:</b> Prefilter <b>Required Units:</b> 1 <b>Add'l Description:</b></p>	Continuous	<p><b>CDM:</b> Heating &amp; Ventilation Air Flow &amp; Control Diagram (HVAC), Engineering Drawing H-2-91269, Sheet 2 and Field Walkdowns. <b>Comment:</b> Engineering drawings verify the presence of prefilter.</p>
<p><b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> In series</p>	Continuous	<p><b>CDM:</b> Heating &amp; Ventilation Air Flow &amp; Control Diagram (HVAC), Engineering Drawing H-2-91269, Sheet 2 and Field Walkdowns. <b>Comment:</b> Engineering drawings verify the presence of two HEPA filters, in series.</p>

Requirement	Compliance Status	Compliance Determination Method
<p><b>Zone or Area:</b>  <b>Abatement Technology:</b> Fan  <b>Required Units:</b> 2  <b>Add'l Description:</b> 2 in parallel (with one as a backup)</p>	Continuous	<p><b>CDM:</b> Heating &amp; Ventilation Air Flow &amp; Control Diagram (HVAC), Engineering Drawing H-2-91269, Sheet 2 and Field Walkdowns.  <b>Comment:</b> Engineering drawings verify the presence of two fans, in parallel with one as backup.</p>
<p><b>Required Sampling:</b> Record Sample  <b>Sampling Frequency:</b> Particulates shall be continuously sampled and analyzed every two-weeks for gross alpha and gross beta, composited on a quarterly basis and analyzed isotopically.  <b>Radionuclide Requiring Measurement:</b> All radionuclides that contribute greater than 10% of the potential-to-emit TEDE to the MEI, greater than 0.1 mrem/yr potential-to-emit TEDE to the MEI, and greater than 25% of the TEDE to the MEI after controls.</p>	Continuous	<p><b>CDM:</b> ABCASH program.  <b>Comment:</b> ABCASH EDP code number T785</p>
<p><b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93 (b)(4)(i) &amp; WAC 246-247-075(2)  <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114 NDA as detailed in conditions below.</p>	Continuous	<p><b>CDM:</b> NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528).</p>
<p>Permit: AIR 06-1062 - A    <b>Issue Date:</b>10-05-06    <b>Effective Date:</b>10-05-06    <b>Obsolete Date:</b> 03-15-07  <b>NOC:</b> Consolidated T Plant Operations  <b>WDOH NOC ID:</b> 711    <b>Date In AOP:</b> 01-01-07    <b>Page in AOP:</b> EU0314-001</p>		
Requirement	Compliance Status	Compliance Determination Method
<p>The total abated emission limit for this Notice of Construction is limited to 5.60E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).</p>	Continuous	<p><b>CDM:</b> Annual Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>This consolidated T-Plant license supersedes all radioactive air licenses for 291-T-1.</p> <p>a. This approval subsumes those activities approved in three previous license approvals, retains/revises the specific conditions and limitations of those approvals, and replaces them as the radioactive air license for T-Plant:</p> <p>i. AIR 03-1208 (NOC ID # 445, "Storage in T-Plant Complex of Sludge from K-Basins")  ii. AIR 01-1010 (NOC ID # 499, "T-Plant Complex Fuel Removal Project")  iii. AIR 02-704 (NOC ID # 500, "Entering and Characterizing of the 224-T Facility Process Cells")</p>	Continuous	<p><b>CDM:</b> DO-100-039, Package Transuranic Waste;  DO-100-012, Package Mixed Waste in Drums and Boxes;  DO-100-022, Package Low-Level Waste;  DO-100-027, Package Nonradioactive Dangerous Waste.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>b. With additional conditions and limitations provided herein, this approval also extends to new activities discussed in the NOC application "Radioactive Air Emissions Notice of Construction for Consolidated T Plant Operations", DOE/RL-2004-50, Rev.0, September, 2004, described briefly:</p> <ul style="list-style-type: none"> <li>i. Receipt, Storage, Treatment, and Loads out of Contact-Handled and Remote-Handled Transuranic (TRU) and Transuranic Mixed Waste (M-91 Initiative)</li> <li>ii. Treatment ( in addition to storage ) of K-Basin Sludge from the North Load out Pit (NLOP)</li> <li>iii. Such activities considered routine at T Plant as are described in succeeding conditions.</li> </ul> <p>Activities a)j through a)jiii may emit radioactive air through 291-T-1. Additionally, activity a)jiii may emit to the 200 Area Diffuse &amp; Fugitive emission unit and to Portable Temporary Radioactive Air Emission Units.</p>		
<p>The PTE for this project ad determined under WAC 246-247-030(21)(a-e)[as specified in the application] is 1.20E+02 mrem/year.</p> <p>Approved are the associated potential release rates (Curies/year) of:</p> <p>Am-241 1.38E+00 Liquid/Particulate Solid WAC 246-247-030 (21) (a) isotopic distribution based on destructive analysis of pre-filter four</p> <p>Cs-137 1.46E+01 Liquid/Particulate Solid WAC 246-247-030 (21) (a)</p> <p>Pu-239/240 1.38E+01 Liquid/Particulate Solid WAC 246-247-030 (21) (a)</p> <p>Sr-90 1.94E+01 Liquid/Particulate Solid WAC 246-247-030 (21) (a)</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified): Am-241 Cs-137 Pu-239/240 Sr-90</p> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)) DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725( 4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>	Continuous	CDM: T Plant Curie Inventory Logbook, HNF-N-42.
<p>As described in the NOC, compliance to ASME/ANSI AG-1 is limited to the replacement of HEPA filters in the ventilation systems. Replacement filters must meet the qualifications test of AG-1 and deviations approved by DOH (WAC 246-247-040(5)).</p>	Continuous	CDM: Management of HEPA Filter Systems, HNF-PRO-8323.

Requirement	Compliance Status	Compliance Determination Method
<p>USDOE shall demonstrate that the emission unit monitoring system complies with or is equivalent to the requirements of ANSI Standard N13.1 1999. This demonstration shall be completed by December 31, 2005, and a report of this work shall be submitted by 31 March, 2006 using the ANSI 13.1 1999 Table 6 performance criteria. Calculated transport, transmission, and aspiration values are acceptable in lieu of measurements. A flow traverse to determine the coefficient of variation (COV) taken in one direction only is acceptable, flow asymmetries in the stack cross section not having been observed in COV determinations performed on stacks of approximately similar configuration. The licensee shall notify WDOH by January 15, 2006, if the flow traverse measurements will not support a compliant COV value; approval for an alternate method shall in that case be obtained by 15 March 2006, or all processing activities governed by this approval shall cease (WAC 246-247-060(5)).</p>	<p>Continuous</p>	<p><b>CDM:</b> 291-T-1 Stack Equivalency Demonstration to ANSI N13.1-1999 HNF-29175, Rev 0.</p> <p><b>Comment:</b> See RL Letter 06-AMCP-0153, Dated March 30, 2006 which submitted HNF-29175 to WDOH demonstrating equivalency to ANSI N13.1 1999. Due to successful equivalency, notification to WDOH, if flow traverse measurements would not support compliant COV, was not required.</p>
<p>A hold point shall be placed on sludge storage activities immediately prior to receipt of sludge in the T-Plant Complex. The USDOE shall notify the WDOH of readiness to receive waste, and the WDOH shall perform an inspection of T-Plant facilities to ensure acceptability of the 291-T-1 stack for operation as a major emission unit (WAC 246-247-060(5)).</p>	<p>Continuous</p>	<p><b>CDM:</b> RL Letter 03-RCA-186, Dated 03/21/03 to WDOH. WDOH Approval Letter AIR 03-402, Dated 04/14/03</p>
<p>All activities involving radioactive materials shall be conducted in accordance with radiation control procedures approved per applicable QA program. (WAC 246-247-040(5)).</p>	<p>Continuous</p>	<p><b>CDM:</b> PHMC Radiological Control Manual, HNF-5173; Quality Assurance Program Description, HNF-MP-599; NESHAP Quality Assurance Project Plan for Radioactive Air Emissions, HNF-EP-0528</p>
<p>Calibrate all differential pressure gauges associated with 291-T-1 HEPA filters annually (WAC 246-247-040(5)).</p>	<p>Continuous</p>	<p><b>CDM:</b> Pressure/Vacuum Gauge, Differential Pressure/Vacuum Gauge Calibration, WMP-18006</p>
<p>Prior to storing sludge in the T-Plant Complex, USDOE shall perform a complete engineering evaluation of the 291-T-1 stack to ensure its structural integrity. USDOE shall provide to WDOH for review copies of the procedures used to perform this review, together with the results of the review. USDOE shall also provide to WDOH a written plan for remediation of any deficiencies, including a timeline for the remediation. (WAC 246-247-040(5)).</p>	<p>Continuous</p>	<p><b>CDM:</b> 291-T-1 Stack Weather Cap Inspection Report, HNF-27881, Rev. 0, submitted 12/30/05. WDOH approval received by RL on 2/2/06</p>
<p>Receipt and Storage of K-Basin Sludge:  A. Receipt, Treatment, Storage and Load out of north load out pit (NLOP) Sludge:</p>	<p>Continuous</p>	<p><b>CDM:</b> Various T Plant procedures: Handling of NLOP Large Diameter Containers, DO-100-050 North Loadout Pit Sludge Grouting,</p>

Requirement	Compliance Status	Compliance Determination Method
<p>A1) Sludge treatment consists of mixing the sludge with grout via the following major process steps:  A1a) Transferring sludge from Large Diameter Container into the grout system.  A1b) Sampling to ensure grouted containers meet waste isolation project plant (WIPP) acceptance requirements.  A1c) Transferring aliquots into WIPP certified 55 gallon drums.  A1d) Grouting to meet WIPP acceptance criteria.  A2) Prior to treatment, NLOP sludge shall be stored in T-Plant process cells 3L, 10L, 13L, 15L, 8R, 9L, 14R, and/or 16R.  A3) Containerized and grouted sludge shall be stored for not longer than 23 years from the date of issue of this license within the T-Plant complex.  A4) Containerized and grouted sludge shall be stored within the TSD unit boundary, and disposed according to assay of individual containers.  A5) The potential-to-emit of NLOP sludge received at T-Plant shall not exceed 0.9 mrem/year, corresponding to 120 DE Ci.</p> <p>B. Receipt and Storage of K-Basins Sludge:</p> <p>B1) Preparation of cells to receive sludge containers, which shall be limited to the following activities:  B1a) Intrusive cell operations to relocate items within cells and to transfer items between cells.  B1b) Removal of cell contents, which shall be limited to the following operations.  B1b1) Remote crane operations using lifting bails and clamshells.  B1b2) Pumping of liquids.  B1b3) Vacuum suction.  B1b4) Storage, repackaging, and treatment of containerized and uncontainerized radioactive waste.  B1b5) Waste characterization, verification, repackaging, size reduction, segregation, immobilization, and consolidation.  B1b6) Preparation of waste shipments in accordance with acceptance criteria for other facilities.  B1b7) Treatment and storage of liquid mixed waste.  B1c) Storage of contaminated process equipment and debris in the 221-T Canyon Building cells and deck shall be limited to:  B1c1) Tanks, pulsers, precipitators, centrifuges, and jumpers/connectors.  B1c2) Decontamination equipment, immersion tanks, sprayers, and blasters.  B1c3) Equipment rack, pumps, mixers, and motors.  B1c4) Original equipment (prior to decontamination mission).  B1c5) Condensers, chillers, filter assemblies, and columns.  B1c6) Open and closed boxes, drums, and containers, filled with debris.  B1c7) Tools, concrete blocks, and loose debris.  B1d) Refurbishing, recycling, and maintenance of contaminated equipment shall be limited to the items of equipment listed above.  B1e) Decontamination of equipment and materials, which shall be limited to the following operations:  B1e1) Hand, spray, and abrasive methods.  B1e2) Steam cleaning.  B1e3) High Pressure hot water.  B1e4) High pressure cold water.  B1e5) Ice blasting.  B1e6) Abrasive tools.  B2) The chemical and physical processes associated with the sludge storage shall consist of the following:  B2a) After all existing 72 fuel assemblies have been removed and the spent fuel pool water has been removed in accordance with the T-Plant Complex Fuel Removal NOC (DOE/RL-2000-64, Revision 1), the 221-T canyon spent fuel pool shall be decontaminated by T-Plant</p>		<p>DO-100-059  Contact-Handled Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant, DOE/WIPP-02-3122  Package Transuranic Waste, DO-100-039  Waste Profile Sheet, TPLT-220-0001 SWITS 120 Reports for the 4 LDCs  RL letter 06-ESD-0156, dated September 15, 2006 to WDOH documenting that the PWR Fuel Removal Project was completed on September 18, 2004.</p> <p>Hanford Site Solid Waste Acceptance Criteria, HNF-EP-0063  Radiological Work Permits:  RWP T-240, RWP T-246, RWP T-248, RWP T-250, RWP T-252, WP T-258R</p>

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<p>operation personnel. Following the activities covered in the fuel removal NOC (DOE/RL-2000-64, Revision 1), disposal of fuel assembly racks, the filtration system, ion exchange system, and any residual contamination on the pools walls and floor shall be accomplished using the following methods:</p> <p>B2a1) Hand, spray, and abrasive methods.            B2a2) Steam cleaning.            B2a3) High pressure hot water.            B2a4) High pressure cold water.            B2a5) Ice blasting.            B2a6) Abrasive tools.</p> <p>B2b) Radioactive waste shall be managed in accordance with written facility and Hanford Site waste management procedures and acceptance criteria. Criteria for moving containers from the canyon into the tunnel include the requirements that smearable contamination on the outside of the container must be less than 400 dpm/100 cm<sup>2</sup> alpha and less than 100,000 dpm/100 cm<sup>2</sup> beta/gamma.</p> <p>B2c) New liner systems shall be installed in the pool if storage under water is required and in four to twelve of the process cells. Existing water conditioning systems (coolers, filtration system, ion exchange columns, and piping) shall be installed in the pool if storage under water is required and in four to twelve of the process cells. Existing water conditioning systems coolers, filtration system, ion exchange columns, and piping ) shall be used, modified, replaced or removed if storage under water is required.</p> <p>B2d) Spent nuclear fuel (SNF) sludge retrieved from the 105-KE and 105-KW Basins shall be managed as two separate waste streams. Sludge containers configured for dry storage shall be used for less reactive floor and pit sludge components, including windblown sand and rocks, spalled concrete from the basin walls, iron and aluminum corrosion products, ion exchange resin beads, uranium oxides, and uranium fuel particles. More reactive sludge collected in the knockout pot and settler tank during SNF retrieval and processing K-Basins shall be stored in a container configured for storage under water or for dry storage if allowed by criticality and thermal analyses.</p> <p>B2e) Physical upgrades to the 221-T Canyon, as determined in final design, shall include installation of new cell containment, liner bracing, systems, sump pumps, leak detectors, and instrumentation and controls in the 221-T Canyon.</p> <p>B2f) Fire protection alarms and automatic sprinkler systems shall be upgraded in 221-T before sludge containers configured for storage of waste from knockout pot and settler tanks is received. Licensee may submit additional information bearing on this condition at any time.</p> <p>B2g) Canyon radiation detectors, alarms, and cameras will be upgraded to provide surveillance.</p> <p>B2h) Sludge containers shall be designed to ensure a safe storage configuration, based on final design results determined in criticality and heat rejection requirements analysis. Final design shall analyze maximum sludge loading and container sizing to minimize the number of transfers and number of containers.</p> <p>B2i) Contents of filled sludge containers shall consist of a layer of sludge below a layer of water and a layer of air to provide a void space in each container. Sludge containers shall be capable of maintaining sludge in a wet state during transport and storage.</p> <p>B2j) Sludge containers shall be received and placed into interim storage in the 221-T Canyon, configured for dry cell storage or storage under water. All sludge container handling and placement within the 221-T Building shall be performed remotely via crane operations.</p> <p>B2k) The containers shall be transported from K-Basins to the 221-T Building via tractor and trailer. Each transfer shall consist of one transport cask which shall be inspected upon receipt according to the approved receipt methods.</p> <p>B2l) Sludge container unloading operations shall be done remotely using the canyon crane system. T-Plant Complex personnel shall vent and purge the transport cask with on-radioactive inert gas within the</p>		

Requirement	Compliance Status	Compliance Determination Method
<p>controlled airspace. The purge/venting system shall include a radiation detection method to verify that the storage container does not leak during transport and shall purge all hydrogen from the transport cask.</p> <p>B2m) As a sludge container is moved from the tunnel into the canyon, operations personnel shall verify remotely the identification number and record the container number, via existing camera systems. After the container is removed from the cask, an empty container will be placed in the cask and the lid shall be replaced. The transport system shall be surveyed for possible contamination on exiting the Radiological Area and will return to K-Basins.</p> <p>B2n) After the sludge containers are placed in the 221-T Canyon interim dry storage location, surveillance shall be performed to ensure that safety, regulatory, and safeguards and security requirements are met. Water levels within the dry storage containers shall be monitored (weight differential), and water additions shall be made remotely.</p> <p>B2o) After sludge containers are placed in the interim underwater pool storage location, surveillance shall be performed to ensure that safety, regulatory, and safeguards and security requirements are met. Pool storage conditions (water quality, water temperature, water level, and ion exchange column status) shall be monitored, and water shall be added as needed to the pool to maintain the necessary water depth.</p> <p>B2p) After removal of the fuel assemblies and the pool water, a hold point shall be placed on further spent fuel decontamination activities, pending the establishment of acceptable levels for decontamination of the 221-T Canyon spent fuel pool. The USDOE shall propose a set of decontamination levels for review by WDOH, and decontamination work shall not continue until the WDOH has reviewed and accepted these levels (WAC 246-247-040(5)).</p>		
<p>Receipt, Storage, Treatment, and Load out of Contact-handled and Remote-handled Transuranic (TRU) and Transuranic mixed (TRUM0 (M-91 Initiative):</p> <p>A. M91 project activities shall be conducted in T-Plant within the head end, the railroad tunnel, and/or the T-Plant Canyon. M-91 waste shall be received at the head end or at the railroad tunnel. M91 waste is remote or contact handled Transuranic, Transuranic mixed, mixed, or mixed low level waste.</p> <p>B. M-91 waste containers shall be opened and their contents treated in the head end of T-Plant only under containment, containment being defined here as either vented and HEPA-filtered glove box/bag, sealed glove box/bag, ventilated and HEPA-filtered containment tent or ventilated and HEPA-filtered solid-structure temporary containment, or PTRAEU. Where active ventilation is provided, that ventilation shall discharge into the T-Plant canyon so that radioactive air emissions originating in this process are further controlled by the 291-T-1 ventilation system controls. Procedures (approved in continued integrity of the containment structures shall be followed, shall include periodic radiological surveys, and shall be kept available for WDOH review. The head end will be posted based on radiological conditions in accordance with radiation control procedures approved per applicable QA program).</p> <p>C. M-91 waste containers shall be opened and their contents treated in the railroad tunnel and/or canyon of T-Plant, in accord with radiological control procedures (approved in accord with applicable QA program).</p> <p>D. Lower risk M-91 containers may be received at the head end of T-Plant, and higher risk M-91 containers shall be received at the railroad tunnel. Risk criteria, including radiological risk considerations, governing receipt location shall be developed and documented.</p>	<p>Continuous</p>	<p><b>CDM:</b> DO-100-129, Shipping, Receiving, and Relocating Waste; DO-100-039, Package Transuranic Waste; DO-100-058, TRU Drum Waste Processing; Hanford Site Solid Waste Acceptance Criteria, HNF-EP-0063; Package Transuranic Waste, DO-100-039; Contact-Handled Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant, DOE/WIPP-02-3122.</p>

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<p>E. Surface contamination and dose rate limits on M-91 waste containers received at T-Plant shall be governed by approved solid waste acceptance procedures. Deviations from approved solid waste acceptance procedures are allowed under a controlled waiver process. Stand-alone solid waste acceptance documents specifying surface contamination and dose rate limits shall be developed and approved for any M-91 containers received under the waiver process. These procedures shall be kept readily available for WDOH review. Documentation shall be sufficient to allow ready identification of the criteria under which each waste container is accepted, and shall note definite compliance with the applicable criteria on receipt.</p> <p>F. Applicable surface contamination/dose rate criteria shall be documented for each container of M-91 waste repackaged at T-Plant for transshipment. Documentation of applicable criteria and compliance thereto shall be maintained for M-91 waste containers shipped from T-Plant.</p> <p>G. Receipt, Storage, Treatment, and Load out of Contact-Handled and Remote-Handled Transuranic (TRU) and Transuranic Mixed Waste (M-91 Initiative) includes the following activities: G10 Receiving. G2) Sorting. G3) Storing. G4) Size Reduction. G5) Repackaging. G6) Containerizing. G7) Load out. G8) Treatment. (WAC 246-247-040(5)).</p>		
<p>Routine T-Plant Activities:</p> <p>A1) Packaging and Repackaging Waste – Packaging and repackaging activities are performed for waste generated at T-Plant as well as on onsite and offsite generators. Packaging and repackaging activities are: A1a) Sorting. A1b) Segregation. A1c) Removing prohibited items. A1d) Compositing/aggregating solids or liquids. A1e) Adding absorbent. A1f) Size reduction [e.g., cutting (jaws, saws, torches)], bending, folding, crushing (e.g., drum crusher), shredding, compacting, or similar methods that do not have a higher extent of disruption]. A1g) Void filling. A1h) Pressure relief/release (e.g., aerosol cans, gas cylinders, drums, or other similar containers). A1i) Aerosol can/drum puncturing. A2) Verification Activities – Verification support activities are provided for waste and other materials that are generated on or off the Hanford Site. Verification Activities are: A2a) Physical observation. A2b) Nondestructive examination (NDE). A2c) Nondestructive assay (NDA). A2d) Chemical field screening. A2e) Radiological surveys. A2f) Radiological samples. A2g) Headspace gas analysis. A2h) Chemical sampling. A3) Sampling Activities – Sampling of waste generated by operations or by other onsite or offsite generators is performed. The purpose of sampling is to confirm process knowledge, characterize waste, support verification and determine land disposal requirements as applicable. Sampling activities are: A3a) Field screening [e.g., pH paper, oxidizer, volatile organic</p>	<p>Continuous</p>	<p><b>CDM:</b> DO-100-039, Package Transuranic Waste; DO-100-012, Package Mixed Waste in Drums and Boxes; DO-100-022, Package Low-Level Waste; DO-100-027, Package Nonradioactive Dangerous Waste.</p>

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<p>analyses (VOAs), polychlorinated biphenyls (PCBs), or similar screening parameters].</p> <p>A3b) Obtaining a sample for analysis [e.g., grab, composite, composite liquid waste sampler (COLIWASA), or other similar sampling techniques].</p> <p>A3c) Shipping/transferring the samples to an approved laboratory for analysis.</p> <p>A3d) Disposition of sample returns (e.g., placement back into the parent container or another approved container/tank).</p> <p>A3e) Headspace gas analysis [typically in support of the Waste isolation Pilot Plant (WIPP) Project].</p> <p>A3f) Tank sampling (liquid, sludge, salt cake, composites).</p> <p>A4) Decontamination/Refurbishment Activities – Materials, equipment, and waste can be decontaminated (e.g., free release, reduce the radiological levels, or other similar criteria) using a variety of methods. T-Plant also performs decontamination of T-Plant structural components (e.g., 221-T Building walls, cells, or to the similar surfaces). Decontamination activities at T-Plant are:</p> <p>A4a) Water (fog, high or low-pressure spraying).</p> <p>A4b) Steam.</p> <p>A4c) Ice Blasting.</p> <p>A4d) Vacuum blasting.</p> <p>A4e) Brushing.</p> <p>A4f) Abrasive tools.</p> <p>A4g) Scraping.</p> <p>A4h) Washing (e.g., chemicals/detergents).</p> <p>A4i) Immersion.</p> <p>A4j) Electro-polishing.</p> <p>A4k) Cutting (e.g., removal by sawing, torch cutting more highly radioactive components or other similar methods).</p> <p>A4l) Rust/paint removal.</p> <p>A5) Maintenance Activities – A variety of preventative and/or repair maintenance activities are performed at T-Plant. Some maintenance activities involve the temporary shut down of the 291-T-1 exhaust stack. Maintenance activities are:</p> <p>A5a) Painting.</p> <p>A5b) Crane maintenance.</p> <p>A5c) Electronic systems functional checks and repairs [CAMs, personnel contamination monitors (PCMs)].</p> <p>A5d) Calibrations.</p> <p>And may be performed on:</p> <p>A5e) Rollup doors.</p> <p>A5f) Heat pumps.</p> <p>A5g) Exhaust fans.</p> <p>A5h) Transformers.</p> <p>A5i) Scale systems.</p> <p>A5j) Wire rope.</p> <p>A5k) Stack systems fan lubes.</p> <p>A5l) Forklifts.</p> <p>A6) Waste Treatment Activities – T-Plant is a treatment facility permitted by the Washington State Department of Ecology (Ecology). Treatment activities are:</p> <p>A6a) Macroencapsulation.</p> <p>A6b) Absorption.</p> <p>A6c) neutralization.</p> <p>A6d) Immobilization.</p> <p>A6e) Encapsulation.</p> <p>A6f) Stabilization ( solidification cementation, grouting).</p> <p>A6g) Compaction.</p> <p>A6h) Amalgamation.</p> <p>A6i) Segregation.</p> <p>A6j) Shredding.</p> <p>A6k) Venting.</p> <p>A6l) Size Reduction.</p> <p>A7) Recycling Activities – Materials are recycled whenever possible.</p>		

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<p>Recycled materials are collected in accumulation containers in approved locations and transferred to the Recycling Center. Only nonradioactive materials are sent to the Recycling Center. Some radioactive materials (ferrous and nonferrous metals) can be recycled. Recycled materials are: ferrous and non-ferrous metal, light bulbs, aerosol cans, oils, and batteries.</p> <p>A8) Storage Activities – T-Plant is permitted for waste storage by Ecology. Plant also stores other materials (chemicals, or equipment, or similar materials) to support operations. Radioactive wastes may be stored uncontainerized or in:</p> <p>A8a) containers (boxes, drums, tanker trucks/railcars, or large diameter containers).</p> <p>A8b) Tanks.</p> <p>A8c) Sumps and pipes.</p> <p>A9) Equipment, Materials, and Waste Movement Activities – The movement of materials, equipment, waste, chemicals, or similar items involves the receipt and/or transferring/shipping, and movement and/or relocation within the T-Plant TSD unit boundary. Movement activities (using a forklift, crane, truck, dolly, personnel) are:</p> <p>A0a) Receiving waste (liquid, solid, semi-solid) for storage and/or treatment.</p> <p>A9b) Movement of waste (liquid, solid, semi-solid) and equipment in or out of process cells, canyon deck craneway, or tunnel in the 221-T Building.</p> <p>A9c) Movement of liquids, sludges, or other waste from containers and/or tanks via transfer lines.</p> <p>A9d) Waste container transfers (among outdoor storage pads, within building, process cells, canyon deck, or other approved locations).</p> <p>A9e) Placing and storing chemical products in flammable cabinets or other approved storage locations.</p> <p>A9f) Transloading from the 221-T tunnel to canyon deck and/or process cells.</p> <p>A10) Housekeeping Activities – Housekeeping activities involve maintaining T-Plant in a clean and orderly condition. Housekeeping activities are:</p> <p>A10a) Sweeping (brooms).</p> <p>A10b) Mopping (squeegees or mops).</p> <p>A10c) Vacuuming.</p> <p>A10d) Dusting.</p> <p>A10e) Wiping (sponges, towels).</p> <p>A10f) Picking up debris.</p> <p>A10g) Removal of trash.</p> <p>A11) Surveillance Activities – Surveillance activities involve walking down and inspecting various areas, systems, and components. Surveillances typically consist of daily, weekly, and monthly inspections of waste containers, tanks, buildings, or similar locations. Surveillances are subject to change (adding, deleting and/or modifying) as operations, maintenance, engineering, and radiological control dictates. Surveillances, inspections, and maintenance activities that do not have the potential to create airborne contamination can occur within the 221-T Building when the 291-T-1 exhaust stack emission system is shutdown. The following surveillances are performed at T-Plant:</p> <p>A11a) Container storage areas treatment and storage tanks and ancillary equipment.</p> <p>A11b) General condition of building structures.</p> <p>A11c) Safety Cold weather surveillances (typically between October 1 and March 31).</p> <p>A11d) Inspection of equipment.</p> <p>A11e) Inspection of HEPA filtered vacuums.</p> <p>A11f) Radiological surveys.</p> <p>A12) Contamination Within the Canyon – The operational activities described inherently involve the spread of contamination within the canyon. The canyon is designed to provide containment for these operational activities. Job specific contamination controls are used</p>		

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(spreading paper to facilitate easy decontamination, fogging, fixing contamination, covering, performing operations remotely or other similar methods that cover, seal, or remove smearable contamination). (WAC 246-247-040(5))		
<p>The abated and unabated emissions for this license have been estimated using particulate 241-Am, 239/240-Pu, 137-Cs, and 90-Sr, based on the isotopic distribution measured in destructive analysis of a T-Plant pre-filter, a Dose Equivalent-Curie limit of 15,000 DE-Ci, and also include a small contribution from gaseous radionuclides that may be encountered. The amounts of radioactive gases included are: (3-H, 25 Ci), (85-Kr, 3000 Ci), (129-I, 0.05 Ci), (219-Rn, 0.2 Ci), (220-Rn, 30 Ci), (222-Rn, 2 Ci), Radionuclides that may be encountered as particulates are: 242-Cm, 243-Am, 244-Cm, 60Co, 134-Cs, 154-Eu, 40-K, 94-Nb, 237-Np, 238-Pu, 241-Pu, 242-Pu, 244-Pu, 226-Ra, 106-Ru, 125-Sb, 228-Th, 234-Th, 232-U, 233-U, 234-U, 235-U, 236-U, 238-U. Other particulate radionuclides are permitted, the total to remain within the DE-Ci limit of 15,000 DE-Ci and the abated emission limit of the license. Gaseous radionuclides are permitted, the sum of doses from radioactive gases to remain less than 6% of the total abated emission limit for this license.</p> <p>This condition does not apply to naturally occurring Radon.</p>	Continuous	<p><b>CDM:</b> Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007. Inventory Control Program, WMP 340, Section 1.08.</p>
The adequacy of the sampling system must be maintained by a minimum of annual inspections, calibrations and maintenance activities as scheduled in the T-Plant Facility procedures. The frequency of these activities cannot be diminished from their current approved level without concurrence from WDOH (WAC 246-247-040(5)).	Continuous	<p><b>CDM:</b> Inspection and Maintenance of 291-T Stack Sampling Probe and Transport Tube, 2T18077; Stack Monitor Record Sampler Components Swap, Functional Check, and Calibration, 2T18073.</p>
The alternative flow measurement method proposed for the 291-T-1 stack by USDOE letter 03-RCA-0210, dated April 9, 2003, is approved for use (WAC 246-247-075(3)).	Continuous	<p><b>CDM:</b> Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007. <b>Comment:</b> The alternative method allows use of maximum exhaust fan capacity to calculate emissions.</p>
The annual inspection and maintenance of the HEPAs must include visual inspection of the filter housing. Documentation of these activities must be made available to DOH upon request (WAC 246-247-040(5)). The annual inspection and maintenance of the HEPAs must include visual inspection of the filter housing. Documentation of these activities must be made available to DOH upon request (WAC 246-247-040(5)).	Continuous	<p><b>CDM:</b> In-Place Testing of HEPA Filter Systems, 2T99042. <b>Comment:</b> Records will be provided when requested by WDOH.</p>
The document "291-T-1 Exhaust Stack Inspection	Continuous	<b>CDM:</b> 291-T-1 Stack Weather Cap

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<p>Report,” HNF-15560, contains conclusions and recommendations for stack improvements, including the fabrication and installation of a new stack weather cap. These recommendations shall be addressed, and documentation of their resolution shall be forwarded to WDOH for approval by June 1, 2005 (WAC 246-247-060(5)).</p>		<p>Inspection Report, HNF-27881, Rev. 0, submitted 12/30/05. WDOH approval received by RL on 2/2/06.</p>
<p>The emission unit monitoring system shall have the following activities performed:  A1) By December 31, 2005 and annually thereafter:  A1a) A visual check of nozzle position and orientation as well as measurements of nozzle openings; A1b) Checks to ensure the tightness of all fittings and connections as well as a leak test of the entire sampling system.  A1c) Visual inspections for corrosion, physical damage, or dust loading of the probe, sample lines, and monitoring system equipment.  A2) Annually, from December 31, 2003:  A2a) A functional calibration check of monitoring system instrumentation shall be performed.  A2b) USDOE shall provide to WDOH for review copies of the procedures used to perform the above activities. (WAC 246-247-060(5)).</p>	<p>Continuous</p>	<p><b>CDM:</b> Inspection and Maintenance of 291-T Stack Sampling Probe and Transport Tube, 2T18077; Stack Monitor Record Sampler Components Swap, Functional Check, and Calibration, 2T18073.</p>
<p>The PTE at T-Plant shall be tracked in DE curies. A running total of DE curies present at the beginning of the calendar year plus DE curies introduced into T-Plant during that year shall be maintained and kept available for WDOH review. This record shall be made current at no greater than weekly intervals. That the total does not exceed license limits shall be routinely verified, and documentation of the verification shall be maintained (WAC 246-247-040(5))(WAC 246-247-060(5)).</p>	<p>Continuous</p>	<p><b>CDM:</b> Inventory Control Program, WMP 340, Section 1.08. T Plant Curie Inventory, HNF-N-42 Logbook</p>
<p>The Quality Assurance Standards for the sampling of emissions and subsequent analysis must remain in compliance with HNF-0528 NESHAPS Quality Assurance Project Plan for Radioactive Airborne (all of sections 2.0, 3.0, 5.0). (WAC 246-247-060(5))</p>	<p>Continuous</p>	<p><b>CDM:</b> Toxic and Radioactive Air Emission Compliance, WMP 340, Section 4.03.</p>
<p>The relative humidity must be measured with a calibrated hygrometer or with wet and dry bulb readings as allowed in Method 2. Methods 4, 5 and 17 are not applicable to radioactive airborne effluent stacks. (WAC 246-247-040(5)).30)</p>	<p>Not Applicable</p>	<p><b>CDM:</b> Approval of Alternate Method for Flow Measurement in the 291 T001 Stack, USDOE letter 03-RCA-0210, dated April 9, 2003, made this condition not applicable.</p>
<p>The stack must be operated to maintain near isokinetic sampling (WAC 246-247-040(5)).</p>	<p>Not Applicable</p>	<p><b>CDM:</b> RL letter 06-AMCP-0153, dated March 30, 2006 to WDOH submitting HNF-29175 and documenting the stack monitoring system has been upgraded</p>

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		and equivalency to ANSI 13.1-1999.
<p>T-Plant Fuel Removal Project:</p> <p>A. The spent fuel pool filtration system must be reactivated and placed in service before removal of the fuel assemblies to increase water clarity. The pool water chemistry must be maintained and monitored while the PWR-2 fuel is removed.</p> <p>B. Monitor at least monthly the water quality of the spent fuel pool for Cobalt-60 and Cesium-137. The low radionuclide concentrations are evidence that the integrity of the fuel cladding is intact. Notify DOH immediately if the activity levels of the water increase during fuel removal to a level greater than two times the established levels (0.01 microcuries per milliliter) for the pool; i.e., 0.02 microcuries per milliliter.</p> <p>C. The radionuclides of concern for this fuel removal project are Iron-55, Cobalt-60, Nickel-63, Strontium-90, and Plutonium-238 from the crud (external surface contamination on the fuel assemblies) Cobalt-60 and Cesium-137 in the pool water.</p> <p>D. The scope of the T-Plant Complex Fuel Removal Project is limited to the activities required to prepare for, and perform fuel handling, canister loading, canister drying and creating an inert atmosphere inside the canister, and cask loading within the 221-T Canyon, and subsequent cask transportation to the Canister Storage Building (CSB).</p> <p>E. The removal activities covered under this NOC are limited to the 72 PWR-2 fuel assemblies currently in the 221-T spent fuel pool.</p> <p>F. The transport cask must be designed to preclude the potential release of radioactive emissions.</p> <p>G. Upon completion of the project, the pool water will be pumped out and transferred (e.g. tanker trucks or hard piping) to a permitted liquid waste treatment/disposal facility.</p> <p>H. Approved activities for the T-Plant Fuel Removal Project are:</p> <p>H1) Remove all spent nuclear fuel assemblies from the spent fuel pool in the T-Plant Complex 221-T Canyon for interim storage in the Canister Storage Building. The activities required for fuel removal are limited to the following:  H1a) Retrieval of PWR-2 fuel assemblies from their current pool storage racks in the 221-T Building.  H1b) Insertion of PWR-2 fuel assemblies into Shippingport Spent Fuel Containers (SSFCs) and closure with shield plugs.  H1c) Fuel conditioning within the SSFCs. This includes the drying of the fuel, and replacing the air inside the SSFCs with an inert atmosphere.  H1d) Transfer of the SSFCs to the CSB.</p> <p>H2) The chemical and physical processes associated with the T-Plant Complex Fuel Removal Project are limited to the following:  H2a) The SSFCs (with inserts installed), shield plugs, shield plug seals, and required tools will be staged at the T-Plant Complex. The skid-mounted fuel conditioning system will be placed in the 221-T Tunnel.  H2b) The SSFCs/cask/transporter will be moved into the 221-T Tunnel and the loading guide will be installed into the SSFCs.  H2c) The hoist will be moved to the spent fuel pool using the canyon bridge crane to position. The fuel assembly will be grappled remotely, raised from the pool, and the fuel assembly identification number will be recorded.  H2d) The fuel assembly will be transferred over the cell partition and lowered into the SSFCs. After four fuel assemblies are placed into an</p>	<p>Not Applicable</p>	<p>CDM: The PWR Fuel Removal Project was completed on September 18, 2004. RL letter 06-ESD-0156, dated September 15, 2006 to WDOH documenting conditions that are no longer applicable.</p>

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<p>SSFCs, the shield plug will be installed and SSFCs will be sealed mechanically.</p> <p>H2e) The SSFCs will remain on the transporter trailer during loading and conditioning operations within the fuel transport cask, and will be connected to the fuel conditioning system via the process port on the shield plug. The SSFCs will be conditioned by pulling a vacuum to dry the fuel, backfilling with helium, pulling a vacuum again, and refilling the SSFCs with helium to inert the atmosphere surrounding the fuel. The SSFCs will be leak tested to verify closure and the proves port cover plate will be closed.</p> <p>H2f) The cask lid will be placed on the cask and bolted in place (airtight) and the cask will be transported to the CSB. After off-loading the SSFCs at the CSB, the cask and transporter will be returned to the 221-T Tunnel. It will take 18 trips to transfer the 72 fuel assemblies.</p> <p>H2g) The transport cask must be designed to preclude the potential release of radioactive emissions.</p> <p>H2h) The fuel conditioning system skid will be dismantled and removed from the 221-T Canyon.</p> <p>(WAC 246-247-040(5))</p>		
<p>T-Plant must continue to demonstrate that the adequacy of their system design and operation is equivalent to the intent of ASME/ANSI N510, Both stages of HEPA filtration must be individually aerosol tested in place, a minimum of annually (at a minimum control efficiency of 99.95 percent). (WAC 246-247-040(5))</p>	<p>Continuous</p>	<p><b>CDM:</b> In-Place Testing of HEPA Filter Systems, 2T99042. In-Place Testing of HEPA Filter Systems – 291-T Exhaust Filter Bank 1C, 2C, 3C, &amp; 4C Data Sheets, 2T99042E. <b>Comment:</b> Record Doc. No. 2T-00010 CHV-HEPA-101 2T-19218 CHV-HEPA-102 2T-00011 CHV-HEPA-103 2T-19219 CHV-HEPA-104 2T-00012 CHV-HEPA-105 2T-19220 CHV-HEPA-106 2T-00013 CHV-HEPA-107 2T-19221 CHV-HEPA-108</p>
<p>Until the requirements below for the emission unit monitoring system are met, non-destructive analysis (NDA) shall be performed annually on the final stage of the HEPA FILTERS FOR THE 291-t-1 STACK. The NDA method used for this measurement shall be capable of measuring a minimum detectable activity (MDA) of 1uCi or less. USDOE shall provide to WDOH for review, copies of written procedures for conducting the NDA measurement and for determining the MDA. The MDA of the NDA measurement method shall be verified at each measurement, and the results of the verification shall be provided to WDOH (WAC 246-247-040(5)).</p>	<p>Not Applicable</p>	<p><b>CDM:</b> 291-T became a major stack in January 2005 and compliant with ANSI N13.1 1999 requirements in December 2005.</p>

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<p align="center">Permit: AIR 07-306 - A Issue Date:03-23-07 Effective Date:03-15-07            NOC: Consolidated T Plant Operations            WDOH NOC ID: 711 Date In AOP: 05-03-07 Page in AOP: EU0314-001</p>		
<p>The total abated emission limit for this Notice of Construction is limited to 5.60E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).</p>	<p>Continuous</p>	<p>CDM: Annual Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>This consolidated T-Plant license supersedes all radioactive air licenses for 291-T-1.</p> <p>a. This approval subsumes those activities approved in three previous license approvals, retains/revises the specific conditions and limitations of those approvals, and replaces them as the radioactive air license for T-Plant:</p> <p>i. AIR 03-1208 (NOC ID # 445, "Storage in T-Plant Complex of Sludge from K-Basins")            ii. AIR 01-1010 (NOC ID # 499, "T-Plant Complex Fuel Removal Project")            iii. AIR 02-704 (NOC ID # 500, "Entering and Characterizing of the 224-T Facility Process Cells")</p> <p>b. With additional conditions and limitations provided herein, this approval also extends to new activities discussed in the NOC application "Radioactive Air Emissions Notice of Construction for Consolidated T Plant Operations", DOE/RL-2004-50, Rev.0, September, 2004, described briefly:</p> <p>i. Receipt, Storage, Treatment, and Loads out of Contact-Handled and Remote-Handled Transuranic (TRU) and Transuranic Mixed Waste (M-91 Initiative)            ii. Treatment ( in addition to storage ) of K-Basin Sludge from the North Load out Pit (NLOP)            iii. Such activities considered routine at T Plant as are described in succeeding conditions.</p> <p>Activities a)i through a)iii may emit radioactive air through 291-T-1. Additionally, activity a)iii may emit to the 200 Area Diffuse &amp; Fugitive emission unit and to Portable Temporary Radioactive Air Emission Units.</p>	<p>Continuous</p>	<p>CDM: DO-100-039, Package Transuranic Waste;            DO-100-012, Package Mixed Waste in Drums and Boxes;            DO-100-022, Package Low-Level Waste;            DO-100-027, Package Nonradioactive Dangerous Waste.</p>
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e)[as specified in the application] is 1.20E+02 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Am-241 1.38E+00 Liquid/Particulate Solid            WAC 246-247-030 (21) (a)            isotopic distribution based on destructive analysis of pre-filter four</p> <p>Cs-137 1.46E+01 Liquid/Particulate Solid            WAC 246-247-030 (21) (a)</p> <p>Pu-239/240 1.38E+01 Liquid/Particulate Solid            WAC 246-247-030 (21) (a)</p> <p>Sr-90 1.94E+01 Liquid/Particulate Solid            WAC 246-247-030 (21) (a)</p>	<p>Continuous</p>	<p>CDM: T Plant Curie Inventory Logbook, HNF-N-42.</p>

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<p>The radioactive isotopes identified for this emission unit are (no quantities specified): Am-241      Cs-137      Pu-239/240      Sr-90</p> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)) DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725( 4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>		
<p>All activities involving radioactive materials shall be conducted in accordance with radiation control procedures approved per applicable QA program. (WAC 246-247-040(5))</p>	Continuous	<p><b>CDM:</b> HNF-MP-599, Quality Assurance Program Description; NESHAP Quality Assurance Project Plan for Radioactive Air Emissions, HNF-EP-0528, HNF-5173, PHMC Radiological Control Manual</p>
<p>Calibrate all differential pressure gauges associated with 291-T-1 HEPA filters annually. (WAC 246-247-040(5))</p>	Continuous	<p><b>CDM:</b> WMP-18006, Pressure/Vacuum Gauge, Differential Pressure/Vacuum Gauge Calibration</p>
<p>Receipt, Storage, Treatment, and Load out of Contact-handled and Remote-handled transuranic (TRU) and transuranic mixed (TRUM) (M-91 Initiative):</p> <p>A. M91 project activities shall be conducted in T-Plant within the head end, the railroad tunnel, and/or the T-Plant Canyon. M-91 waste shall be received at the head end or at the railroad tunnel. M91 waste is remote or contact handled transuranic, transuranic mixed, mixed, or mixed low level waste.</p> <p>B. M-91 waste containers shall be opened and their contents treated in the head end of T-Plant only under containment, containment being defined here as either vented and HEPA-filtered glove box/bag, sealed glove box/bag, ventilated and HEPA-filtered containment tent or ventilated and HEPA-filtered solid-structure temporary containment, or PTRAEU. Where active ventilation is provided, that ventilation shall discharge into the T-Plant canyon so that radioactive air emissions originating in this process are further controlled by the 291-T-1 ventilation system controls. Procedures (approved in accord with applicable QA program) to ensure the initial integrity of the containment and to ensure the continued integrity of the containment structures shall be followed, shall include periodic radiological surveys, and shall be kept available for WDOH review. The head end will be posted based on radiological conditions in accordance with radiation control procedures approved per applicable QA program.</p> <p>C. M-91 waste containers shall be opened and their contents treated in the railroad tunnel and/or canyon of T-Plant, in accord with radiological control procedures (approved in accord with applicable QA program).</p>	Continuous	<p><b>CDM:</b> DO-100-129, Shipping, Receiving, and Relocating Waste; DO-100-039, Package Transuranic Waste; DO-100-058, TRU Drum Waste Processing ; Hanford Site Solid Waste Acceptance Criteria, HNF-EP-0063; Package Transuranic Waste, DO-100-039; Contact-Handled Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant, DOE/WIPP-02-3122.</p>

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<p>D. Lower risk M-91 containers may be received at the head end of T-Plant, and higher risk M-91 containers shall be received at the railroad tunnel. Risk criteria, including radiological risk considerations, governing receipt location shall be developed and documented.</p> <p>E. Surface contamination and dose rate limits on M-91 waste containers received at T-Plant shall be governed by approved solid waste acceptance procedures. Deviations from approved solid waste acceptance procedures are allowed under a controlled waiver process. Stand-alone solid waste acceptance documents specifying surface contamination and dose rate limits shall be developed and approved for any M-91 containers received under the waiver process. These procedures shall be kept readily available for WDOH review. Documentation shall be sufficient to allow ready identification of the criteria under which each waste container is accepted, and shall note definite compliance with the applicable criteria on receipt.</p> <p>F. Applicable surface contamination/dose rate criteria shall be documented for each container of M-91 waste repackaged at T-Plant for transshipment. Documentation of applicable criteria and compliance thereto shall be maintained for M-91 waste containers shipped from T-Plant.</p> <p>G. Receipt, Storage, Treatment, and Load out of Contact-Handled and Remote-Handled Transuranic (TRU) and Transuranic Mixed Waste (M-91 Initiative) includes the following activities:  G1) Receiving.  G2) Sorting.  G3) Storing.  G4) Size Reduction.  G5) Repackaging.  G6) Containerizing.  G7) Load out.  G8) Treatment. (WAC 246-247-040(5)).</p>		
<p>Routine T-Plant Activities:</p> <p>A1) Packaging and Repackaging Waste - Packaging and repackaging activities are performed for waste generated at T-Plant as well as for onsite and offsite generators. Packaging and repackaging activities are:  A1a) Sorting.  A1b) Segregation.  A1c) Removing prohibited items.  A1d) Compositing/aggregating solids or liquids.  A1e) Adding absorbent.  A1f) Size reduction [e.g., cutting (jaws, saws, torches)], bending, folding, crushing (e.g., drum crusher), shredding, compacting, or similar methods that do not have a higher extent of disruption].  A1g) Void filling.  A1h) Pressure relief/release (e.g., aerosol cans, gas cylinders, drums, or other similar containers).  A1i) Aerosol can/drum puncturing.  A2) Verification Activities - Verification support activities are provided for waste and other materials that are generated on or off the Hanford Site. Verification activities are:  A2a) Physical observation.  A2b) Nondestructive examination (NDE).  A2c) Nondestructive assay (NDA).  A2d) Chemical field screening.  A2e) Radiological surveys.  A2f) Radiological samples.  A2g) Headspace gas analysis.  A2h) Chemical sampling.</p>	<p>Continuous</p>	<p><b>CDM:</b> DO-100-039, Package Transuranic Waste;  DO-100-012, Package Mixed Waste in Drums and Boxes;  DO-100-022, Package Low-Level Waste;  DO-100-027, Package Nonradioactive Dangerous Waste.</p>

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<p>A3) Sampling Activities - Sampling of waste generated by operations or by other onsite or offsite generators is performed. The purpose of sampling is to confirm process knowledge, characterize waste, support verification, and determine land disposal requirements as applicable. Sampling activities are:</p> <p>A3a) Field screening [e.g., pH paper, oxidizer, volatile organic analyses (VOAs), polychlorinated biphenyls (PCBs), or similar screening parameters].</p> <p>A3b) Obtaining a sample for analysis [e.g., grab, composite, composite liquid waste sampler (COLIWASA), or other similar sampling techniques].</p> <p>A3c) Shipping/transferring the samples to an approved laboratory for analysis.</p> <p>A3d) Disposition of sample returns (e.g., placement back into the parent container or another approved container/tank).</p> <p>A3e) Headspace gas analysis [typically in support of the Waste Isolation Pilot Plant (WIPP) Project].</p> <p>A3f) Tank sampling (liquid, sludge, salt cake, composites).</p> <p>A4) Decontamination/Refurbishment Activities - Materials, equipment, and waste can be decontaminated (e.g., free release, reduce the radiological levels, or other similar criteria) using a variety of methods. T-Plant also performs decontamination of T- Plant structural components (e.g., 221-T Building walls, cells, or other similar surfaces).</p> <p>Decontamination activities at T-Plant are:</p> <p>A4a) Water (fog, high or low-pressure spraying).</p> <p>A4b) Steam.</p> <p>A4c) Ice blasting.</p> <p>A4d) Vacuum blasting.</p> <p>A4e) Brushing.</p> <p>A4f) Abrasive tools.</p> <p>A4g) Scraping.</p> <p>A4h) Washing (e.g., chemicals/detergents).</p> <p>A4i) Immersion.</p> <p>A4j) Electro-polishing.</p> <p>A4k) Cutting (e.g., removal by sawing, torch cutting more highly radioactive components or other similar methods).</p> <p>A4l) Rust/paint removal.</p> <p>A5) Maintenance Activities - A variety of preventative and/or repair maintenance activities are performed at T-Plant. Some maintenance activities involve the temporary shut down of the 291-T-1 exhaust stack. Maintenance activities are:</p> <p>A5a) Painting.</p> <p>A5b) Crane maintenance.</p> <p>A5c) Electronic systems functional checks and repairs [CAMs, personnel contamination monitors (PCMs)].</p> <p>A5d) Calibrations.</p> <p>And may be performed on:</p> <p>A5e) Rollup doors.</p> <p>A5f) Heat pumps.</p> <p>A5g) Exhaust fans.</p> <p>A5h) Transformers.</p> <p>A5i) Scale systems.</p> <p>A5j) Wire rope.</p> <p>A5k) Stack systems fan lubes.</p> <p>A5l) Forklifts.</p> <p>A6) Waste Treatment Activities - T-Plant is a treatment facility permitted by the Washington State Department of Ecology (Ecology). Treatment activities are:</p> <p>A6a) Macroencapsulation.</p> <p>A6b) Absorption.</p> <p>A6c) Neutralization.</p> <p>A6d) Immobilization.</p> <p>A6e) Encapsulation.</p> <p>A6f) Stabilization (solidification, cementation, grouting).</p>		

Requirement	Compliance Status	Compliance Determination Method
<p>A6g) Compaction.  A6h) Amalgamation.  A6i) Segregation.  A6j) Shredding.  A6k) Venting.  A6l) Size Reduction.  A7) Recycling Activities - Materials are recycled whenever possible. Recycled materials are collected in accumulation containers in approved locations and transferred to the Recycling Center. Only nonradioactive materials are sent to the Recycling Center. Some radioactive materials (ferrous and nonferrous metals) can be recycled. Recycled materials are: ferrous and non-ferrous metal, light bulbs, aerosol cans, oils, and batteries.  A8) Storage Activities - T-Plant is permitted for waste storage by Ecology. Plant also stores other materials (chemicals, or equipment, or similar materials) to support operations. Radioactive wastes may be stored uncontainerized or in:  A8a) Containers (boxes, drums, tanker trucks/railcars, or large diameter containers).  A8b) Tanks.  A8c) Sumps and pipes.  A9) Equipment, Materials, and Waste Movement Activities - The movement of materials, equipment, waste, chemicals, or similar items involves the receipt and/or transferring/shipping, and movement and/or relocation within the T-Plant TSD unit boundary. Movement activities (using a forklift, crane, truck, dolly, personnel) are:  A9a) Receiving waste (liquid, solid, semi-solid ) for storage and/or treatment.  A9b) Movement of waste (liquid, solid, semi-solid) and equipment in or out of process cells, canyon deck craneway, or tunnel in the 221-T Building.  A9c) Movement of liquids, sludges, or other waste from containers and/or tanks via transfer lines.  A9d) Waste container transfers (among outdoor storage pads, within buildings, process cells, canyon deck, or other approved locations).  A9e) Placing and storing chemical products in flammable cabinets or other approved storage locations.  A9f) Transloading from the 221-T tunnel to canyon deck and/or process cells.  A10) Housekeeping Activities - Housekeeping activities involve maintaining T-Plant in a clean and orderly condition. Housekeeping activities are:  A10a) Sweeping (brooms).  A10b) Mopping (squeegees or mops).  A10c) Vacuuming.  A10d) Dusting.  A10e) Wiping (sponges, towels).  A10f) Picking up debris.  A10g) Removal of trash.  A11) Surveillance Activities - Surveillance activities involve walking down and inspecting various areas, systems, and components. Surveillances typically consist of daily, weekly, and monthly inspections of waste containers, tanks, buildings, or similar locations. Surveillances are subject to change (adding, deleting and/or modifying) as operations, maintenance, engineering, and radiological control dictates. Surveillances, inspections, and maintenance activities that do not have the potential to create airborne contamination can occur within the 221-T Building when the 291-T-1 exhaust stack emission system is shutdown. The following surveillances are performed at T-Plant:  A11a) Container storage areas treatment and storage tanks and ancillary equipment.  A11b) General condition of building structures.  A11c) Safety Cold weather surveillances (typically, between October 1 and March 31).</p>		

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<p>A11d) Inspection of equipment. A11e) Inspection of HEPA filtered vacuums. A11f) Radiological surveys. A12) Contamination Within the Canyon - The operational activities described inherently involve the spread of contamination within the canyon. The canyon is designed to provide containment for these operational activities. Job specific contamination controls are used (spreading paper to facilitate easy decontamination, fogging, fixing contamination, covering, performing operations remotely or other similar methods that cover, seal, or remove smearable contamination). (WAC 246-247-040(5))</p>		
<p>The abated and unabated emissions for this license have been estimated using particulate 241-Am, 239/240-Pu, 137-Cs, and 90-Sr, based on the isotopic distribution measured in destructive analysis of a T-Plant pre-filter, a Dose Equivalent-Curie limit of 15,000 DE-Ci, and also include a small contribution from gaseous radionuclides that may be encountered. The amounts of radioactive gases included are: (3-H, 25 Ci), (85-Kr, 3000 Ci), (129-I, 0.05 Ci), (219-Rn, 0.2 Ci), (220-Rn, 30 Ci), (222-Rn, 2 Ci). Radionuclides that may be encountered as particulates are: 242-Cm, 243-Am, 244-Cm, 60-Co, 134-Cs, 154-Eu, 40-K, 94-Nb, 237-Np, 238-Pu, 241-Pu, 242-Pu, 244-Pu, 226-Ra, 106-Ru, 125-Sb, 228-Th, 234-Th, 232-U, 233-U, 234-U, 235-U, 236-U, 238-U. Other particulate radionuclides are permitted, the total to remain within the DE-Ci limit of 15,000 DE-Ci and the abated emission limit of the license. Gaseous radionuclides are permitted, the sum of doses from radioactive gases to remain less than 6% of the total abated emission limit for this license.</p> <p>This condition does not apply to naturally occurring Radon.</p>	Continuous	<p><b>CDM:</b> Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007; Inventory Control Program, WMP 340, Section 1.08.</p>
<p>The alternative flow measurement method proposed for the 291-T-1 stack by USDOE letter 03-RCA-0210, dated April 9, 2003, is approved for use (WAC 246-247-075(3)).</p>	Continuous	<p><b>CDM:</b> Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007. <b>Comment:</b> The alternative method allows use of maximum exhaust fan capacity to calculate emissions.</p>
<p>The annual inspection and maintenance of the HEPAs must include visual inspection of the filter housing. Documentation of these activities must be made available to DOH upon request. (WAC 246-247-040(5))</p>	Continuous	<p><b>CDM:</b> In-Place Testing of HEPA Filter Systems, 2T99042. Records will be provided when requested by WDOH.</p>
<p>The emission unit monitoring system shall have the following activities performed: A1) By December 31, 2005 and annually thereafter: A1a) A visual check of nozzle position and orientation as well as measurements of nozzle openings; A1b) Checks to ensure the tightness of all fittings and</p>	Continuous	<p><b>CDM:</b> Inspection and Maintenance of 291-T Stack Sampling Probe and Transport Tube, 2T18077; Stack Monitor Record Sampler Components Swap, Functional Check, and Calibration, 2T18073.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>connections as well as a leak test of the entire sampling system.</p> <p>A1c) Visual inspections for corrosion, physical damage, or dust loading of the probe, sample lines, and monitoring system equipment.</p> <p>A2) Annually, from December 31, 2003:</p> <p>A2a) A functional/calibration check of monitoring system instrumentation shall be performed.</p> <p>A2b) USDOE shall provide to WDOH for review copies of the procedures used to perform the above activities. (WAC 246-247-060(5)).</p>		
<p>The PTE at T-Plant shall be tracked in DE curies. A running total of DE curies present at the beginning of the calendar year plus DE curies introduced into T-Plant during that year shall be maintained and kept available for WDOH review. This record shall be made current at no greater than weekly intervals. That the total does not exceed license limits shall be routinely verified, and documentation of that verification shall be maintained. (WAC 246-247-040(5)) (WAC 246-247-060(5))</p>	Continuous	<p><b>CDM:</b> Inventory Control Program, WMP 340, Section 1.08. T Plant Curie Inventory, HNF-N-42 Logbook</p>
<p>The Quality Assurance Standards for the sampling of emissions and subsequent analysis must remain in compliance with HNF-0528 NESHAPS Quality Assurance Project Plan for Radioactive Airborne (all of sections 2.0, 3.0, 5.0). (WAC 246-247-060(5))</p>	Continuous	<p><b>CDM:</b> Toxic and Radioactive Air Emission Compliance, WMP 340, Section 4.03. ABCASH data reviews as needed in association with the biennial Lab Certification Audit.</p>
<p>T-Plant must continue to demonstrate that the adequacy of their system design and operation is equivalent to the intent of ASME/ANSI N 510. Both stages of HEPA filtration must be individually aerosol tested in place, a minimum of annually (at a minimum control efficiency of 99.95 percent). (WAC 246-247-040(5))</p>	Continuous	<p><b>CDM:</b> 2T99042, In-Place Testing of HEPA Filter Systems; 2T99042E, In-Place Testing of HEPA Filter Systems – 291-T Exhaust Filter Bank 1C, 2C, 3C, &amp; 4C Data Sheets.</p>
<p>Receipt and Storage of K-Basins Sludge:</p> <p>A. Receipt, Treatment, Storage and Load out of north load out pit (NLOP) Sludge:</p> <p>A1) Sludge treatment consists of mixing the sludge with grout via the following major process steps:</p> <p>A1a) Transferring sludge from Large Diameter Container into the grout system.</p> <p>A1b) Sampling to ensure grouted containers meet waste isolation project plant (WIPP) acceptance requirements.</p> <p>A1c) Transferring aliquots into WIPP certified 55 gallon drums.</p> <p>A1d) Grouting to meet WIPP waste acceptance criteria.</p> <p>A2) Prior to treatment, NLOP sludge shall be stored in T-Plant process cells 3L, 10L, 13L, 15L, 8R, 9L, 14R, and/or 16R.</p> <p>A3) Containerized and grouted sludge shall be stored for not longer than 23 years from the date of issue of this license within the T-Plant complex.</p> <p>A4) Containerized and grouted sludge shall be stored within the TSD unit boundary, and disposed according to assay of individual containers.</p> <p>A5) The potential-to-emit of NLOP sludge received at T-Plant shall not</p>	Continuous	<p><b>CDM:</b> Various T Plant procedures: Handling of NLOP Large Diameter Containers, DO-100-050; North Loadout Pit Sludge Grouting, DO-100-059; Contact-Handled Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant, DOE/WIPP-02-3122; Package Transuranic Waste, DO-100-039; Waste Profile Sheet, TPLT-220-0001; SWITS 120 Reports for the 4 LDCs; RL letter 06-ESD-0156, dated September 15, 2006 to WDOH documenting that the PWR Fuel Removal Project was completed on September 18, 2004;</p>

Requirement	Compliance Status	Compliance Determination Method
<p>exceed 0.9 mrem/year, corresponding to 120 DE Ci.</p> <p>B. Receipt and Storage of K-Basins Sludge:</p> <p>B1) Preparation of cells to receive sludge containers, which shall be limited to the following activities:</p> <p>B1a) Intrusive cell operations to relocate items within cells and to transfer items between cells.</p> <p>B1b) Removal of cell contents, which shall be limited to the following operations.</p> <p>B1b1) Remote crane operations using lifting bails and clamshells.</p> <p>B1b2) Pumping of liquids.</p> <p>B1b3) Vacuum suction.</p> <p>B1b4) Storage, repackaging, and treatment of containerized and uncontainerized radioactive waste.</p> <p>B1b5) Waste characterization, verification, repackaging, size reduction, segregation, immobilization, and consolidation.</p> <p>B1b6) Preparation of waste shipments in accordance with acceptance criteria for other facilities.</p> <p>B1b7) Treatment and storage of liquid mixed waste.</p> <p>B1c) Storage of contaminated process equipment and debris in the 221-T Canyon Building cells and deck shall be limited to:</p> <p>B1c1) Tanks, pulsers, precipitators, centrifuges, and jumpers/connectors.</p> <p>B1c2) Decontamination equipment, immersion tanks, sprayers, and blasters.</p> <p>B1c3) Equipment racks, pumps, mixers, and motors.</p> <p>B1c4) Original equipment (prior to decontamination mission).</p> <p>B1c5) Condensers, chillers, filter assemblies, and columns.</p> <p>B1c6) Open and closed boxes, drums, and containers, filled with debris.</p> <p>B1c7) Tools, concrete blocks, and loose debris.</p> <p>B1d) Refurbishing, recycling, and maintenance of contaminated equipment shall be limited to the items of equipment listed above. B1e) Decontamination of equipment and materials, which shall be limited to the following operations:</p> <p>B1e1) Hand, spray, and abrasive methods.</p> <p>B1e2) Steam cleaning.</p> <p>B1e3) High pressure hot water.</p> <p>B1e4) High pressure cold water</p> <p>B1e5) Ice blasting.</p> <p>B1e6) Abrasive tools.</p> <p>B2) The chemical and physical processes associated with the sludge storage shall consist of the following:</p> <p>B2b) Radioactive waste shall be managed in accordance with written facility and Hanford Site waste management procedures and acceptance criteria. Criteria for moving containers from the canyon into the tunnel include the requirements that smearable contamination on the outside of the container must be less than 400 dpm/100 cm<sup>2</sup> alpha and less than 20,000 dpm/100 cm<sup>2</sup> beta/gamma for low risk evolutions. For medium risk evolutions the criteria for moving containers from the canyon into the tunnel shall include the requirements that smearable contamination on the outside of the container must be less than 2,000 dpm/100 cm<sup>2</sup> alpha and less than 100,000 dpm/100 cm<sup>2</sup> beta/gamma.</p> <p>B2c) New liner systems shall be installed in the pool if storage under water is required and in four to twelve of the process cells. Existing water conditioning systems (coolers, filtration system, ion exchange columns, and piping) shall be used, modified, replaced or removed if storage under water is required.</p> <p>B2d) Spent nuclear fuel (SNF) sludge retrieved from the 105-KE and 105-KW Basins shall be managed as two separate waste streams. Sludge containers configured for dry storage shall be used for less reactive floor and pit sludge components, including windblown sand and rocks, spalled concrete from the basin walls, iron and aluminum</p>		<p>Hanford Site Solid Waste Acceptance Criteria, HNF-EP-0063; Radiological Work Permits: RWP T-240, RWP T-246, RWP T-248, RWP T-250, RWP T-252, WP T-258R.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>corrosion products, ion exchange resin beads, uranium oxides, and uranium fuel particles. More reactive sludge collected in the knockout pots and settler tank during SNF retrieval and processing at K-Basins shall be stored in a container configured for storage under water or for dry storage if allowed by criticality and thermal analyses.</p> <p>B2e) Physical upgrades to the 221-T Canyon, as determined in final design, shall include installation of new cell containment, liner bracing systems, sump pumps, leak detectors, and instrumentation and controls in the 221-T Canyon.</p> <p>B2g) Canyon radiation detectors, alarms, and cameras will be upgraded to provide surveillance.</p> <p>B2h) Sludge containers shall be designed to ensure a safe storage configuration, based on final design results determined in criticality and heat rejection requirements analysis. Final design shall analyze maximum sludge loading and container sizing to minimize the number of transfers and number of containers.</p> <p>B2i) Contents of filled sludge containers shall consist of a layer of sludge below a layer of water and a layer of air to provide a void space in each container. Sludge containers shall be capable of maintaining sludge in a wet state during transport and storage. B2j) Sludge containers shall be received and placed into interim storage in the 221-T Canyon, configured for dry cell storage or storage under water. All sludge container handling and placement within the 221-T Building shall be performed remotely via crane operations.</p> <p>B2k) The containers shall be transported from K- Basins to the 221-T Building via tractor and trailer. Each transfer shall consist of one transport cask which shall be inspected upon receipt according to approved receipt methods.</p> <p>B2l) Sludge container unloading operations shall be done remotely using the canyon crane system. T-Plant Complex personnel shall vent and purge the transport cask with non-radioactive inert gas within the controlled airspace. The purge/venting system shall include a radiation detection method to verify that the storage container does not leak during transport and shall purge all hydrogen from the transport cask.</p> <p>B2m) As a sludge container is moved from the tunnel into the canyon, operations personnel shall verify remotely the identification number and record the container number, via existing camera systems. After the container is removed from the cask, an empty container will be placed in the cask and the lid shall be replaced. The transport system shall be surveyed for possible contamination on exiting the Radiological Area and will return to K- Basins.</p> <p>B2n) After the sludge containers are placed in the 221-T Canyon interim dry storage location, surveillance shall be performed to ensure that safety, regulatory, and safeguards and security requirements are met. Water levels within the dry storage containers shall be monitored (weight differential), and water additions shall be made remotely.</p> <p>B2o) After sludge containers are placed in the interim underwater pool storage location, surveillance shall be performed to ensure that safety, regulatory, and safeguards and security requirements are met. Pool storage conditions (water quality, water temperature, water level, and ion exchange column status) shall be monitored, and water shall be added as needed to the pool to maintain the necessary water depth. (WAC 246-247-040(5))</p>		

**P-296T007-001**  
WDOH Emission Unit ID : 315  
Page in AOP : EU0315-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 1 <b>Add'l Description:</b> To operate per Conditions and Limitations of the license.	Continuous	<b>CDM:</b> Heating & Ventilation Air Flow & Control Diagram (HVAC), Engineering Drawings H-2-83095 Sheet 1, H-2-83100 Sheet 1, H-2-826566 Sheet 1; and field walkdowns. <b>Comment:</b> Engineering drawings verify the presence of fan.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Prefilter <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Heating & Ventilation Air Flow & Control Diagram (HVAC), Engineering Drawings H-2-83095 Sheet 1, H-2-83100 Sheet 1, H-2-826566 Sheet 1; and field walkdowns. <b>Comment:</b> Engineering drawings verify the presence of prefilter.
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Heating & Ventilation Air Flow & Control Diagram (HVAC), Engineering Drawings H-2-83095 Sheet 1, H-2-83100 Sheet 1, H-2-826566 Sheet 1; and field walkdowns. <b>Comment:</b> Engineering drawings verify the presence of HEPA filter.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Heater <b>Required Units:</b> 1 <b>Add'l Description:</b> To operate per Conditions and Limitations of the license.	Continuous	<b>CDM:</b> Heating & Ventilation Air Flow & Control Diagram (HVAC), Engineering Drawings H-2-83095 Sheet 1, H-2-83100 Sheet 1, H-2-826566 Sheet 1; and field walkdowns. <b>Comment:</b> Engineering drawings verify the presence of heater. See "E-HTR" which is the acronym for "electric heater".
<b>Zone or Area:</b> <b>Abatement Technology:</b> Demister <b>Required Units:</b> 1 <b>Add'l Description:</b> To operate per Conditions and Limitations of the license.	Continuous	<b>CDM:</b> Heating & Ventilation Air Flow & Control Diagram (HVAC), Engineering Drawings H-2-83095 Sheet 1, H-2-83100 Sheet 1, H-2-826566 Sheet 1; and field walkdowns. <b>Comment:</b> Engineering drawings verify the presence of demister. See reference to "DMS" which is the acronym for "demister".

Requirement	Compliance Status	Compliance Determination Method
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> See special conditions. <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> ABCASH Program <b>Comment:</b> ABCASH EDP code number T154
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(c)(4)(e) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> Fluor Hanford NESHAP quality assurance program.
Permit: AIR 06-1013 - A <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>NOC:</b> Operation of the 2706-T Building <b>WDOH NOC ID:</b> 648 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0315-001		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 7.50E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).	Continuous	<b>CDM:</b> Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted. The approved activities are limited to:</p> <p>A1) Packaging and Repackaging Waste - Packaging and repackaging activities are performed for waste generated at 2706-T as well as for onsite and offsite generators. The repackaging of waste supports waste acceptance criteria for other TSD facilities. For example, prohibited items from waste packages are removed and either staged for either handling or repackaging using remote or manual methods.</p> <p>Packaging and repackaging activities are:            A1a) Sorting.            A1b) Segregation.            A1c) Removing prohibited items.            A1d) Compositing/aggregating solids or liquids.            A1e) Adding absorbent.            A1f) Size reduction [e.g., cutting (jaws, saws, torches)], bending, folding, crushing (e.g., drum crusher), shredding, compacting, or similar methods that do not have a higher extent of disruption].            A1g) Void filling            A1h) Pressure relief/release (e.g., aerosol cans, gas cylinders, drums, or other similar containers).</p> <p>A2) Verification Activities - Verification support activities are provided for waste and other materials that are generated on or off the Hanford Site.</p> <p>Verification activities are:            A2a) Physical observation.            A2b) Nondestructive examination (NDE).            A2c) Nondestructive assay (NDA).            A2d) Chemical field screening.            A2e) Radiological surveys.            A2f) Radiological samples.            A2g) Headspace gas sampling.</p>	Continuous	<b>CDM:</b> DO-100-039, Package Transuranic Waste; DO-100-012, Package Mixed Waste in Drums and Boxes; DO-100-022, Package Low-Level Waste; DO-100-027, Package Nonradioactive Dangerous Waste; WMP 370, Section 1.10, Verification Program.

Requirement	Compliance Status	Compliance Determination Method
<p>A2h) Chemical sampling.</p> <p>A3) Sampling Activities - Sampling of waste generated by operations or by other onsite or offsite generators is performed. The purpose of sampling is to confirm process knowledge, characterize waste, support verification, and determine land disposal requirements as applicable.</p> <p>Sampling activities are:</p> <p>A3a) Field screening (e.g., pH paper, oxidizer, volatile organic analyses (VOAs), polychlorinated biphenyls (PCBs), or similar screening parameters).</p> <p>A3b) Obtaining a sample for analysis [e.g., grab, composite, composite liquid waste sampler (COLIWASA), or other similar sampling techniques].</p> <p>A3c) Shipping/transferring the samples to an approved laboratory for analysis.</p> <p>A3d) Disposition of sample returns (e.g., placement back into the parent container or another approved container/tank).</p> <p>A3e) Headspace gas analysis [typically in support of the Waste Isolation Pilot Plant (WIPP) Project].</p> <p>A4) Decontamination/Refurbishment Activities - Materials, equipment, and waste can be decontaminated (e.g., free release, reduce the radiological levels, or other similar criteria) using a variety of methods. Equipment can also be repaired and refurbished within the 2706-T facility. Within 2706-T, decontamination of 2706-T structural components may be performed.</p> <p>Decontamination and refurbishment activities at 2706-T are:</p> <p>A4a) Water (fog, high or low-pressure spraying).</p> <p>A4b) Steam.</p> <p>A4c) Ice blasting.</p> <p>A4d) Vacuum blasting.</p> <p>A4e) Brushing.</p> <p>A4f) Abrasive tools.</p> <p>A4g) Scraping.</p> <p>A4h) Washing (e.g., chemicals/detergents).</p> <p>A4i) Immersion.</p> <p>A4j) Electro-polishing.</p> <p>A4k) Cutting (e.g., removal by sawing, torch cutting more highly radioactive components or other similar methods).</p> <p>A4l) Rust/paint removal.</p> <p>A4m) Sand blasting.</p> <p>A4n) Vacuuming.</p> <p>A5) Maintenance Activities - A variety of preventative and/or repair maintenance activities are performed at 2706-T. Some maintenance activities involve the temporary shut down of the 296-T-7 exhaust stack.</p> <p>Maintenance activities are:</p> <p>A5a) Painting.</p> <p>A5b) Crane maintenance.</p> <p>A5c) Electronic systems functional checks and repairs [CAMs, personnel contamination monitors (PCMs)].</p> <p>A5d) Calibrations.</p> <p>A5e) Mechanical overhaul and rebuild.</p> <p>A5f) Bearing replacement.</p> <p>A5g) Pump and motor alignment.</p> <p>Maintenance may be performed on:</p> <p>A5h) Rollup doors.</p> <p>A5i) Heat pumps.</p> <p>A5j) Exhaust fans.</p> <p>A5k) Transformers.</p> <p>A5l) Scale systems.</p>		

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<p>A5m) Wire rope. A5n) Stack systems. A5o) Forklifts.</p> <p>A6) Waste Treatment Activities - 2706-T is a RCRA treatment and Storage facility permitted by the Washington State Department of Ecology (Ecology).</p> <p>Treatment activities are: A6a) Macroencapsulation. A6b) Absorption. A6c) Neutralization. A6d) Immobilization. A6e) Encapsulation. A6f) Stabilization (solidification, cementation, grouting). A6g) Compaction. A6h) Amalgamation. A6i) Segregation. A6j) Shredding. A6k) Venting and drilling. A6l) Size Reduction.</p> <p>A7) Recycling Activities - Materials are recycled whenever possible. Recycled materials are: ferrous and non-ferrous metal, light bulbs, aerosol cans, oils, and batteries.</p> <p>A8) Storage Activities - 2706-T stores materials (chemicals, or equipment, or similar materials) to support operations. Radioactive wastes may be stored uncontainerized or in: A8a) Containers (boxes, drums, tanker trucks/railcars, or large diameter containers). A8b) Tanks, A8c) Sumps and pipes.</p> <p>A9) Equipment, Materials, and Waste Movement Activities. - The movement of materials, equipment and waste is necessary to support operations and maintenance. Movement activities (using a forklift, crane, truck, doll, personnel) are: A9a) Receiving waste (liquid, solid, semi-solid) for storage and/or treatment. A9b) Movement of waste (liquid, solid, semi-solid) and equipment. A9c) Movement of liquids, sludges, or other waste form containers and/or tanks via transfer lines. A9d) Waste container transfers. A9e) Placing and storing chemical products in flammable cabinets or other approved storage locations. A9f) Movement of contaminated material.</p> <p>A10) Housekeeping Activities - Housekeeping activities involve maintaining 2706-T in a clean and orderly condition.</p> <p>Housekeeping activities are: A10a) Sweeping (brooms). A10b) Mopping (squeegees or mops). A10c) Vacuuming. A10d) Dusting. A10e) Wiping (sponges, towels). A10f) Picking up debris. A10g) Removal of trash.</p> <p>A11) Surveillance Activities - Surveillance activities involve walking down and inspecting various areas, systems, and components. Surveillances typically consist of daily, weekly, and monthly inspections of waste containers, tanks, buildings, or similar locations. Surveillances are subject to change (adding, deleting and /or</p>		

Requirement	Compliance Status	Compliance Determination Method
<p>modifying) as operations, maintenance, engineering, and radiological control dictates. Surveillances, inspections, and maintenance activities that do not have the potential to create airborne contamination can occur within the 2706-T exhaust stack emission system is shutdown.</p> <p>The following surveillances are performed at 2706-T:  A11a) Container storage areas treatment and storage tanks and ancillary equipment.  A11b) General condition of building structures.  A11c) Cold weather surveillances (typically, between October 12 and March 31).  A11d) Inspection of equipment.  A11e) Inspection of HEPA filtered vacuums.  A11f) Radiological surveys.</p> <p>2706-T: The 2706-T facility includes the 2706-T building and the 2706-TA Building. The 2706-T Building and the 2706-TA Building make up a single structure and are described briefly here. The 2706-T facility handles low-level waste, mixed low level waste, and transuranic (TRU) waste.</p> <p>The 2706-T Building was built in 1959 as a low-level decontamination building. The original building was 66 feet long and 50 ft. wide. The 2706-TA Building was added in 1994/1995 over the concrete pad on the west side of the 2706-T. One rollup-door and one man-door provide access between 2706-T and 2706-TA Building. Three heat pumps provide heating, ventilation, and air conditioning for the 2706-T Building operations area. Waste handling and decontamination operational areas of the 2706-T Building are open and unobstructed. The 2706-T building is a pre-engineered metal building. The foundation is concrete slab on grade throughout. The 2706-T Building includes two pits, one for decontamination and treatment of motor vehicles and other large equipment, and one for rail car decontamination and treatment. These pits can also be used to support collection of liquids from waste handling activities.</p> <p>Current operations in 2706-T Building include waste sampling, packaging and repackaging, head-gas sampling, managing waste container, decontamination/refurbishment, maintenance, recycling, storage, housekeeping, surveillance, and movement activities. One egress door leads directly to the exterior of 2706-T Building. Other doors lead directly to the non-ventilated lean-to on the north side, and an air lock provides access to the 2706-TA Building operations area. The railway and auto pits have metal grating and some wooden covers to prevent falls into the pits. An epoxy floor sealant had been applied to all operational area floors. To support these operations, greenhouses are used as necessary in 2706-T. Greenhouses are temporary or semi-permanent radioactive material confinement structures, and can be used for contamination control. If used, greenhouses shall exhaust to the areas ventilated by the 296-T-7 ventilation systems.</p> <p>The atmosphere clean-up train (ACT-1) system, sprinkler system riser room, and electrical room are located in the south lean-to (non-ventilated).</p> <p>2706-TA: The 2706-TA Building is an addition to the 2706-T Building installed in the 1990s as an add-on over the concrete storage pad located west of the building. The 2706-TA Building is approximately 54 feet long, 45 ft wide, and 23 feet high. There are two rollup doors located at the waste end of the building. The 2706-TA Building has steel primary and secondary structural elements and corrugated sheet metal exterior siding and roofing panels. Three heat pumps provide heating, ventilation, and air conditioning for the 2706-TA Building operations area. The floor is concrete slab on grade. An epoxy floor sealant had been applied to all operational are floors. Waste handling</p>		

Requirement	Compliance Status	Compliance Determination Method
<p>and decontamination operational areas of the 2706-TA Building are open and unobstructed.</p> <p>Current operations in 2706-TA Building include waste sampling, packaging and repackaging, head-gas sampling, managing waste container, decontamination/refurbishment, maintenance, recycling, storage, housekeeping, surveillance, and movement activities. To support waste activities, greenhouses are used if necessary. Greenhouses are temporary or semi-permanent radioactive material confinement structures, and can be used for contamination control. When used, greenhouses shall exhaust to the areas ventilated by the 296-T-7 ventilation system.</p> <p>Attached to the south side of 2706-TA Building is a lean-to made up of two rooms. The larger room houses the new ACT-2 HEPA filter system, which serves the operational areas. The ACT-1 and ACT-2 systems exhaust through the 296-T-7 stack. The second room houses electronic controllers and electrical switchgear supporting operations.</p> <p>Emissions from these activities are exhausted through 296-T-7, except for emissions resulting from vented TRU containers stored within the facility, which may be released to the 200 Area diffuse and fugitive emission unit when the ventilation system is not in operation.</p>		
<p>The PTE for this project as determined under WAC 246-247-030(21a-e) [as specified in the application] is 7.50E-02 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>DE-0    1.90E-05    Contained WAC 246-247-030 (21) (a)</p> <p>Any radionuclide on the chart of the nuclides could be encountered. A small contribution from the gaseous radionuclides may be encountered. The radionuclides within the facility are controlled by the licensee in terms of dose-equivalent (DE) Curies. A conservative PTE tracking method for the demonstration of compliance to the licensed PTE limits is provided in the conditions of the license. "Contained" means "within typical TRU waste containers for which a release fraction of 2E-09 has been determined to be appropriate."</p> <p>De-0    2.90E-03    Liquid/Particulate Solid WAC 246-247-030 (21) (a)</p> <p>Any radionuclide on the chart of the nuclides could be encountered. A small contribution from the gaseous radionuclides may be encountered. The radionuclides are known to and controlled by the licensee in terms of dose-equivalent (DE) Curies. A conservative PTE tracking method for the demonstration of compliance to the licensed PTE limits is provided in the conditions of the license. This amount of DE curies is permitted within the facility uncontained in TRU waste containers as liquid/particulate for which a release fraction of 1E-03 is appropriate.</p> <p>H-3        1.50E+01    Gas    WAC 246-247-030 (21) (a) Rn-219    2.00E-01    Gas    WAC 246-247-030 (21) (a) Rn-220    2.80E+01    Gas    WAC 246-247-030 (21) (a) Rn-222    1.47E+00    Gas    WAC 246-247-030 (21) (a)</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified): H-3                    Rn-219                    Rn-220                    Rn-222</p> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would</p>	Continuous	<p><b>CDM:</b> Inventory Control Program, WMP-340, Section 1.08; Air Emission Compliance for 2706-T Operational Activities, WMP-340, Section 1.10; PHMC Radiological Control Manual, HNF-5173.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>constitute a significant modification to the AIR Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>		
<p>All activities involving potentially airborne radioactive materials in 2706-T shall be conducted in accordance with the ALARA principle. (WAC 246-247-040(5).</p>	Continuous	<p><b>CDM:</b> HNF-5173, Rev. 3, PHMC Radiological Control Manual; HNF-RD-15332, Environmental Protection Requirements, Section 2.5; HNF-PRO-15333, Environmental Protection Processes, Section 5.5.</p>
<p>The PTE in the space ventilated by 296-T-7 shall be tracked for compliance to the license limit as described in this condition.</p> <p>Waste Contained in Typical TRU Waste Containers: PTE &lt; 9490 DE Ci/year * 2E-09. Compliance: maintain annual total of DE Ci * 2E-09 below limit. [Dose contribution of this activity to license limit estimated assuming each DE Ci is 241- Am].</p> <p>Venting of Waste Contained in Typical TRU waste Containers: PTE &lt; 9490 DE Ci/year * 1E-03 * 5.7E-05. Compliance: maintain annual total of DE Ci * 1E-03 * 5.7E-05 vented below limit. [Dose contribution of this activity to license limit estimated assuming each DE Ci is 241- Am].</p> <p>Torch cutting: PTE&lt;9E-04 mrem/year. Compliance: Maintain the product of inches cut and contamination level to : &lt;8.8E+09 in-dpm/100 sq.cm beta/gamma and &lt; 8.8E+6 dpm/100 sq. cm alpha. (Note: The release at the cut is assumed gaseous due to high cutting temperature, but it is also assumed that any gases thus formed will recondense into a particulate form by the time they reach the filters, and be subject to the standard removal efficiency of the HEPA filter.) [Dose contribution of this activity to license limit estimated assuming all alpha is 241- Am, all beta/gamma is 137-Cs].</p> <p>Gases in Waste Contained in Typical TR Waste Containers: PTE &lt; 7E-04 mrem/year. Compliance: maintain tritium PTE below 15 Ci/yr; 219 - Rn PTE below 0.2Ci/yr; 220-Rn PTE below 1.47 Ci/yr. These limits apply to process-enhanced radionuclides only, per (WAC 246-247-020(4)).[Dose contribution of this activity to license limit estimated using isotope-specific dose conversions factors.]</p> <p>Other Processes: PTE &lt; 4.9E-02 mrem/yr. Compliance: maintain total facility DE Ci/year (exclusive of TRU included above) * 1E-03 below 2.9 * 1E-03, or maintain the sum Ci (alpha) * 1E-03 * 17 + Ci (beta/gamma) * 1E-03 * 0.31 below 4.9 E-02 mrem/year. [Dose contribution of this activity's PTE to license limit estimated assuming DE Curies are 241-Am].</p> <p>Residual Contamination: PTE &lt; 7.1E-03 mrem/year. Accounts for residual contamination present in facility if posting is Contamination Area or below. Greater contamination levels result from other processes, and are accounted for in the PTE(s) associated with them. No specific compliance demonstration is necessary beyond the compliance with posting requirements. [Dose contribution of this activity to license limit estimated assuming all alpha is 241-Am, all beta/gamma is 137-Cs.]</p> <p>The facility shall document and implement a program of inspection and</p>	Continuous	<p><b>CDM:</b> Inventory Control Program, WMP-340, Section 1.08; Air Emission Compliance for 2706-T Operational Activities, WMP-340, Section 1.10; PHMC Radiological Control Manual, HNF-5173.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>maintenance to ensure the continuous integrity of contamination fixative used within the facility.</p> <p>That the total PTE does not exceed licensed limits shall be routinely verified, and documentation of that verification shall be maintained. (WAC 246-247-040(5))(WAC 246-247-060(5)).</p>		
<p>The ventilation system shall be in operation when activities involving radioactive or contaminated materials are performed within the ventilated space. The ventilation system shall be in operation if any part of the 2706-T Facility is posted as a high contamination area, or higher. Storage/movement of ventilated (NucFil or vent clip) TRU containers is permitted when the ventilation system is not operating (WAC 246-247-040(5)).</p>	Continuous	<p><b>CDM:</b> Operate The 2706-T ACT-1 Ventilation System, DO-060-014, Section 5.33 Note / TSR-LCO 3.3.1; Operate The 2706-T ACT-2 Ventilation System, DO-060-015, Section 5.3.3, Note / TSR-LCO 3.3.1; 2706-T Ventilation Logbook.</p>
<p>Record sampling shall be continuous whenever the ventilation system is operating. Samples shall be collected monthly, for periods in which the ventilation system has operated. Samples shall be composited and analyzed quarterly, if a sample was collected during that quarter. Licensee shall document minimum detectable concentrations for the stack emissions measurements (WAC 246-247075(3, 8, 9)).</p>	Continuous	<p><b>CDM:</b> 2706-T/TA Gaseous Effluent Sampling, DO-150-004.</p>
<p>The demisters and heaters in the 296-T-7 ventilation system shall operate when: The ventilation system is operating and processes capable of elevating the ventilation system air humidity or capable of mechanical aerosolization of liquids are performed. Licensee shall develop and document specific and auditable process criteria governing heater and demister operation, sufficient to ensure continued effectiveness of the HEPA filters. (WAC 246-247-040(5)).</p>	Continuous	<p><b>CDM:</b> Operate The 2706-T ACT-1 Ventilation System, DO-060-014, Section 1.0; Operate The 2706-T ACT-2 Ventilation System, DO-060-015, Section 1.0.</p>

**P-291S001-001**

WDOH Emission Unit ID : 332

Page in AOP : EU0332-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<p><b>Zone or Area:</b> <b>Abatement Technology:</b> Sandfilter <b>Required Units:</b> 1 <b>Add'l Description:</b></p>	Continuous	<p><b>CDM:</b> Field walk downs and drawings. H-2-825446, H-2-825444 &amp; H-2-8501</p>
<p><b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 2</p>	Continuous	<p><b>CDM:</b> Field walk downs and drawings. H-2-825446, H-2-825444 &amp; H-2-8501</p>

Requirement	Compliance Status	Compliance Determination Method
<b>Add'l Description:</b> In parallel, only 1 operates at a time		<b>Comment:</b> Timely notification of short disruptions made to WDOH
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 4 week sample/year <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> Analytical results in ABCASH.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> Required sampling and NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528).

**Permit:**ALARACT 28 **Issue Date:**01-01-07  
**NOC:** Shutdown of Stack System(s) (Maintenance and incidental)  
**WDOH NOC ID:** **Date In AOP:** 01-01-07 **Page in AOP:**

Requirement	Compliance Status	Compliance Determination Method
<p><b>1. Description of Activity/Requirements</b></p> <p>The listed facilities are currently under Surveillance and Maintenance (S&amp;M) status, meaning active processing has ceased with radioactive feed materials no longer brought in. Surveillances and maintenance activities are performed in these facilities including, but not limited to minor activities such as exterior and interior inspections; checking for door security, for any unauthorized building intrusions, and for structural integrity; water intrusion cleanup; waste handling/removal; maintaining radiological airborne control zones; animal or insect intrusion abatement; maintaining operating systems and building integrity, eliminating utilities when possible; identifying and reducing hazards; and housekeeping. The primary ventilation systems and associated record sampling systems operate at each facility as described in the Hanford Site Air Operating Permit. At certain times to support these various S&amp;M activities, or related to maintenance or replacement-in-kind, any one of these primary ventilation systems may be shut down for a period exceeding two days duration. The four ventilation systems which may be shut down are: 332 REDOX, 402 B-Plant, 369 PUREX, 310 U-Plant.</p>	Continuous	<b>CDM:</b> Field interviews, and work planning/control documents and procedures.
<p><b>2. Radiological Controls</b></p> <p>It was agreed that an As Low As Reasonably Achievable Control Technology (ALARACT) demonstration is appropriate to address control and monitoring of potential radioactive air emissions during these extended periods of shutdown.</p> <p>During shutdown periods exceeding two days, the following controls</p>	Continuous	<b>CDM:</b> Field interviews, contact log and radiological surveys.

Requirement	Compliance Status	Compliance Determination Method
<p>will be implemented:</p> <p>Inform the Washington Department of Health (WDOH) by telecon or email at the start of each use of this ALARACT action or as soon as it is realized that the systems will be shutdown for more than two days.</p> <p>To provide assurance that containment of airborne contamination is maintained during the subject periods of shutdown, Fluor Hanford (or successor)</p> <p>Contractor Radiological Control Technicians (RCTs) will perform daily (during normal work days i.e., not weekends or holidays) radiological swipe surveys on a representative few normally accessible outer facility doors. If an increase in removable (smearable) contamination is detected at any of these locations during the period of shutdown, notify the WDOH and describe containment measures to be taken.</p> <p>During the subject periods of shutdown, to avoid situations which might encourage increased diffuse or fugitive emissions, no activities will be conducted inside the facility except those approved for unfiltered containment in accordance with established Radiological Control criteria.</p> <p>If the fans are not restarted within the scheduled time discussed with WDOH, WDOH will be contacted, and continued monitoring and/or airborne controls will be discussed.</p>		
<p>3. Monitoring</p> <p>It was agreed that an As Low As Reasonably Achievable Control Technology (ALARACT) demonstration is appropriate to address control and monitoring of potential radioactive air emissions during these extended periods of shutdown.</p>	Continuous	CDM: ALARACT documents completed as discussed/directed with WDOH.
<p>4. Records/Documentation</p> <p>None.</p>	Continuous	CDM: Contact log and radiological surveys.

**P-296S016-001**

WDOH Emission Unit ID : 337

Page in AOP : EU0337-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<p><b>Zone or Area:</b></p> <p><b>Abatement Technology:</b> Fan</p> <p><b>Required Units:</b> 1</p> <p><b>Add'l Description:</b></p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL notification procedure and notification logbook.</p> <p><b>Comment:</b> Exhauster shut down once during the reporting period; reported per the CH2M HILL notification procedure.</p>
<p><b>Zone or Area:</b></p> <p><b>Abatement Technology:</b> HEPA</p>	Continuous	CDM: Field interviews.

Requirement	Compliance Status	Compliance Determination Method
<b>Required Units: 1</b> <b>Add'l Description:</b>		
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 4 week sample/ year <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> ABCASH program <b>Comment:</b> ABCASH EDP code number S264.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> CH2M HILL NESHAP quality assurance program.
No active NOC approvals in the AOP for this certification period.		

**P-296B010-001**

WDOH Emission Unit ID : 340  
Page in AOP : EU0340-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> K-3 Filter Pit <b>Abatement Technology:</b> Fan <b>Required Units:</b> 1 <b>Add'l Description:</b> 2 parallel flow paths, in-series	Continuous	<b>CDM:</b> As Built Drawings. H-2-66531, H-2-66533
<b>Zone or Area:</b> K-1 Filter Bldg. <b>Abatement Technology:</b> Prefilter <b>Required Units:</b> 2 <b>Add'l Description:</b> In series	Continuous	<b>CDM:</b> As Built Drawings. H-2-66531, H-2-66532
<b>Zone or Area:</b> K-3 Filter Pit <b>Abatement Technology:</b> Impingement Vanes <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> As Build Drawings. H-2-99442, H-2-99443, H-2-99444, H-2-99449
<b>Zone or Area:</b> K-3 Filter Pit <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> 2 parallel flow paths, in-series	Continuous	<b>CDM:</b> As Built Drawings. H-2-99442, H-2-99443, H-2-99444, H-2-99449
<b>Zone or Area:</b> K-3 Filter Pit <b>Abatement Technology:</b> Demister <b>Required Units:</b> 1 <b>Add'l Description:</b> Not operable	Continuous	<b>CDM:</b> As Built Drawings. H-2-99442, H-2-99443, H-2-99444, H-2-99449

Requirement	Compliance Status	Compliance Determination Method
<b>Zone or Area:</b> K-3 Filter Pit <b>Abatement Technology:</b> Heater <b>Required Units:</b> 1 <b>Add'l Description:</b> Not operable	Continuous	<b>CDM:</b> As Built Drawings. H-2-99442, H-2-99443, H-2-99444, H-2-99449
<b>Zone or Area:</b> K-1 Filter Bldg. <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> In series	Continuous	<b>CDM:</b> As Built Drawings. H-2-66531, H-2-66532
<b>Zone or Area:</b> K-1 Filter Bldg. <b>Abatement Technology:</b> Fan <b>Required Units:</b> 1 <b>Add'l Description:</b> 2 in parallel	Continuous	<b>CDM:</b> As Built Drawings. H-2-66531, H-2-66532
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> Continuous <b>Radionuclide Requiring Measurement:</b> Each radionuclide that could contribute greater than 10% of the potential TEDE	Continuous	<b>CDM:</b> Review of data in ABCASH, Facility specific procedures, Statement of Work for Services Provided by Waste Sampling and Characterization Facility, HNF-EP-0835; RC-C00-005, Exchange 296-B10 Record Air Samples.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(2) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 60, Appendix A, Method 2; 40 CFR 61, Appendix B, Method 114; 61.93(b)(2)(ii) ANSI N13.1	Continuous	<b>CDM:</b> NESHAP Quality Assurance Project Plan for Radionuclide Air Emissions (HNF-EP-0528 latest revision).
Permit: AIR 06-1014 <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>NOC:</b> WESF Liquid Low Level Radioactive Liquid Removal from Tank 100 <b>WDOH NOC ID:</b> 649 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0340-001 <b>NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3</b>		

**EP-320-02-S**

WDOH Emission Unit ID : 355  
Page in AOP : EU0355-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> In Series	Continuous	<b>CDM:</b> Reviewed the HEPA Filter PM results (PM-55110) and confirmed with Building Engineer.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan	Continuous	<b>CDM:</b> Reviewed the Exhaust Fan PM Results (PM-42525) & verified

Requirement	Compliance Status	Compliance Determination Method
<b>Required Units: 1</b> <b>Add'l Description:</b>		configuration with Building Engineer.
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 2 week sample/year <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> Emission data is maintained in the Gaseous Emission Database (GED). A query of the database confirmed all required samples were collected during the reporting period, including the start and end dates of sample periods.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 60, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> A NESHAPs Inventory of radioactive materials is conducted for PNNL facilities on an annual basis in accordance with PNNL-10855 Rev. 4, "Assessment of Unabated Facility Emission Potentials for Evaluating Airborne Radionuclide Monitoring Requirements at PNNL-2007". The "Pacific Northwest National Laboratory Effluent Management Quality Assurance Plan" (EM-QA-01) specifies quality assurance requirements. The "Airborne Radionuclide Emission Sample Analysis Statement of Work" (Rev. 7, April 2007) specifies radionuclide analysis methods.
No active NOC approvals in the AOP for this certification period.		

**EP-320-04-S**

WDOH Emission Unit ID : 357  
Page in AOP : EU0357-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units: 1</b> <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Reviewed HEPA Filter PM results (PM-55110). Confirmed with the Building Engineer.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units: 1</b> <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Confirmed configuration with the Building Engineer.

Requirement	Compliance Status	Compliance Determination Method
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 2 week sample/year <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> Emission data is maintained in the Gaseous Emission Database (GED). A query of the database confirmed all required samples were collected during the reporting period, including the start and end dates of sample periods.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> A NESHAPs Inventory of radioactive materials is conducted for PNNL facilities on an annual basis in accordance with PNNL-10855 Rev. 4, "Assessment of Unabated Facility Emission Potentials for Evaluating Airborne Radionuclide Monitoring Requirements at PNNL-2007". The "Pacific Northwest National Laboratory Effluent Management Quality Assurance Plan" (EM-QA-01) specifies quality assurance requirements. The "Airborne Radionuclide Emission Sample Analysis Statement of Work" (Rev. 7, April 2007) specifies radionuclide analysis methods.
No active NOC approvals in the AOP for this certification period.		

**EP-320-01-S**

WDOH Emission Unit ID : 358

Page in AOP : EU0358-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> In series	Continuous	<b>CDM:</b> Reviewed the HEPA Filter PM results (PM-55110) and verified configuration with Building Engineer.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 2 <b>Add'l Description:</b> 1 operational, 1 backup	Continuous	<b>CDM:</b> The Building Engineer confirmed the radiological exhaust system is configured with 2 fans, one operational, one backup.
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 2 week sample/year <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> Emission data is maintained in the Gaseous Emission Database (GED). A query of the database confirmed all required samples were collected during the reporting period, including the start

Requirement	Compliance Status	Compliance Determination Method
		and end dates of sample periods.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> A NESHAPs Inventory of radioactive materials is conducted for PNNL facilities on an annual basis in accordance with PNNL-10855 Rev. 4, "Assessment of Unabated Facility Emission Potentials for Evaluating Airborne Radionuclide Monitoring Requirements at PNNL-2007". The "Pacific Northwest National Laboratory Effluent Management Quality Assurance Plan" (EM-QA-01) specifies quality assurance requirements. The "Airborne Radionuclide Emission Sample Analysis Statement of Work" (Rev. 7, April 2007) specifies radionuclide analysis methods.
No active NOC approvals in the AOP for this certification period.		

**EP-323-01-S**

WDOH Emission Unit ID : 359

Page in AOP : EU0359-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 1 <b>Add'l Description:</b> Common to both areas	Continuous	<b>CDM:</b> Reviewed the Exhaust Fan PM Results (PM-43810) & confirmed with the Building Engineer.
<b>Zone or Area:</b> Hot Cell <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> In series	Continuous	<b>CDM:</b> Reviewed the 2007 HEPA Filter PM results (PM-55550). Confirmed with the Building Engineer.
<b>Zone or Area:</b> Equipment Room <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Reviewed the 2007 HEPA Filter PM results (PM-55550). Confirmed with the Building Engineer.
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 2 week sample/year <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> Emission data is maintained in the Gaseous Emission Database (GED). A query of the database confirmed all required samples were collected during the reporting period, including the start

Requirement	Compliance Status	Compliance Determination Method
		and end dates of sample periods.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> A NESHAPs Inventory of radioactive materials is conducted for PNNL facilities on an annual basis in accordance with PNNL-10855 Rev. 4, "Assessment of Unabated Facility Emission Potentials for Evaluating Airborne Radionuclide Monitoring Requirements at PNNL-2007". The "Pacific Northwest National Laboratory Effluent Management Quality Assurance Plan" (EM-QA-01) specifies quality assurance requirements. The "Airborne Radionuclide Emission Sample Analysis Statement of Work" (Rev. 7, April 2007) specifies radionuclide analysis methods.
No active NOC approvals in the AOP for this certification period.		

**EP-325-01-S Hazardous Waste Treatment Unit**

WDOH Emission Unit ID : 361  
Page in AOP : EU0361-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> 2 in series	Continuous	<b>CDM:</b> Reviewed 2007 HEPA Filter PM results (55480, 55490, 55500, 55510, 55440). Confirmed with the Building Engineer.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 3 <b>Add'l Description:</b> 4 in parallel (3 operational, 1 backup)	Continuous	<b>CDM:</b> Reviewed the 2007 Exhaust Fan PM results (PM-41120, 41130, 41140, 41150). Confirmed with the Building Engineer.
<b>Required Sampling:</b> Record Sample; tritium by silica gel. <b>Sampling Frequency:</b> Particulates are continuously sampled and collected every two-weeks for gross alpha and gross beta analysis, and composited on a semi-annual basis and analyzed isotopically. Tritium samples are collected on a monthly basis for analysis. <b>Radionuclide Requiring Measurement:</b> Each radionuclide that could contribute greater than 10% of the	Continuous	<b>CDM:</b> Emission data is maintained in the Gaseous Emission Database (GED). A query of the database confirmed all required samples were collected during the reporting period, including the start and end dates of sample periods. Radionuclides contributing greater than 10% of the EDE are evaluated during the annual NESHAPS inventory

Requirement	Compliance Status	Compliance Determination Method
potential TEDE.		assessment. These isotopes are then analyzed isotopically on semi-annual composites. Semi-annual composite data was included as part of the emission data review.
<p><b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) &amp; WAC 246-247-075(2)  <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 60 Appendix A, Method 2; 40 CFR 61, Appendix B, Method 114</p>	Continuous	<p><b>CDM:</b> A NESHAPs Inventory of radioactive materials is conducted for PNNL facilities on an annual basis in accordance with PNNL-10855 Rev. 4, "Assessment of Unabated Facility Emission Potentials for Evaluating Airborne Radionuclide Monitoring Requirements at PNNL-2007". The "Pacific Northwest National Laboratory Effluent Management Quality Assurance Plan" (EM-QA-01) specifies quality assurance requirements. The "Airborne Radionuclide Emission Sample Analysis Statement of Work" (Rev. 7, April 2007) specifies radionuclide analysis methods. The PNNL "Effluent Sampling and Monitoring Support Memorandum of Agreement" specifies methods for determining stack velocity, volumetric exhaust rate, and cyclonic flow determinations.</p>
<p>Permit: AIR 06-1042 <b>Issue Date:</b>10-05-06 <b>Effective Date:</b>10-05-06  <b>NOC:</b> Conducting General Laboratory Processes Research Activities in the 325 Building  <b>WDOH NOC ID:</b> 687 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0361-001</p>		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 3.19E+00 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).	Continuous	<b>CDM:</b> Reviewed the radionuclide air emissions data for the calendar year 2007 to verify total abated emissions are below the NOC limit.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>Approved are the following laboratory activities conducted in the RPL:</p> <ul style="list-style-type: none"> <li>- Characterizing chemical, radiochemical, and physical properties of samples (e.g., tank wastes, spent fuel, contaminated soils and water), as well as other gaseous materials, glass, ceramic, carbonaceous, or metallic waste forms.</li> <li>- Performing research using high level and low level mixed tank wastes and their stimulants to test radiochemical process systems such as</li> </ul>	Continuous	<p><b>CDM:</b> Under the PNNL Standards-Based Management System (SBMS) each new research project is required to be reviewed via the Electronic Prep &amp; Risk (EPR) assessment process.  <b>Comment:</b> The reviews are recorded in the EPR database. Facility changes are required to be reviewed via the SBMS Subject Area for Engineering Calculations, Drawings and</p>

Requirement	Compliance Status	Compliance Determination Method
<p>leaching, solvent extraction, ion exchange, vitrification, fuel dissolution, decontamination, evaporation, grouting, solid waste packaging/shipment, and high level liquid waste shipping/receiving/transportation.</p> <ul style="list-style-type: none"> <li>- Performing research and development for processing and immobilization support including waste separation, ion exchange, sludge washing/leaching, ultrafiltration, and oxidation/precipitation. Separated species are then immobilized into vitreous and other waste forms, which are subsequently characterized for product acceptability.</li> <li>- Using a full suite of analytical capabilities for radiochemical and inorganic chemical analyses in support of process development, specializing in the analysis of highly radioactive materials and very complex sample matrices.</li> <li>- Pretreatment of materials in preparation for analytical processing, waste treatment, and characterization.</li> <li>- Developing methods for the separation of radioisotopes.</li> <li>- Developing and testing radioisotope generators.</li> <li>- Conducting Non destructive assay (NDA).</li> <li>- Characterizing and testing equipment for determining chemical and physical properties of spent nuclear fuels and associated materials to support processing and disposal pathways.</li> <li>- Performing reactor dosimetry and hydrogen and helium measurements to characterize radiation damage in materials.</li> <li>- Using instrumentation to conduct physical property measurement for rheological and chemical characterization of radiological and hazardous materials in support of process development.</li> <li>- Measuring material particle size and density, zeta potential and rheology in support of general research as well as process development.</li> <li>- Providing chemical and physical separations in support of radiological and hazardous material processing and disposal requirements. These technologies include: removal and concentration of hazardous and/or radioactive components for environmental remediation; separation of hazardous and/or radioactive materials, including solid/liquid phase separations; and, recovery of specific components for recycle and reuse.</li> <li>- Characterizing complex reactor environments, including neutron fluence and spectral measurements, hydrogen and helium gas measurements, and extensive computer simulations of radiation damage effects.</li> <li>- Developing thermal and vitrification processes to immobilize hazardous and radioactive materials into acceptable waste forms. Waste processing technology development includes design, process development, remote operations, and numerical and computational modeling.</li> <li>- Performing nuclear magnetic resonance methods designed for investigation of radioactive materials in the environment, radioactive tank waste, plutonium bearing materials, and other DOE mission active areas as well as fundamental studies of actinide metal salts.</li> <li>- Designing, installing, and testing radiochemical process systems (leaching, solvent extraction, ion exchange, vitrification, fuel dissolution, decontamination, evaporation, grouting, solid waste packaging and shipment, and high level liquid waste shipping, receiving, and transportation).</li> <li>- Using thermoanalytical instrumentation to measure reaction enthalpies, reaction kinetics and mass changes resulting from reactions, and determining the thermal sensitivity of the reaction.</li> <li>- Perform analysis of reaction off gases on a real time or end of reaction basis to identify and quantify the gaseous reaction products, and investigate the thermal stabilities of candidate radioisotope waste forms, volatile radioisotope trapping materials and the potentially hazardous reactions between radioactive waste constituents.</li> <li>- Separations and analyses of radionuclides for environmental measurements.</li> <li>- Performing research with supercritical fluids to understand chemistry</li> </ul>		<p>Specifications, Creating and Modifying. Projects with potential air emissions are reviewed by Effluent Management (EM) under the SBMS Airborne Emission Subject Area, and the records retained by EM.</p>

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<p>mechanisms and processes.</p> <ul style="list-style-type: none"> <li>- Conducting wet chemistry techniques and the operation of specialized analytical instrumentation such as mass spectrometers, organic mass spectrometers, and the Inductively Coupled Plasma Spectrometers.</li> <li>- Studies to decontaminate radioactive materials where metals may be hydrided or tritated and decontaminated in small electric furnaces in gloveboxes or fumehoods resulting in products (e.g., oxide materials) submitted for disposal.</li> <li>- Research and development in processing and method to harden radioactive sources.</li> <li>- Development of standards and testing methodologies for hardened radioactive sources.</li> <li>- Analysis of samples for impurities and analysis of samples for purity.</li> </ul> <p>The RPL also is approved to maintain two hot cell complexes for conducting work with highly radioactive materials. The High Level Radiochemistry Facility (HLRF) and Shielded Analytical Laboratory (SAL) hot cell complexes, and the stand alone mini cells, provide unique, complimentary capabilities for conducting bench scale to pilot scale work with wide varieties and forms of radioactive materials. These capabilities include: radiochemical separation and purification; irradiated fuel/target sectioning and processing; metallography and ceramography; activated metals physical properties testing; thermal processing; materials physical properties testing (solid/liquid separation, centrifugation, settling behavior); radioanalytical and preparatory chemistry operations (acid dissolution, aqueous/solvent extraction or leaching, distillation, ion exchange, caustic fusion).</p> <p>Additional approval of the process for this activity is contained in the following Conditions/Limitations.</p>		
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 2.09E+04 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Ac-225   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ac-227   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ac-228   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ag-108   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ag-108m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ag-109m   Liquid/Particulate Solid - WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ag-110   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ag-110 m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than</p>	<p>Continuous</p>	<p><b>CDM:</b> A NESHAPs Inventory of radioactive materials is conducted for PNNL facilities on an annual basis in accordance with PNNL-10855 Rev. 4, "Assessment of Unabated Facility Emission Potentials for Evaluating Airborne Radionuclide Monitoring Requirements at PNNL-2007". Reviewed the 2007 NESHAPs radionuclide inventory assessment results to verify compliance.</p> <p><b>Comment:</b> For 2007, short lived MFP/MAP identified as Cs-137 in the permit application includes Cs-132, Os-191, Sb-122, Sn-121, Sr-87m, Yb-169, and Zr-97.</p>

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<p>10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ag-111   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Al-26   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Al-28 Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Am-241   3.50E+00   Liquid/Particulate Solid   WAC 246-247-030(21)(a)</p> <p>Am-242   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Am-242 m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Am-243   5.40E-03   Liquid/Particulate Solid   WAC 246-247-030(21)(a)</p> <p>Am-245   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ar-37   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ar-39   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ar-41   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ar-42   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>As-74   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>As-76   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>At-217   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Au-195   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Au-198   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated</p>		

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<p>dose. Ba-131   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Ba-133   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Ba-133m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Ba-137m   4.60E+04   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Ba-139   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Ba-140   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Ba-141   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Ba-142   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Be-10   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Be-7   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Bi-207   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Bi-210   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Bi-211   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Bi-212   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Bi-213   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Bi-214   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Bk-249   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than</p>		

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<p>10% of the unabated PTE and represents less than 25% of the abated dose.            Bk-250   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Br-82   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Br-83   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Br-84   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Br-85   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            C-11   Gas   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            C-14   Gas   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            C-14   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            C-15   Gas   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Ca-41   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Ca-45   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Ca-47   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Cd-109   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Cd-113   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Cd-113 m   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Cd-115   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated</p>		

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<p>dose.</p> <p>Cd-115 m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ce-139   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ce-141   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ce-142   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ce-143   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ce-144   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cf-249   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cf-250   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cf-251   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cf-252   1.20E-01   Liquid/Particulate Solid   WAC 246-247-030(21)(a)</p> <p>Cl-36   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cm-241   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cm-242   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cm-243   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cm-244   1.00E+00   Liquid/Particulate Solid   WAC 246-247-030(21)(a)</p> <p>Cm-245   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cm-246   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p>		

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<p>Cm-247   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cm-248   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Co-56   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Co-57   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Co-58   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Co-60   1.60E+02   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Cr-51   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cr-55   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cs-131   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cs-134   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cs-134 m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cs-135   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cs-136   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cs-137   1.70E+02   Liquid/Particulate Solid   WAC 246-247-030(21)(a)</p> <p>Cs-138   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cs-139   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cu-64   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Es-254   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than</p>		

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<p>10% of the unabated PTE and represents less than 25% of the abated dose.            Eu-150   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Eu-152   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Eu-152 m   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Eu-154   2.00E+02   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Eu-155   4.90E+03   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Eu-156   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Eu-157   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            F-18   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Fe-55   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Fe-59   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Fr-221   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Fr-223   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Ga-67   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Ga-72   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Gd-148   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Gd-149   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Gd-151   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated</p>		

Requirement	Compliance Status	Compliance Determination Method
<p>dose.</p> <p>Gd-152   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Gd-153   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ge-68   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>H-3   3.00E+03 Gas   WAC 246-247-030(21)(a) H-3   1.30E+05 Gas   WAC 246-247-030(21)(a) H-3   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Hf-175   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Hf-178   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Hf-178 m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Hf-181   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Hf-182   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Hg-203   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ho-166   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ho-166 m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>I-122   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>I-123   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>I-125   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>I-129   Gas   WAC 246-247-030(21)(a)</p>		

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<p>Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>I-130   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>I-131   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>I-132   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>I-133   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>I-134   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>I-135   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>In-106   Liquid/Particulate Solid   WAC-246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>In-113 m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>In-114   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>In-114 m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>In-115   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>In-115 m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ir-192   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>K-40   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>K-42   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Kr-81   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than</p>		

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<p>10% of the unabated PTE and represents less than 25% of the abated dose. Kr-83 m   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Kr-85   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Kr-85 m   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Kr-87   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Kr-88   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Kr-89   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Kr-90   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. La-138   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. La-140   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. La-141   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/y</p>		
<p>Condition 3 continued:</p> <p>Te-129   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Te-129m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Te-131   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Te-131m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Te-132   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Te-133   Liquid/Particulate Solid   WAC 246-247-030(21)(a)</p>	<p>Continuous</p>	<p><b>CDM:</b> A NESHAPs Inventory of radioactive materials is conducted for PNNL facilities on an annual basis in accordance with PNNL-10855 Rev. 4, "Assessment of Unabated Facility Emission Potentials for Evaluating Airborne Radionuclide Monitoring Requirements at PNNL-2007". Reviewed the 2007 NESHAPs radionuclide inventory assessment results to verify compliance. <b>Comment:</b> For 2007, short lived MFP/MAP identified as Cs-137 in the permit application includes Cs-132, Os-191, Sb-122, Sn-121, Sr-87m, Yb-169, and Zr-97.</p>

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<p>Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Te-133m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Te-134   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Th-227   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Th-228   7.40E-03   Liquid/Particulate Solid   WAC 246-247-030(21)(a)</p> <p>Th-229   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Th-230   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Th-231   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Th-232   4.40E+00   Liquid/Particulate Solid   WAC 246-247-030(21)(a)</p> <p>Th-233   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Th-234   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ti-44   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ti-51   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>TI-204   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>TI-207   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>TI-208   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>TI-209   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Tm-170   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than</p>		

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<p>10% of the unabated PTE and represents less than 25% of the abated dose. Tm-171   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. U-232   5.50E-03   Liquid/Particulate Solid   WAC 246-247-030(21)(a) U-233   1.30E-02   Liquid/Particulate Solid   WAC 246-247-030(21)(a) U-234   1.40E-02   Liquid/Particulate Solid   WAC 246-247-030(21)(a) U-235   3.10E+01   Liquid/Particulate Solid   WAC 246-247-030(21)(a) U-236   1.40E-02   Liquid/Particulate Solid   WAC 246-247-030(21)(a) U-237   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. U-238   6.10E+01   Liquid/Particulate Solid   WAC 246-247-030(21)(a) U-239   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. U-240   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. V-48   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. V-49   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. W-181   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. W-185   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. W-187   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. W-188   1.70E+02   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Xe-122   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Xe-123   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Xe-125   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Xe-127   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Xe-131m   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated</p>		

Requirement	Compliance Status	Compliance Determination Method
<p>dose. Xe-133   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Xe-133m   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Xe-135   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Xe-135m   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Xe-137   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Xe-138   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Y-88   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Y-90   1.20E+05   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Y-90 m Liquid/Particulate Solid WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Y-91   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Y-91m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Y-92   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Y-93   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Yb-164   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Yb-175   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Yb-177   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Zn-65   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated</p>		

Requirement	Compliance Status	Compliance Determination Method																																																																																																																																																																																																																																																															
<p>dose.</p> <p>Zn-69   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Zn-69m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Zr-88   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Zr-89   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Zr-93   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Zr-95   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <table border="0"> <tr><td>Ac-225</td><td>Ac-227</td><td>Ac-228</td><td>Ag-108m</td><td>Ag-108</td></tr> <tr><td>Ag-109 m</td><td>Ag-110 m</td><td>Ag-110</td><td>Ag-111</td><td>Al-26</td></tr> <tr><td>Al-28</td><td>Am-241</td><td>Am-242 m</td><td>Am-242</td><td>Am-243</td></tr> <tr><td>Am-245</td><td>Ar-37</td><td>Ar-39</td><td>Ar-41</td><td>Ar-42</td></tr> <tr><td>As-74</td><td>As-76</td><td>At-217</td><td>Au-195</td><td>Au-198</td></tr> <tr><td>Ba-131</td><td>Ba-133</td><td>Ba-133 m</td><td>Ba-137 m</td><td>Ba-139</td></tr> <tr><td>Ba-140</td><td>Ba-141</td><td>Ba-142</td><td>Be-10</td><td>Be-7</td></tr> <tr><td>Bi-207</td><td>Bi-210</td><td>Bi-211</td><td>Bi-212</td><td>Bi-213</td></tr> <tr><td>Bi-214</td><td>Bk-249</td><td>Bk-250</td><td>Br-82</td><td>Br-83</td></tr> <tr><td>Br-84</td><td>Br-85</td><td>C-11</td><td>C-14</td><td>C-15</td></tr> <tr><td>Ca-41</td><td>Ca-45</td><td>Ca-47</td><td>Cd-109</td><td>Cd-113 m</td></tr> <tr><td>Cd-113</td><td>Cd-115 m</td><td>Cd-115</td><td>Ce-139</td><td>Ce-141</td></tr> <tr><td>Ce-142</td><td>Ce-143</td><td>Ce-144</td><td>Cf-249</td><td>Cf-250</td></tr> <tr><td>Cf-251</td><td>Cf-252</td><td>Cl-36</td><td>Cm-241</td><td>Cm-242</td></tr> <tr><td>Cm-243</td><td>Cm-244</td><td>Cm-245</td><td>Cm-246</td><td>Cm-247</td></tr> <tr><td>Cm-248</td><td>Co-56</td><td>Co-57</td><td>Co-58</td><td>Co-60</td></tr> <tr><td>Cr-51</td><td>Cr-55</td><td>Cs-131</td><td>Cs-134</td><td>Cs-134 m</td></tr> <tr><td>Cs-135</td><td>Cs-136</td><td>Cs-137</td><td>Cs-138</td><td>Cs-139</td></tr> <tr><td>Cu-64</td><td>Es-254</td><td>Eu-150</td><td>Eu-152</td><td>Eu-152 m</td></tr> <tr><td>Eu-154</td><td>Eu-155</td><td>Eu-156</td><td>Eu-157</td><td>F-18</td></tr> <tr><td>Fe-55</td><td>Fe-59</td><td>Fr-221</td><td>Fr-223</td><td>Ga-67</td></tr> <tr><td>Ga-72</td><td>Gd-148</td><td>Gd-149</td><td>Gd-151</td><td>Gd-152</td></tr> <tr><td>Gd-153</td><td>Ge-68</td><td>H-3</td><td>Hf-175</td><td>Hf-178</td></tr> <tr><td>Hf-178 m</td><td>Hf-181</td><td>Hf-182</td><td>Hg-203</td><td>Ho-166</td></tr> <tr><td>Ho-166 m</td><td>I-122</td><td>I-123</td><td>I-125</td><td>I-129</td></tr> <tr><td>I-130</td><td>I-131</td><td>I-132</td><td>I-133</td><td>I-134</td></tr> <tr><td>I-135</td><td>In-106</td><td>In-113 m</td><td>In-114 m</td><td>In-114</td></tr> <tr><td>In-115</td><td>In-115 m</td><td>Ir-192</td><td>K-40</td><td>K-42</td></tr> <tr><td>Kr-81</td><td>Kr-83</td><td>Kr-85</td><td>Kr-85 m</td><td>Kr-87</td></tr> <tr><td>Kr-88</td><td>Kr-89</td><td>Kr-90</td><td>La-138</td><td>La-140</td></tr> <tr><td>La-141</td><td>La-142</td><td>Lu-177</td><td>Mg-27</td><td>Mn-52</td></tr> <tr><td>Mn-54</td><td>Mn-56</td><td>Mo-93</td><td>Mo-99</td><td>N-13</td></tr> <tr><td>Na-22</td><td>Na-24</td><td>Nb-91</td><td>Nb-91 m</td><td>Nb-92</td></tr> <tr><td>Nb-93 m</td><td>Nb-94</td><td>Nb-95</td><td>Nb-95 m</td><td>Nb-97</td></tr> <tr><td>Nb-97 m</td><td>Nd-144</td><td>Nd-147</td><td>Ni-56</td><td>Ni-59</td></tr> <tr><td>Ni-63</td><td>Ni-65</td><td>Np-235</td><td>Np-236</td><td>Np-237</td></tr> <tr><td>Np-238</td><td>Np-239</td><td>Np-240</td><td>Np-240 m</td><td>O-15</td></tr> <tr><td>P-32</td><td>P-33</td><td>Pa-231</td><td>Pa-233</td><td>Pa-234</td></tr> <tr><td>Pa-234 m</td><td>Pb-209</td><td>Pb-210</td><td>Pb-211</td><td>Pb-212</td></tr> <tr><td>Pb-214</td><td>Pd-107</td><td>Pd-109</td><td>Pm-145</td><td>Pm-146</td></tr> <tr><td>Pm-147</td><td>Pm-148 m</td><td>Pm-148</td><td>Pm-149</td><td>Pm-151</td></tr> <tr><td>Po-208</td><td>Po-209</td><td>Po-210</td><td>Po-211</td><td>Po-212</td></tr> <tr><td>Po-213</td><td>Po-214</td><td>Po-215</td><td>Po-216</td><td>Po-218</td></tr> <tr><td>Pr-143</td><td>Pr-144</td><td>Pr-144 m</td><td>Pu-234</td><td>Pu-236</td></tr> <tr><td>Pu-237</td><td>Pu-238</td><td>Pu-239</td><td>Pu-240</td><td>Pu-241</td></tr> <tr><td>Pu-242</td><td>Pu-243</td><td>Pu-244</td><td>Ra-223</td><td>Ra-224</td></tr> <tr><td>Ra-225</td><td>Ra-226</td><td>Ra-228</td><td>Rb-86</td><td>Rb-87</td></tr> <tr><td>Rb-88</td><td>Rb-89</td><td>Rb-90</td><td>Rb-90 m</td><td>Re-186</td></tr> <tr><td>Re-187</td><td>Re-188</td><td>Rh-102</td><td>Rh-103 m</td><td>Rh-105</td></tr> <tr><td>Rh-105 m</td><td>Rh-106</td><td>Rn-219</td><td>Rn-220</td><td>Rn-222</td></tr> <tr><td>Ru-103</td><td>Ru-105</td><td>Ru-106</td><td>Ru-97</td><td>S-35</td></tr> </table>	Ac-225	Ac-227	Ac-228	Ag-108m	Ag-108	Ag-109 m	Ag-110 m	Ag-110	Ag-111	Al-26	Al-28	Am-241	Am-242 m	Am-242	Am-243	Am-245	Ar-37	Ar-39	Ar-41	Ar-42	As-74	As-76	At-217	Au-195	Au-198	Ba-131	Ba-133	Ba-133 m	Ba-137 m	Ba-139	Ba-140	Ba-141	Ba-142	Be-10	Be-7	Bi-207	Bi-210	Bi-211	Bi-212	Bi-213	Bi-214	Bk-249	Bk-250	Br-82	Br-83	Br-84	Br-85	C-11	C-14	C-15	Ca-41	Ca-45	Ca-47	Cd-109	Cd-113 m	Cd-113	Cd-115 m	Cd-115	Ce-139	Ce-141	Ce-142	Ce-143	Ce-144	Cf-249	Cf-250	Cf-251	Cf-252	Cl-36	Cm-241	Cm-242	Cm-243	Cm-244	Cm-245	Cm-246	Cm-247	Cm-248	Co-56	Co-57	Co-58	Co-60	Cr-51	Cr-55	Cs-131	Cs-134	Cs-134 m	Cs-135	Cs-136	Cs-137	Cs-138	Cs-139	Cu-64	Es-254	Eu-150	Eu-152	Eu-152 m	Eu-154	Eu-155	Eu-156	Eu-157	F-18	Fe-55	Fe-59	Fr-221	Fr-223	Ga-67	Ga-72	Gd-148	Gd-149	Gd-151	Gd-152	Gd-153	Ge-68	H-3	Hf-175	Hf-178	Hf-178 m	Hf-181	Hf-182	Hg-203	Ho-166	Ho-166 m	I-122	I-123	I-125	I-129	I-130	I-131	I-132	I-133	I-134	I-135	In-106	In-113 m	In-114 m	In-114	In-115	In-115 m	Ir-192	K-40	K-42	Kr-81	Kr-83	Kr-85	Kr-85 m	Kr-87	Kr-88	Kr-89	Kr-90	La-138	La-140	La-141	La-142	Lu-177	Mg-27	Mn-52	Mn-54	Mn-56	Mo-93	Mo-99	N-13	Na-22	Na-24	Nb-91	Nb-91 m	Nb-92	Nb-93 m	Nb-94	Nb-95	Nb-95 m	Nb-97	Nb-97 m	Nd-144	Nd-147	Ni-56	Ni-59	Ni-63	Ni-65	Np-235	Np-236	Np-237	Np-238	Np-239	Np-240	Np-240 m	O-15	P-32	P-33	Pa-231	Pa-233	Pa-234	Pa-234 m	Pb-209	Pb-210	Pb-211	Pb-212	Pb-214	Pd-107	Pd-109	Pm-145	Pm-146	Pm-147	Pm-148 m	Pm-148	Pm-149	Pm-151	Po-208	Po-209	Po-210	Po-211	Po-212	Po-213	Po-214	Po-215	Po-216	Po-218	Pr-143	Pr-144	Pr-144 m	Pu-234	Pu-236	Pu-237	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Pu-243	Pu-244	Ra-223	Ra-224	Ra-225	Ra-226	Ra-228	Rb-86	Rb-87	Rb-88	Rb-89	Rb-90	Rb-90 m	Re-186	Re-187	Re-188	Rh-102	Rh-103 m	Rh-105	Rh-105 m	Rh-106	Rn-219	Rn-220	Rn-222	Ru-103	Ru-105	Ru-106	Ru-97	S-35		
Ac-225	Ac-227	Ac-228	Ag-108m	Ag-108																																																																																																																																																																																																																																																													
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Requirement	Compliance Status	Compliance Determination Method
<p>Sb-124 Sb-125 Sb-126 Sb-126 m Sb-127            Sc-46 Sc-47 Se-75 Se-79 Si-31            Sm-145 Sm-146 Sm-147 Sm-151 Sm-153            Sm-157 Sn-113 Sn-117 m Sn-119 m Sn-121 m            Sn-123 Sn-125 Sn-126 Sr-85 Sr-89            Sr-90 Sr-91 Sr-92 Ta-179 Ta-182            Ta-183 Tb-160 Tc-101 Tc-95 Tc-97            Tc-97 m Tc-98 Tc-99 Tc-99 m Te-121 m            Te-121 Te-123 Te-123 m Te-125 m Te-127 m            Te-127 Te-129 m Te-129 Te-131 Te-131 m            Te-132 Te-133 Te-133 m Te-134 Th-227            Th-228 Th-229 Th-230 Th-231 Th-232            Th-233 Th-234 Th-44 Th-51 Th-204            Tl-207 Tl-209 Tl-209 Tm-170 Tm-171            U-233 U-233 U-234 U-235 U-235            U-237 U-238 U-239 U-240 V-48 V-48            V-49 W-181 W-185 W-187 W-188            Xe-122 Xe-123 Xe-125 Xe-127 Xe-131 m            Xe-133 Xe-133 m Xe-135 Xe-135 m Xe-137            Xe-138 Y-88 Y-90 Y-90 m Y-91            Y-91 m Y-92 Y-93 Yb-164 Yb-175            Yb-177 Zn-65 Zn-69 Zn-69 m Zr-88            Zr-89 Zr-93 Zr-95</p> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. WAC 246-247-110(9). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>		
<p>For the I-131 Medical Isotope Project</p> <p>The charcoal bed shall be rated at a minimum of 1,000 cubic feet per minute (cfm) and be 2" thick.</p>	<p>Not Applicable</p>	<p>CDM: Personnel Interview. The I-131 Medical Isotope Project did not operate during CY2007; therefore this condition was not triggered.</p>
<p>For the I-131 Medical Isotope Project:</p> <p>Iodine samples shall be collected using a two stage sample collection system. The sampling system shall consist of a 47mm in line filter holder that contains either a removable activated carbon canister or filter paper coated with activated carbon. Two samplers shall be placed in series to evaluate potential breakthrough of the first sampling stage. The iodine samplers shall be installed on the current stack sampling system for RPL, downstream of the record particulate sampler. The iodine samples shall be analyzed using EPA Method G-1 (40 CFR 61, Appendix B).</p>	<p>Not Applicable</p>	<p>CDM: The I-131 Medical Isotope Project did not operate during CY2007; therefore this condition was not triggered.</p>
<p>For the I-131 Medical Isotope Project:</p> <p>The exhaust from the hot cell shall be routed through an activated charcoal bed. A charcoal bed shall be procured and installed upstream of the HEPA filters. The filter</p>	<p>Not Applicable</p>	<p>CDM: The I-131 Medical Isotope Project did not operate during CY2007; therefore this condition was not triggered.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>assembly shall be a two stage filter, containing a charcoal bed and a post filter inside of the same outer housing. The post filter shall be a particulate filter designed to remove any carbon particles that may dislodge from the bed from normal use, preventing these particles from reaching the primary and secondary stages of HEPA filtration downstream.</p>		
<p>For the I-131 Medical Isotope Project:</p> <p>The iodine sampling system shall be in continuous operation when the I-131 material for this project enters the RPL facility through completion of the project (when all iodine has been processed and shipped for offsite use).</p>	<p>Not Applicable</p>	<p><b>CDM:</b> The I-131 Medical Isotope Project did not operate during CY2007; therefore this condition was not triggered.</p>
<p>For the I-131 Medical Isotope Project:</p> <p>The removal efficiency for radio iodine of the charcoal bed filter unit shall be a minimum of 90% and shall be installed and tested per ANSI 510. These procedures shall be developed in accordance with the guidance provided in ANSI N510. These procedures shall be provided to the department for review prior to starting the I-131 project.</p>	<p>Not Applicable</p>	<p><b>CDM:</b> The I-131 Medical Isotope Project did not operate during CY2007; therefore this condition was not triggered.</p>
<p>For the Th-232 medical isotope project:</p> <p>Before initiation of processing, the Rn-220 monitor shall be operational. The exhaust sample will be measured by a Rn-220 monitor collected using the same isokinetic probe that is used to collect the record particulate sample. The radon monitor shall be installed downstream of the record particulate sample, measuring the sample stream that has already been pre filtered by the record particulate sample.</p>	<p>Not Applicable</p>	<p><b>CDM:</b> The Th-232 Medical Isotope Project did not operate during CY2007; therefore this condition was not triggered.</p>
<p>For the Th-232 Medical Isotope Project: Procedures for Rn-220 monitoring shall be forwarded to the department for review.</p>	<p>Not Applicable</p>	<p><b>CDM:</b> The Th-232 Medical Isotope Project did not operate during CY2007; therefore this condition was not triggered.</p>
<p>For the Th-232 Medical Isotope:</p> <p>The Rn-220 gas that is generated during the process will be routed through a recovery system that is located inside of a hood in Room 510. As the Rn-220 (gaseous form) decays (55 second half life), the resulting daughter products shall be collected in the recovery system. The recovery system shall be capable of collecting in excess of 80% of the Rn-220 that is generated.</p>	<p>Not Applicable</p>	<p><b>CDM:</b> The Th-232 Medical Isotope Project did not operate during CY2007; therefore this condition was not triggered.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>For the Tritium Target Qualification Project (TTQP)</p> <p>Sectioning of the TPBAR rods shall be performed in the hot cells in HLRF. Sectioning must be done inside Plexiglas containment.</p>	Continuous	<p><b>CDM:</b> Personnel Interview <b>Comment:</b> TTQP ceased activity in 2004; similar tritium activities follow this condition.</p>
<p>For the Tritium Target Qualification Project (TTQP):</p> <p>Project activities are limited to High Level Radiochemical Facility (HLRF), Shielded Analytical Laboratory (SAL), and Rooms 420, 418, and Room 48 in the basement.</p>	Continuous	<p><b>CDM:</b> Personnel Interview <b>Comment:</b> TTQP ceased activity in 2004; similar tritium activities follow this condition.</p>
<p>For the Tritium Target Qualification Project (TTQP):</p> <p>The "Mandatory Use Procedures" require that each step be read prior to performing the activity.</p> <p>These procedures are those that involve the following:</p> <ul style="list-style-type: none"> <li>• Operation of the furnace and gas clean up system used to extract tritium from the Tritium Producing Burnable Absorber Rods and;</li> <li>• The transfer of the extracted tritium to hydride transport vessels.</li> </ul>	Continuous	<p><b>CDM:</b> Personnel Interview <b>Comment:</b> TTQP ceased activity in 2004; similar tritium activities follow this condition.</p>
<p>For the Tritium Target Qualification Project (TTQP):</p> <p>The tritium permeation testing shall be conducted in Room 48 of the basement in the laboratory hood or glovebox.</p>	Continuous	<p><b>CDM:</b> Personnel Interview <b>Comment:</b> TTQP ceased activity in 2004; similar tritium activities follow this condition.</p>
<p>For the Waste Sludge Solidification Demonstration:</p> <p>The objective is to demonstrate methods of solidification of waste sludge from the 105 K East Basin. The purpose for rendering the sludge as a solid is to allow for permanent storage at the Waste Isolation Pilot Plant (WIPP).</p> <p>Core samples are taken from sludge found in the K East Basin (up to 4 liters of solids) and transported to the 325 Building (RPL) for initial study. The samples are collected in 4 liter poly bottles and shipped to RPL in PAS 1 containers accompanied by a chain of custody. All containers shall be visually inspected upon receipt and dose measurements taken. After receipt, the sample bottles are placed into a glove box or hot cell and combined into one composite. The sludge is allowed to settle from the mixture, and the water is decanted. The decanted water and a sample of the settle sludge are characterized for major constituents (e.g. nucleotides, organics). The remaining sludge is split into different test samples and each processed with a different solidification method (grout, absorbent, drying, etc). Characterization of each test sample will occur at RPL, with the exception of one long term grout solidified monolith prepared for long term and WIPP specific testing at the Central Waste Center (CWC). Once testing is completed, a recommendation is made for the most effective solidification process.</p> <p>Once the initial study is complete, large scale testing begins and will</p>	Not Applicable	<p><b>CDM:</b> This project did not operate during CY2007; therefore this condition was not triggered.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>nominally include up to 6.3 m<sup>3</sup> (the Spent Nuclear Fuel (SNF) project bounding volume is 7.5 m<sup>3</sup>) of sludge material. Material from the K East Basin is to be transported to the 325 Building using a Sludge Transport Systems (STS).</p> <p>The STS consists of:</p> <ul style="list-style-type: none"> <li>- Large Diameter Container (LDC). A vertical stainless steel cylindrical tank designed to contain material from K East Basin. The container is approximately 5 feet in diameter and 10 feet high.</li> <li>- Sludge transportation cask. The LDC is placed into a cylindrical stainless steel and lead shell which is to provide shielding and to seal the LDC from the outside.</li> <li>- Transportation trailer. The sludge transportation cask is anchored onto a trailer. The sludge transportation trailer complies with federal regulations and state standards.</li> </ul> <p>Note: The following information is for completeness. Radioactive air emissions from these activities are covered by other permits/processes.</p> <p>The STS is staged in the north transfer bay near the K East North Loading Operation Pit (NLOP). The LDC is connected to the K East Basin's Sludge Retrieval System (SRS), and is filled with material. Once a sufficient volume of sludge is contained in the LDC, the excess water cover level is lowered so the tank holds approximately 2.5 m<sup>3</sup> of material. An inert gas (e.g., helium or argon) blanket is placed over the material inside the LDC and the tank's outlet and inlet ports are closed. A NucFil HEPA type filter and rupture disk are placed on the tank's vent ports. The cask lid is then installed, sealing the LDC inside. Once the cask is sealed and secured, the STS is transported to the 325 Building loading dock by the High Level Radiochemistry Facility (HLRF). Once the STS is staged in the desired location, the transportation cask is unsealed in an approved area.</p> <p>Note: The following activities describe actions to be taken within the RPL.</p> <p>Inside the building, the LDC inlet and outlet are opened and the material is sampled for analysis. After determining the acceptability of the material, it is pumped from the LDC into several shielded vessels. The materials in the vessels are then processed with the solidification method designated from the initial testing. Each vessel is covered with a lid vented with a NucFil HEPA type filter. Each shield vessel is placed in an overpack container and stored inside the RPL until the material is ready for shipped to CWC. Once the LDC is emptied, it is rinsed. It is then placed back onto the STS in preparation for resealing in the transportation cask and for transport back to K Basin. Overall, three shipments of K East Basin sludge in the STS are planned at this time.</p>		
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in (WAC 246-247-030(16)), maybe conducted.</p> <p>MEDICAL ISOTOPE RESEARCH (I-131 Project)</p> <p>I-131 solution will be procured from an offsite vendor and shipped to the Pacific Northwest National Laboratory (PNNL). It is expected that multiple shipments of I-131 will be required throughout the project, due to storage concerns that are the result of the short half life of I-131 (approximately eight days). The objective of these experiments is to combine the I-131 solution with an antibody solution (supplied by the customer). The test apparatus is a closed system that shall be set up inside of a hot cell located in Room 203 of the RPL.</p> <p>One containment vessel (medical grade intravenous type hag) shall be</p>	<p>Not Applicable</p>	<p><b>CDM:</b> The I-131 Medical Isotope Project did not operate during CY2007; therefore this condition was not triggered.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>used for the I-131 solution, and the second vessel shall be used to contain the vendor supplied antibody solution. Both solutions shall be transported to the mixing vessel by means of a peristaltic pump. The mixed solution will then be routed through an in line purification system and dispensed into a medical grade product bag. Once processing is complete, the I-131 antibody shall be transferred from the product bag into small glass vials (inside the hot cell). The final product can then be shipped to the customer or a destination designated by the customer. Shipment from RPL must occur fairly quickly, due to the short half life of I-131.</p> <p>Processing will be performed using variable amounts of I-131 and will be conducted as separate batches. Current project is allowed to conduct multiple processing runs, with each run using from four to 100 curies (Ci) of I-131. The processing of the material will not alter the physical form of the I-131 liquid. No more than 300 Ci of I-131 per year is allowed.</p>		
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in (WAC 246-247-030(16)), may be conducted.</p> <p><b>MEDICAL ISOTOPE RESEARCH (Th-232 Project)</b></p> <p>Th-232 parent material is approved to be present in the facility as either an oxide [ThO<sub>2</sub>] or a nitrate [Th(NO<sub>3</sub>)<sub>4</sub>]. The parent material shall be maintained in shipping containers, with sub samples being periodically removed for performing laboratory testing. During the tests, the parent material may be subjected to processes (e.g., grinding or suspension in solution) to maximize the recovery of the desired isotopes. The preparation of the parent material and the capture process shall be performed in Room 510. The amount of parent material allowed to be processed annually under this NOC is estimated to be 30,000 kilograms. Parent material may be transported to RPL from off site suppliers in multiple shipments throughout the year. The parent material shall be in the form of a granular oxide or nitrate (powder) that will be stored inside shipping containers at RPL until it is to be used. The shipping containers will be opened periodically to retrieve parent material for processing.</p> <p>The prepared materials will then be loaded into a containment vessel and the vessel sealed. A transport line has been tapped into the lid of the containment vessel. The Rn-220 gas that is generated during batch processing exits the vessel through this transport line to a radon recovery system that is located inside of a laboratory hood in Room 510. The daughter products that result from the decay of Rn 220 are captured by the recovery system, and this system exhausts to a</p>	<p>Not Applicable</p>	<p><b>CDM:</b> The Th-232 Medical Isotope Project did not operate during CY2007; therefore this condition was not triggered.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>laboratory fume hood that is part of the RPL radiological exhaust system. The exhaust exits the facility through the RPL main stack (EP 325-01-S).</p> <p>The radionuclides associated with this project are the Th-232 in the parent material, and the daughter products resulting from the decay of Th-232 (in order): Ra-228, Ac-228, Th-228, Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Po-212, Tl-208, and Pb-208 (stable isotope).</p>		
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in (WAC 246-247-030(16)), maybe conducted.</p> <p>Tritium Target Qualification Project (TTQP)</p> <p>Tritium Target Qualification Project (TTQP) it is approved to perform the analysis of ten tritium-producing, burnable absorber rods (target rods) that were shipped to the RPL from the Idaho National Engineering Laboratory and eight additional target rods shipped from the Argonne National Laboratory West (ANL W) to the RPL.</p> <p>The processes approved under this activity includes the following:</p> <p>Target Rod Sectioning (Activity 1) Sections are cut from the tritium target rods for quantitative analysis using a diamond saw within a Plexiglas containment. Each section is disassembled, and the components are analyzed to determine gas species concentrations. Selected sections are further analyzed for lithium burn up, as well as tritium and helium content. The rods are then subjected to protium, metallography, and microprobe studies. During the sectioning of the rods, emissions from the hot cells of the High Level Radiochemistry Facility (HLRF) are vented to the existing radiological exhaust system and eventually to the main exhaust stack.</p> <p>Tritium Extraction and Analysis (Activity 2) Tritium is extracted by heating either a 4 foot target rod, or components from the target rod sections. Following tritium extraction, the 4 foot target rod is sectioned and analyzed as described in Activity 1. Tritium extraction and analysis is performed at two separate locations within the Radiochemical Processing Laboratory (RPL). Small scale tritium extraction tests are performed in Room 416, while full tritium rod extraction tests are conducted in the hot cells of the HLRF. Radionuclide emissions not captured during the tritium extraction tests pass through a laboratory hood or glovebox to the existing ventilation system, and eventually through the main exhaust stack.</p> <p>Ex reactor Tritium Permeation Tests (Activity 3) Measurements are taken to determine the cladding material permeability used in the target rods. The test is conducted in an enclosed test loop, of which a section is constructed from TARGET ROD cladding material. Tritium absorption/release kinetics validation, correlation development and hydrogen ingress characterization, safety testing, and mechanical testing are then conducted. The tritium permeation tests are performed in Laboratory 48 in the RPL basement. Preparation of lithium aluminate (LiAlO<sub>2</sub>) samples for lithium isotopic ratio analysis is conducted in Laboratory 419. Radionuclide emissions not captured during the permeation tests are allowed to pass through a laboratory hood or glovebox, to the existing ventilation system, and eventually through the main exhaust stack.</p> <p>Other activities that will continue with the "ramp down" of the TTQP</p>	<p>Continuous</p>	<p><b>CDM:</b> Under the PNNL Standards-Based Management System (SBMS) each new research project is required to be reviewed via the Electronic Prep &amp; Risk (EPR) assessment process. The reviews are recorded in the EPR database. Facility changes are required to be reviewed via the SBMS Subject Area for Engineering Calculations, Drawings and Specifications Creating and Modifying. Projects with potential air emissions are reviewed by Effluent Management (EM) under the SBMS Airborne Emission Subject Area, and the records retained by EM.</p> <p><b>Comment:</b> TTQP ceased activity in 2004; similar tritium activities follow this condition.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>include clean up of the furnace and other portions of the extraction system and subsequent waste disposal. During these activities, minor tritium releases are expected from hold up within the system.</p>		
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in (WAC 246-247-030(16)), may be conducted.</p> <p><b>WASTE OPERATIONS</b></p> <p>The approved activities in the Radiochemical Processing Laboratory (RPL) include waste treatment operations that occur in various areas of the facility. In the HWTU, hazardous materials and radioactive mixed waste shall be stored, dispensed, used, handled, packaged in drums, and treated using various small bench scale treatment processes. Treatment processes used at the HWTU is limited to include pH adjustment, ion exchange, venting of gas cylinders, carbon absorption using polymer beads or mineral absorbents such as clays, chemical oxidation, chemical precipitation, chemical reduction, waste concentration by evaporation, neutralization, filtration, solvent extraction, solids washing, catalytic destruction, and grout encapsulation (cementation).</p> <p>The compaction unit is allowed to reduce volumes of low level radioactive and radioactive mixed dry materials (such as gloves, wipes, and step off pad waste). During each compaction event, radiological smear samples shall be collected to verify containment of radiological contamination.</p> <p>Radioactive waste boxes and drums are allowed to be stored in a controlled, fenced area (outside of the RPL) at the northeast corner of the facility. If any intrusive work (i.e., sampling, etc.) is required that may have the potential to emit radionuclides, the container shall be moved inside the facility.</p>	<p>Continuous</p>	<p><b>CDM:</b> Under the PNNL Standards-Based Management System (SBMS) each new research project is required to be reviewed via the Electronic Prep &amp; Risk (EPR) assessment process. The reviews are recorded in the EPR database.</p> <p>Facility changes are required to be reviewed via the SBMS Subject Area for Engineering Calculations, Drawings and Specifications Creating and Modifying. Projects with potential air emissions are reviewed by Effluent Management (EM) under the SBMS Airborne Emission Subject Area, and the records retained by EM.</p>
<p><b>TTQP Project Specific Emission Control Systems</b></p> <p><b>Molecular Sieve</b></p> <p>A molecular sieve will be used to control emissions during the full rod tritium extraction process to be performed in the HRLF.</p> <p>The molecular sieve will be used until the exhaust gas concentration, as measured with an ion chamber, indicates that the sieve is approaching the point of breakthrough. At this point, a fresh molecular sieve bed will replace the spent bed.</p> <p><b>Two Stage Bubbler Trap</b></p> <p>The tritium emission control system for the small scale extraction activities in Laboratory 416 consists of a two stage bubbler type trapping system. The bubbler type trapping system includes a glass tube that contains either water or oil. An inert sweep gas carries the tritium from the heated tritium target rod components to the bubbler where tritium is removed from the gas stream.</p> <p><b>Uranium Getter</b></p> <p>Cladding material permeability measurements during Activity 3 will use a uranium getter material as a part of the commercial tritium storage system.</p>	<p>Continuous</p>	<p><b>CDM:</b> Records Review / Personnel Interview. There is a final bank of HEPA filters located in the equipment room off the northwest corner of the RPL. Individual laboratory processes (Laboratory) are also filtered by a "primary" stage of HEPA filtration; these filters are located in the basement area of RPL. (Drawing H-3-70230).</p> <p><b>Comment:</b> TTQP ceased activity in 2004; similar tritium activities follow this condition.</p>

**EP-326-01-S**  
WDOH Emission Unit ID : 362  
Page in AOP : EU0362-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 3 <b>Add'l Description:</b> In parallel, common to both areas	Continuous	<b>CDM:</b> Reviewed 2007 Exhaust Fan PM results (PM-43720, 43730, 43740) & confirmed with Building Engineer.
<b>Zone or Area:</b> Hoods, SEM <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> In series	Continuous	<b>CDM:</b> Reviewed 2007 HEPA Filter PM results (PM-55460) & confirmed with Building Engineer.
<b>Zone or Area:</b> Hot cells and hoods <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Reviewed 2007 HEPA Filter PM results (PM-55460) & confirmed with Building Engineer.
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 2 week sample/year <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> Emission data is maintained in the Gaseous Emission Database (GED). A query of the database confirmed all required samples were collected during the reporting period, including the start and end dates of sample periods.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> A NESHAPs Inventory of radioactive materials is conducted for PNNL facilities on an annual basis in accordance with PNNL-10855 Rev. 4, "Assessment of Unabated Facility Emission Potentials for Evaluating Airborne Radionuclide Monitoring Requirements at PNNL-2007". The "Pacific Northwest National Laboratory Effluent Management Quality Assurance Plan" (EM-QA-01) specifies quality assurance requirements. The "Airborne Radionuclide Emission Sample Analysis Statement of Work" (Rev. 7, April 2007) specifies radionuclide analysis methods.

Requirement	Compliance Status	Compliance Determination Method																																																																																					
<p>Permit: AIR 06-1036 <b>Issue Date:</b>10-05-06 <b>Effective Date:</b>10-05-06  <b>NOC:</b> Research at the 326 Facility  <b>WDOH NOC ID:</b> 677 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0362-001</p>																																																																																							
<p>The total abated emission limit for this Notice of Construction is limited to 8.52E-05 mrem/year to the Maximally Exposed Individual.</p>	Continuous	<p><b>CDM:</b> Reviewed the radionuclide air emissions data for the calendar year 2007 to verify total abated emissions are below the NOC limit.</p>																																																																																					
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>Included are the following type of research activities within the 326 Facility.</p> <p>Development and calibration of fiber optic chemical sensors, electrical and mechanical engineering support for nuclear instrumentation development and fabrication, design and engineering of special purpose radiation detectors and sampling systems, and operation of a continuous glass fiber draw capability to produce neutron sensitive scintillating glass fiber which is a new class of solid state radiation detectors.</p>	Continuous	<p><b>CDM:</b> Under the PNNL Standards-Based Management System (SBMS) each new research project is required to be reviewed via the Electronic Proposal &amp; Risk (EPR) assessment process. The reviews are recorded in the EPR database.</p> <p>Facility changes are required to be reviewed via the SBMS Subject Area for Engineering Calculations, Drawings and Specifications, Creating and Modifying. Projects with potential air emissions are further reviewed by Effluent Management (EM) under the SBMS Airborne Emission Subject Area, and the records retained by EM.</p>																																																																																					
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e)[as specified in the application] is 8.15E-03 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Alpha-0 1.76E-06 Liquid/Particulate Solid WAC 246-247-030 (21) (a) Alpha release rate based on Am-241.</p> <p>Beta-0 1.33E-03 Liquid/Particulate Solid WAC 246-247-030 (21) (a) Beta release rate based on Co-60.</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <table border="0"> <tr><td>Ag-110 m</td><td>Am-241</td><td>Am-234</td><td>Ar-37</td><td>Ar-39</td></tr> <tr><td>Ar-41</td><td>Ba-133</td><td>Bi-207</td><td>C-14</td><td>Ca-45</td></tr> <tr><td>Cd-109</td><td>Ce-144</td><td>Cf-252</td><td>Cm-244</td><td>Co-56</td></tr> <tr><td>Co-57</td><td>Co-58</td><td>Co-60</td><td>Cr-51</td><td>Cs-134</td></tr> <tr><td>Cs-137</td><td>Cu-64</td><td>Eu-152</td><td>Eu-154</td><td>Eu-155</td></tr> <tr><td>Eu-156</td><td>Fe-55</td><td>Gd-149</td><td>Gd-151</td><td>H-3</td></tr> <tr><td>I-125</td><td>I-129</td><td>I-131</td><td>Kr-83 m</td><td>Kr-85</td></tr> <tr><td>Kr-85 m</td><td>Kr-87</td><td>Kr-88</td><td>Mn-54</td><td>Mo-93</td></tr> <tr><td>Na-22</td><td>Nb-93 m</td><td>Nb-94</td><td>Ni-59</td><td>Ni-63</td></tr> <tr><td>Np-237</td><td>Pu-238</td><td>Pu-239</td><td>Pu-240</td><td>Pu-242</td></tr> <tr><td>Ra-226</td><td>Rn-222</td><td>Ru-106</td><td>Sb-124</td><td>Sb-125</td></tr> <tr><td>Sc-46</td><td>Sn-113</td><td>Sn-119 m</td><td>Sn-123</td><td>Sr-85</td></tr> <tr><td>Sr-89</td><td>Sr-90</td><td>Ta-179</td><td>Ta-182</td><td>Tc-99</td></tr> <tr><td>Te-123</td><td>Th-230</td><td>Th-232</td><td>U-234</td><td>U-235</td></tr> <tr><td>U-236</td><td>U-238</td><td>V-49</td><td>W-181</td><td>W-185</td></tr> <tr><td>Xe-131 m</td><td>Xe-133</td><td>Xe-133 m</td><td>Xe-135</td><td>Xe-135 m</td></tr> <tr><td>Xe-137</td><td>Xe-138</td><td>Zn-65</td><td>Zr-95</td><td></td></tr> </table> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify</p>	Ag-110 m	Am-241	Am-234	Ar-37	Ar-39	Ar-41	Ba-133	Bi-207	C-14	Ca-45	Cd-109	Ce-144	Cf-252	Cm-244	Co-56	Co-57	Co-58	Co-60	Cr-51	Cs-134	Cs-137	Cu-64	Eu-152	Eu-154	Eu-155	Eu-156	Fe-55	Gd-149	Gd-151	H-3	I-125	I-129	I-131	Kr-83 m	Kr-85	Kr-85 m	Kr-87	Kr-88	Mn-54	Mo-93	Na-22	Nb-93 m	Nb-94	Ni-59	Ni-63	Np-237	Pu-238	Pu-239	Pu-240	Pu-242	Ra-226	Rn-222	Ru-106	Sb-124	Sb-125	Sc-46	Sn-113	Sn-119 m	Sn-123	Sr-85	Sr-89	Sr-90	Ta-179	Ta-182	Tc-99	Te-123	Th-230	Th-232	U-234	U-235	U-236	U-238	V-49	W-181	W-185	Xe-131 m	Xe-133	Xe-133 m	Xe-135	Xe-135 m	Xe-137	Xe-138	Zn-65	Zr-95		Intermittent	<p><b>CDM:</b> A NESHAPs Inventory of radioactive materials is conducted for PNNL facilities on an annual basis in accordance with PNNL-10855 Rev. 4, "Assessment of Unabated Facility Emission Potentials for Evaluating Airborne Radionuclide Monitoring Requirements at PNNL-2007".</p> <p>Reviewed the 2007 NESHAPs radionuclide inventory assessment results to verify compliance.</p> <p><b>Comment:</b> Radionuclides in inventory but not listed in the NOC include: Ce-139, Cl-36, Fe-59, Gd-153, Hg-203, Nb-95, Pb-210, Pm-147, Pu-241, Re-188, S-35, Tb-160, Tl-204, W-188, and Y-88. The 15 isotopes are low activity sealed sources/solids that are included for completeness.</p>
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Requirement	Compliance Status	Compliance Determination Method
the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the AIR Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.		

**EP-329-01-S Chemical Sciences Laboratory**

WDOH Emission Unit ID : 366

Page in AOP : EU0366-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> In series, (System includes up to 5 banks of 2 stages of HEPA filters in series, minimum of 1 bank of 2 testable filters in use)	Continuous	CDM: Reviewed 2007 HEPA Filter PM results (PM-55120) & confirmed with Building Engineer.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 2 <b>Add'l Description:</b> 2 in parallel, 1 Standby (3 total)	Continuous	CDM: Reviewed 2007 Exhaust Fan PM Results (PM-41021, 41022, & 43710) and confirmed with Building Engineer.
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 2 week sample/year <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	CDM: Emission data is maintained in the Gaseous Emission Database (GED). A query of the database confirmed all required samples were collected during the reporting period, including the start and end dates of sample periods.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	CDM: A NESHAPs Inventory of radioactive materials is conducted for PNNL facilities on an annual basis in accordance with PNNL-10855 Rev. 4, "Assessment of Unabated Facility Emission Potentials for Evaluating Airborne Radionuclide Monitoring Requirements at PNNL-2007". The "Pacific Northwest National Laboratory Effluent Management Quality Assurance Plan" (EM-QA-01) specifies quality assurance requirements. The

Requirement	Compliance Status	Compliance Determination Method
		"Airborne Radionuclide Emission Sample Analysis Statement of Work" (Rev. 7, April 2007) specifies radionuclide analysis methods.
Permit: AIR 06-1055 <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>NOC:</b> Operation of Research Activities Conducted in the Chemical Sciences Laboratory (329 Building) <b>WDOH NOC ID:</b> 701 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0366-001		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 9.40E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).	Continuous	<b>CDM:</b> The radionuclide air emissions data for calendar year 2007 was reviewed to verify the abated emissions for the 329 Building were below the NOC limits.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>Research activities conducted in the 329 Building support the Hanford environmental mission and other key DOE missions of national and international importance. Research activities are performed on both radioactive and non-radioactive samples. The following processes are allowed to be performed in the 329 Building:</p> <ul style="list-style-type: none"> <li>- Development of special purpose radiation detection and sampling/analysis systems.</li> <li>- Development of electronics and software to enhance radiation detector performance.</li> <li>- Radiation detection equipment used for radioisotope quantification that may involve chemical separations.</li> <li>- Solid, liquid, and gas sample (both radioactive and non-radioactive) analysis in specialized laboratories.</li> <li>- <i>Wet chemistry techniques and the operation of specialized analytical instrumentation such as mass spectrometers, organic mass spectrometers, and inductively coupled plasma spectrometers.</i></li> <li>- Separations and analyses of radionuclides and samples containing radionuclides.</li> <li>- Preparation of radioactive standards (solid, liquid, and gas).</li> <li>- Characterizing chemical, radiochemical, and physical properties of samples (e.g., tank wastes, spent fuel, contaminated soils and water), as well as other gaseous materials, glass, ceramic, carbonaceous, or metallic waste forms.</li> <li>- Performing research using high-level and low-level mixed tank wastes and their simulants to test radiochemical process systems such as leaching, solvent extraction, ion exchange, vitrification, fuel dissolution, decontamination, evaporation, grouting, solid waste packaging/shipment, and high-level liquid waste shipping/receiving/transportation.</li> <li>- Performing research and development for processing and immobilization support including waste separation, ion exchange, sludge washing/leaching, ultra filtration, oxidation/precipitation, species separation, immobilization, and characterization.</li> <li>- Using a full suite of analytical capabilities for radiochemical and inorganic chemical analyses in support of process development.</li> </ul>	Continuous	<b>CDM:</b> Under the PNNL Standards Based Management System (SBMS) each new research project is required to be reviewed via the Electronic Prep & Risk (EPR) assessment process. The reviews are recorded in the EPR database. Facility changes are required to be reviewed via the SBMS Subject Area for Engineering Calculations, Drawings and Specifications, Creating and Modifying. Projects with potential air emissions are reviewed by Effluent Management (EM) under the SBMS Airborne Emission Subject Area, and the records retained by EM.

Requirement	Compliance Status	Compliance Determination Method																																																																																																																													
<p>specializing in the analysis of highly radioactive materials and very complex sample matrices.</p> <ul style="list-style-type: none"> <li>- Developing methods for the separation of radioisotopes.</li> <li>- Glove box work and storage of higher activity materials in shielded storage areas.</li> <li>- Developing and testing radioisotope generators.</li> <li>- Conducting Non-Destructive Analysis (NDA).</li> <li>- Processes involving the creation of mixed activation products (MAP) and mixed fission products (MFP), separation, analysis and research.</li> <li>- Developing thermal and vitrification processes to immobilize hazardous and radioactive materials into acceptable waste forms.</li> </ul> <p>Waste processing technology development includes design, process development, remote operations, and numerical and computational modeling.</p> <ul style="list-style-type: none"> <li>- Providing chemical and physical separations in support of radiological and hazardous material processing and disposal requirements. These technologies include: removal and concentration of hazardous and/or radioactive components for environmental remediation; separation of hazardous and/or radioactive materials, including solid/liquid phase separations; and, recovery of specific components for recycle and reuse.</li> <li>- Separations and analyses of radionuclides for environmental measurements.</li> <li>- Sampling and analysis of environmental samples including soils, vegetation and water/liquids; decommissioning materials; and tank wastes.</li> <li>- Performing research with supercritical fluids to understand chemistry mechanisms and processes.</li> <li>- Lab setup projects involving fume hood removals/upgrades and ductwork tie-in.</li> </ul>																																																																																																																															
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 4.34E-02 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Alpha-0    5.60E-06    Liquid/Particulate Solid WAC 246-247-030 (21) (a) Alpha release rate based on Am-241.</p> <p>B/G-0        9.20E-03        Liquid/Particulate Solid WAC 246-247-030 (21) (a) Beta/Gamma release rate based on Sr-90 and Cs-137.</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td>Ac-225</td> <td>Ac-227</td> <td>Ac-228</td> <td>Ag-108 m</td> <td>Ag-108</td> </tr> <tr> <td>Ag-109 m</td> <td>Ag-110 m</td> <td>Ag-110</td> <td>Ag-111</td> <td>Al-26</td> </tr> <tr> <td>Am-241</td> <td>Am-242 m</td> <td>Am-242</td> <td>Am-243</td> <td>Am-245</td> </tr> <tr> <td>Ar-37</td> <td>Ar-39</td> <td>Ar-41</td> <td>Ar-42</td> <td>As-74</td> </tr> <tr> <td>As-76</td> <td>At-217</td> <td>Au-195</td> <td>Au-198</td> <td>Ba-131</td> </tr> <tr> <td>Ba-133</td> <td>Ba-133 m</td> <td>Ba-137 m</td> <td>Ba-139</td> <td>Ba-140</td> </tr> <tr> <td>Ba-141</td> <td>Ba-142</td> <td>Be-10</td> <td>Be-7</td> <td>Bi-207</td> </tr> <tr> <td>Bi-210</td> <td>Bi-211</td> <td>Bi-212</td> <td>Bi-213</td> <td>Bi-214</td> </tr> <tr> <td>Bk-249</td> <td>Bk-250</td> <td>Br-82</td> <td>Br-83</td> <td>Br-84</td> </tr> <tr> <td>Br-85</td> <td>C-11</td> <td>C-14</td> <td>C-15</td> <td>Ca-41</td> </tr> <tr> <td>Ca-45</td> <td>Ca-47</td> <td>Cd-109</td> <td>Cd-113 m</td> <td>Cd-113</td> </tr> <tr> <td>Cd-115 m</td> <td>Cd-115</td> <td>Ce-139</td> <td>Ce-141</td> <td>Ce-142</td> </tr> <tr> <td>Ce-143</td> <td>Ce-144</td> <td>Cf-249</td> <td>Cf-250</td> <td>Cf-251</td> </tr> <tr> <td>Cf-252</td> <td>Cl-36</td> <td>Cm-241</td> <td>Cm-242</td> <td>Cm-243</td> </tr> <tr> <td>Cm-244</td> <td>Cm-245</td> <td>Cm-246</td> <td>Cm-247</td> <td>Cm-248</td> </tr> <tr> <td>Co-56</td> <td>Co-57</td> <td>Co-58</td> <td>Co-60</td> <td>Cr-51</td> </tr> <tr> <td>Cs-131</td> <td>Cs-134</td> <td>Cs-134 m</td> <td>Cs-135</td> <td>Cs-136</td> </tr> <tr> <td>Cs-137</td> <td>Cs-138</td> <td>Cs-139</td> <td>Cu-64</td> <td>Es-254</td> </tr> <tr> <td>Eu-150</td> <td>Eu-152</td> <td>Eu-152 m</td> <td>Eu-154</td> <td>Eu-155</td> </tr> <tr> <td>Eu-156</td> <td>Eu-157</td> <td>F-18</td> <td>Fe-55</td> <td>Fe-59</td> </tr> <tr> <td>Fr-221</td> <td>Fr-223</td> <td>Ga-67</td> <td>Ga-72</td> <td>Gd-148</td> </tr> <tr> <td>Gd-149</td> <td>Gd-151</td> <td>Gd-152</td> <td>Gd-153</td> <td>Ge-68</td> </tr> <tr> <td>H-3</td> <td>Hf-175</td> <td>Hf-178</td> <td>Hf-178 m</td> <td>Hf-181</td> </tr> <tr> <td>Hf-182</td> <td>Hg-203</td> <td>Ho-166</td> <td>Ho-166 m</td> <td>I-122</td> </tr> <tr> <td>I-123</td> <td>I-125</td> <td>I-129</td> <td>I-130</td> <td>I-131</td> </tr> </table>	Ac-225	Ac-227	Ac-228	Ag-108 m	Ag-108	Ag-109 m	Ag-110 m	Ag-110	Ag-111	Al-26	Am-241	Am-242 m	Am-242	Am-243	Am-245	Ar-37	Ar-39	Ar-41	Ar-42	As-74	As-76	At-217	Au-195	Au-198	Ba-131	Ba-133	Ba-133 m	Ba-137 m	Ba-139	Ba-140	Ba-141	Ba-142	Be-10	Be-7	Bi-207	Bi-210	Bi-211	Bi-212	Bi-213	Bi-214	Bk-249	Bk-250	Br-82	Br-83	Br-84	Br-85	C-11	C-14	C-15	Ca-41	Ca-45	Ca-47	Cd-109	Cd-113 m	Cd-113	Cd-115 m	Cd-115	Ce-139	Ce-141	Ce-142	Ce-143	Ce-144	Cf-249	Cf-250	Cf-251	Cf-252	Cl-36	Cm-241	Cm-242	Cm-243	Cm-244	Cm-245	Cm-246	Cm-247	Cm-248	Co-56	Co-57	Co-58	Co-60	Cr-51	Cs-131	Cs-134	Cs-134 m	Cs-135	Cs-136	Cs-137	Cs-138	Cs-139	Cu-64	Es-254	Eu-150	Eu-152	Eu-152 m	Eu-154	Eu-155	Eu-156	Eu-157	F-18	Fe-55	Fe-59	Fr-221	Fr-223	Ga-67	Ga-72	Gd-148	Gd-149	Gd-151	Gd-152	Gd-153	Ge-68	H-3	Hf-175	Hf-178	Hf-178 m	Hf-181	Hf-182	Hg-203	Ho-166	Ho-166 m	I-122	I-123	I-125	I-129	I-130	I-131	<p>Continuous</p>	<p><b>CDM:</b> A NESHAPs Inventory of radioactive materials is conducted for PNNL facilities on an annual basis in accordance with PNNL-10855 Rev. 4, "Assessment of Unabated Facility Emission Potentials for Evaluating Airborne Radionuclide Monitoring Requirements at PNNL-2007".</p> <p>Reviewed the 2007 NESHAPs radionuclide inventory assessment results to verify compliance.</p> <p><b>Comment:</b> For 2007, short lived MFP/MAP identified as Cs-137 in the permit application includes Cs-132, Dy-165, Er-169, Er-171, Sb-129, Sn-117m, Sn-121, Sr-87m, Tb-161, and Zr-97.</p>
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I-123	I-125	I-129	I-130	I-131																																																																																																																											

Requirement	Compliance Status	Compliance Determination Method
<p>I-132 I-133 I-134 I-135 In-106            In-113 m In-114 m In-114 In-115 In-115 m            Ir-192 K-40 K-42 Kr-81 Kr-83 m            Kr-85 Kr-85 m Kr-87 Kr-88 Kr-89            Kr-90 La-138 La-140 La-141 La-142            Lu-177 Mn-52 Mn-54 Mn-56 Mo-93            Mo-99 N-13 Na-22 Na-24 Nb-91            Nb-91 m Nb-92 Nb-93 m Nb-94 Nb-95            Nb-95 m Nb-97 Nb-97 m Nd-144 Nd-147            Ni-56 Ni-59 Ni-63 Ni-65 Np-235            Np-236 Np-237 Np-238 Np-239 Np-240            Np-240 m O-15 P-32 P-33 Pa-231            Pa-233 Pa-234 Pa-234 m Pb-209 Pb-210            Pb-211 Pb-212 Pb-214 Pd-107 Pd-109            Pm-145 Pm-146 Pm-147 Pm-148 m Pm-148            Pm-149 Pm-151 Po-208 Po-209 Po-210            Po-211 Po-212 Po-213 Po-214 Po-215            Po-216 Po-218 Pr-143 Pr-144 Pr-144 m            Pu-234 Pu-236 Pu-237 Pu-238 Pu-239            Pu-240 Pu-241 Pu-242 Pu-243 Pu-244            Ra-223 Ra-224 Ra-225 Ra-226 Ra-228            Rb-86 Rb-87 Rb-88 Rb-89 Rb-90            Rb-90 m Re-186 Re-187 Re-188 Rh-102            Rh-103 m Rh-105 Rh-105 m Rh-106 Rn-219            Rn-220 Rn-222 Ru-103 Ru-105 Ru-106            Ru-97 S-35 Sb-124 Sb-125 Sb-126            Sb-126 m Sb-127 Sc-46 Sc-47 Se-75            Se-79 Sm-145 Sm-146 Sm-147 Sm-151            Sm-153 Sm-157 Sn-113 Sn-119 m Sn-121 m            Sn-123 Sn-125 Sn-126 Sr-85 Sr-89            Sr-90 Sr-91 Sr-92 Ta-179 Ta-182            Ta-183 Tb-160 Tc-101 Tc-95 m Tc-97            Tc-97 m Tc-98 Tc-99 Tc-99 m Te-121 m            Te-121 Te-123 Te-123 m Te-125 m Te-127 m            Te-127 Te-129 m Te-129 Te-131 Te-131 m            Te-132 Te-133 Te-133 m Te-134 Th-227            Th-228 Th-229 Th-230 Th-231 Th-232            Th-233 Th-234 Ti-44 Tl-204 Tl-207            Tl-208 Tl-209 Tm-170 Tm-171 U-232            U-233 U-234 U-235 U-236 U-237            U-238 U-239 U-240 V-48 V-49            W-181 W-185 W-187 W-188 Xe-122            Xe-123 Xe-125 Xe-127 Xe-131 m Xe-133            Xe-133 m Xe-135 Xe-135 m Xe-137 Xe-138            Y-88 Y-90 Y-90 m Y-91 Y-91 m            Y-92 Y-93 Yb-164 Yb-175 Yb-177            Zn-65 Zn-69 Zn-69 m Zr-88 Zr-89            Zr-93 Zr-95</p> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. WAC 246-247-110(9). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>		
<p>The emission unit monitoring system shall have the following activities performed:</p> <p>a. A functional/calibration check of monitoring system instrumentation shall be performed annually.</p>	<p>Continuous</p>	<p>CDM: Records Review. Monitoring system checks are completed during sampling events.</p>

**P-291A001-001**  
WDOH Emission Unit ID : 369  
Page in AOP : EU0369-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fiberglass Filter <b>Required Units:</b> 1 <b>Add'l Description:</b> (Deep Bed Fiberglass filter)	Continuous	CDM: Field walk downs and drawings H-2-58540
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> In series	Continuous	CDM: Field walk downs and drawings H-2-75975 and H-2-75976
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 2 <b>Add'l Description:</b> In parallel, one operating, one back-up	Continuous	CDM: Field walk downs and drawings H-2-58540; Timely notification of short disruptions made to WDOH
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> Continuous <b>Radionuclide Requiring Measurement:</b> 239/240Pu, 241Am	Continuous	CDM: Analytical results in ABCASH
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(2) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 60, Appendix A, Method 2; 40 CFR 61, Appendix B, Method 114 61.93(b)(2)(ii) ANSI N13.1	Continuous	CDM: Required sampling and NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528, latest revision)
<b>Permit:ALARACT 28 Issue Date:01-01-07</b> <b>NOC: Shutdown of Stack System(s) (Maintenance and incidental)</b> <b>WDOH NOC ID: Date In AOP: 01-01-07 Page in AOP:</b>		
Requirement	Compliance Status	Compliance Determination Method
<b>1. Description of Activity/Requirements</b>  The listed facilities are currently under Surveillance and Maintenance (S&M) status, meaning active processing has ceased with radioactive feed materials no longer brought in. Surveillances and maintenance activities are performed in these facilities including, but not limited to minor activities such as exterior and interior inspections; checking for door security, for any unauthorized building intrusions, and for structural integrity; water intrusion	Continuous	CDM: Field interviews, and work planning/control documents and procedures

Requirement	Compliance Status	Compliance Determination Method
<p>cleanup; waste handling/removal; maintaining radiological airborne control zones; animal or insect intrusion abatement; maintaining operating systems and building integrity, eliminating utilities when possible; identifying and reducing hazards; and housekeeping. The primary ventilation systems and associated record sampling systems operate at each facility as described in the Hanford Site Air Operating Permit. At certain times to support these various S&amp;M activities, or related to maintenance or replacement-in-kind, any one of these primary ventilation systems may be shut down for a period exceeding two days duration. The four ventilation systems which may be shut down are: 332 REDOX, 402 B-Plant, 369 PUREX, 310 U-Plant.</p>		
<p>2. Radiological Controls</p> <p>It was agreed that an As Low As Reasonably Achievable Control Technology (ALARACT) demonstration is appropriate to address control and monitoring of potential radioactive air emissions during these extended periods of shutdown.</p> <p>During shutdown periods exceeding two days, the following controls will be implemented:</p> <p>Inform the Washington Department of Health (WDOH) by telecon or email at the start of each use of this ALARACT action or as soon as it is realized that the systems will be shutdown for more than two days.</p> <p>To provide assurance that containment of airborne contamination is maintained during the subject periods of shutdown, Fluor Hanford (or successor)</p> <p>Contractor Radiological Control Technicians (RCTs) will perform daily (during normal work days i.e., not weekends or holidays) radiological swipe surveys on a representative few normally accessible outer facility doors. If an increase in removable (smearable) contamination is detected at any of these locations during the period of shutdown, notify the WDOH and describe containment measures to be taken.</p> <p>During the subject periods of shutdown, to avoid situations which might encourage increased diffuse or fugitive emissions, no activities will be conducted inside the facility except those approved for unfiltered containment in accordance with established Radiological Control criteria.</p> <p>If the fans are not restarted within the scheduled time discussed with WDOH, WDOH will be contacted, and continued monitoring and/or airborne controls will be discussed.</p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews, contact log and radiological surveys</p>
<p>3. Monitoring</p> <p>It was agreed that an As Low As Reasonably Achievable Control Technology (ALARACT) demonstration is appropriate to address control and monitoring of potential radioactive air emissions during these extended periods of shutdown.</p>	<p>Continuous</p>	<p><b>CDM:</b> ALARACT documents completed as discussed/directed with WDOH</p>

Requirement	Compliance Status	Compliance Determination Method
4. Records/Documentation None.	Continuous	CDM: Contact log and radiological surveys

**P-296A010-001**

WDOH Emission Unit ID : 384

Page in AOP : EU0384-001

EMISSION UNIT DID NOT OPERATE DURING CY 2007 SEE TABLE 2

<p>Permit: AIR 06-1026 Issue Date:10-05-06 Effective Date:10-05-06          NOC: Reactivation of PUREX Storage Tunnel Number 2          WDOH NOC ID: 665 Date In AOP: 01-01-07 Page in AOP: EU0384-001          NOC NOT UTILIZED DURING CY 2007 SEE <u>TABLE 3</u></p>
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**P-437MN&ST-001**

WDOH Emission Unit ID : 385

Page in AOP : EU0385-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<p><b>Zone or Area:</b> Decon 1 &amp; 2 Activities  <b>Abatement Technology:</b> HEPA  <b>Required Units:</b> 1  <b>Add'l Description:</b> 2 parallel flow paths, minimum of one HEPA operational</p>	Continuous	CDM: Verified by visual inspection and discussion with the Cognizant Engineer.
<p><b>Zone or Area:</b> Contaminated Equipment Repair Area  <b>Abatement Technology:</b> HEPA  <b>Required Units:</b> 1  <b>Add'l Description:</b> 2 in parallel</p>	Continuous	CDM: Verified by visual inspection and discussion with the Cognizant Engineer.
<p><b>Zone or Area:</b>  <b>Abatement Technology:</b> Fan  <b>Required Units:</b> 2  <b>Add'l Description:</b> In parallel, serves all MN&amp;ST, intermittent use</p>	Continuous	CDM: Verified by visual inspection and discussion with the Cognizant Engineer.
<p><b>Zone or Area:</b> Liquid Radioactive Waste Loadout Facility Ventilation  <b>Abatement Technology:</b> HEPA  <b>Required Units:</b> 1  <b>Add'l Description:</b></p>	Continuous	CDM: Verified by visual inspection and discussion with the Cognizant Engineer.
<p><b>Zone or Area:</b> Liquid Radioactive Waste Loadout Facility Ventilation  <b>Abatement Technology:</b> Prefilter  <b>Required Units:</b> 1  <b>Add'l Description:</b></p>	Continuous	CDM: Verified by visual inspection and discussion with the Cognizant Engineer.

Requirement	Compliance Status	Compliance Determination Method
<b>Zone or Area:</b> Radiological Waste Tank Room Ventilation <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Verified by visual inspection and discussion with the Cognizant Engineer.
<b>Zone or Area:</b> Radiological Waste Tank Room Ventilation <b>Abatement Technology:</b> Prefilter <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Verified by visual inspection and discussion with the Cognizant Engineer.
<b>Zone or Area:</b> Contaminated Equipment Repair Area <b>Abatement Technology:</b> Prefilter <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Verified by visual inspection and discussion with the Cognizant Engineer.
<b>Zone or Area:</b> Waste Tank 1 & 2 Vents <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b> 1 stage with 2 parallel flow paths	Continuous	<b>CDM:</b> Verified by visual inspection and discussion with the Cognizant Engineer.
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 4 week sample/year <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> Sampling is verified by information in ABCASH. The Statement of Work for Services Provided by the Waste Sampling and Characterization Facility for the Environmental Compliance Program during Calendar Year 2007 (HNF-EP-0835) defines what analyses are performed and the frequency.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93 (b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> The NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528) specifies the hardware and method used to sample and the analytical methods used in the laboratory.
Permit: AIR 06-1011 - A <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>NOC:</b> Sodium Residuals Reaction/Removal and other Deactivation Work Activities at the Fast Flux Test Facility <b>WDOH NOC ID:</b> 646 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0385-001		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 5.70E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).	Continuous	<b>CDM:</b> The Annual Radionuclide Air Emission Report for the Hanford Site, Calendar Year 2007.
This approval applies only to those activities described below. No additional activities or variations on the approved activities that	Continuous	<b>CDM:</b> FFTF-36419, FFTF Closure Project Documented Safety Analysis,

Requirement	Compliance Status	Compliance Determination Method
<p>constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The activity will involve reaction of sodium residuals associated with the Fast Flux Test Facility Project systems and equipment. This activity could be conducted in place or at designated cleaning locations. Typically, the sodium residuals would be reacted with superheated steam. The primary advantages of the superheated steam process (SSP) are that it does not allow condensation to occur and component cleaning can be performed in a shorter time period. Prior to steam injection into the system to be cleaned the steam is heated to ~204 C (400 F). The equipment to be cleaned is heated to a minimum of 100 C (212 F) and higher if possible. Most systems will require multiple injection points. As the superheated steam reacts with the metallic sodium, the temperature increases. The temperature is controlled such that the maximum reaction temperature is no greater than ~538 C (1,000 F).</p> <p>Because of the high initial temperature and the increase of the temperature caused by the reaction, no condensation occurs. The caustic formed is a liquid at the processing temperatures and because it is denser than the liquid sodium, it settles to the bottom of any pools leaving the sodium on top where it is always exposed to the superheated steam. Due to the continued exposure of the molten sodium to the superheated steam, the reaction continues at a constant rate. Superheated steam injection is continued until hydrogen is no longer being generated. The system is then cooled and rinsed and the fluid is drained from the system.</p> <p>PERFORM IN PLACE CLEANING OF VESSELS, COMPONENTS, AND LARGE BORE PIPE A PTRAEU would be used to clean, in place, large bore sodium pipe [greater than or equal to --20 centimeter (8 inch) diameter], components and vessels in the primary and secondary sodium cooling systems. The PTRAEU also would be used to clean the Interim Decay Storage (IDS) and Fuel Storage Facility (FSF) vessels [Note: Select components in the primary sodium system, and large diameter piping and components in the secondary sodium system may be removed and cleaned in FSF or the Maintenance and Storage Facility (MASF), as described below].</p> <p>Typically, penetrations into the piping/vessels would be made at appropriate locations using a low speed drill. Existing sodium heating systems would be energized, and piping/vessels heated to liquefy the existing sodium residuals. A PTRAEU would be connected to the penetration points, and used at various locations to inject the superheated steam into plant systems.</p> <p>The superheated steam would be injected. Hydrogen generation would be monitored to follow the reaction. Sulfuric acid would be added to the resultant process liquid (i.e., sodium hydroxide solution) to reduce the pH to &lt;13. This solution would be routed for offloading to tanker transport for overland transfer to Liquid Effluent Treatment Facility (LERF) and subsequent treatment at 200 Area Effluent Treatment Facility (ETF). If needed or chosen for use during these activities, the categorical NOC for sitewide use of tanker loading for wastewater could be used.</p> <p>REMOVE SMALL BORE PIPE AND COMPONENTS FOR REACTION N A CLEANING STATION Small bore piping [&lt;20 centimeter (8 inch) diameter], valves and other components [e.g., core component pots from IDS, fuel storage tubes from FSF, and dump heat exchangers (DHX) tube bundles] may be removed and processed in a proposed stationary cleaning station that would be located in FSF. Mechanical means (e.g., portable saws, pipe cutters) would be used to cut the pipe, valves, and components into</p>		<p>inquiry of facility personnel, and review of facility records associated with HNF-PRO-12115, Work Management, and Job Control System.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>manageable size. All heat exchanger tube bundles, which contain multiple parallel flow paths, would be dismantled to ensure effective cleaning.</p> <p>The proposed FSF stationary cleaning station would consist of a chamber with removable rack for loading piping and components. The piping would be loaded at an angle, allowing the residual sodium to drain to a catch basin when heated before the injection of inert gas and/or reaction medium. The process in the cleaning station would be consistent with the in place process where the resultant waste sodium hydroxide solution is collected, the pH reduced to &lt;13, and transported to the 200 Areas. The FSF is considered an appropriate location due to availability of sufficient floor space, existing overhead crane, available utilities, and proximity to proposed operations. If needed or chosen for use during these activities, the categorical NOC for sitewide use of tanker loading for wastewater could be used.</p> <p>Cleaned piping and components would be disposed of in a Hanford Site solid waste management facility.</p> <p><b>REMOVE LARGE COMPONENTS FOR CLEANING</b> The large diameter cleaning vessel (LDCV) located in the existing MASF could be used for cleaning large components following removal (e.g., primary sodium pumps, intermediate heat exchanger (IHX) tube bundles, and instrument trees). The LDCV. could be retrofitted with a new super heated steam supply and associated control system for use in cleaning the aforementioned components. The IHX tube bundles, which contain multiple parallel sodium flow paths, may be dismantled to ensure effective cleaning. Small bore pipe and components also could be cleaned in MASF, if necessary.</p> <p><b>OTHER DEACTIVATION ACTIVITIES</b> Other related routine, continued deactivation activities that could occur as part of the proposed action are: remove/dispose of asbestos; remove/stabilize existing hazards in conjunction with systems and equipment deactivation associated with sodium residuals; remove/recycle/dispose excess deactivated equipment and components; and remove depleted uranium and/or lead shielding.</p>		
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 5.70E-03 mrem/year. Approved are the associated potential release rates (Curies/year) of: Alpha-0 2.00E-05 Liquid/Particulate Solid WAC 246-247-030 (21) (e) Alpha release rate based on Pu-239. BIG-0 3.30E-01 Liquid/Particulate Solid WAC246-247-030 (21) (e) Beta/Gamma release rate based on Cs-I 37. The radioactive isotopes identified for this emission unit are (no quantities specified): Ba-137 m Co-60 Cs-134 Cs-137 H-3 Mn-54 Na-22 Pu-239 Ru-106 Zn-65</p> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-03006). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)) DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the</p>	<p>Continuous</p>	<p><b>CDM:</b> Verified the basis for the PTE calculation in the NOC application.</p>

Requirement	Compliance Status	Compliance Determination Method
particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.		
Operations shall be performed in accordance with the controls specified in radiation work planning documents and/or operating procedures and shall be available for inspection upon request.	Continuous	<b>CDM:</b> FFTF-36419, FFTF Closure Project Documented Safety Analysis, HNF-5173, PHMC Radiological Control Manual, FFTF-POL-6-14, FFTF Plant Policy Manual, inquiry of facility personnel, and review of facility records associated with HNF-PRO-12115, Work Management, and Job Control System.
All activities shall be conducted under the auspices of radiological or health physics control technicians or personnel. Routine field surveys, including swipes/smears, shall be conducted. Fixatives, covers, or other standard measures shall be used, as necessary to contain contamination.	Continuous	<b>CDM:</b> FFTF-36419, FFTF Closure Project Documented Safety Analysis, HNF-5173, PHMC Radiological Control Manual, FFTF-POL-6-14, FFTF Plant Policy Manual, inquiry of facility personnel, and review of facility records associated with HNF-PRO-12115, Work Management, and Job Control System.
Appropriate spill prevention procedures shall be in place to minimize the release of radioactive liquid waste to the environment, and to provide immediate cleanup of any liquid spills.	Continuous	<b>CDM:</b> FFTF-36419, FFTF Closure Project Documented Safety Analysis, HNF-IP-0263, Building Emergency Plan for FFTF Property Protected Area, FFTF-POL-6-14, FFTF Plant Policy Manual, inquiry of facility personnel, and review of facility records associated with HNF-PRO-12115, Work Management, and Job Control System.
The total amount of sodium reacted from all emission units shall not exceed 4,000 gallons per year with no more than 2,000 gallons challenging a single emission unit.	Continuous	<b>CDM:</b> FFTF-36419, FFTF Closure Project Documented Safety Analysis, FFTF-POL-6-14, FFTF Plant Policy Manual, inquiry of facility personnel, and review of facility records associated with HNF-PRO-12115, Work Management, and Job Control System.
Other radioisotopes may be present due to activation products, fission products, decay products, and tracer gases. These other isotopes are approved for this emission unit and will not contribute significantly to the calculated potential-to-emit.	Not Applicable	<b>CDM:</b> This is a statement of fact. Compliance determination is not necessary.
Emissions would be routed through the existing MASF ventilation system; for conservatism no filtration is assumed.	Continuous	<b>CDM:</b> Verified by visual inspection and discussion with the Cognizant Engineer that the system has not been changed and is the same as the As-Built

Requirement	Compliance Status	Compliance Determination Method
		drawing.

**P-296Z005-001**

WDOH Emission Unit ID : 389  
Page in AOP : EU0389-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> 2 parallel banks with each bank containing 4 sets of 2-stage HEPAs; one set per bank operational. Abatement credit given for one HEPA filter in each bank.	Continuous	<b>CDM:</b> Facility Walk down, review of essential equipment operations and drawings.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 1 <b>Add'l Description:</b> Each bank has 2 fans in parallel. Only one fan in each bank required to be operating.	Continuous	<b>CDM:</b> Facility Walk down, review of essential equipment operations and drawings. <b>Comment:</b> Timely notification of short disruptions made to WDOH.
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 4 week sample/ year <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> ABCASH data, Fluor Hanford notification procedure and notification logbook. <b>Comment:</b> ABCASH EDP code is Z913
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93 (b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> Actions to assure quality of periodic confirmatory measurement as described in Section 4.0 of the Standard Conditions.	Continuous	<b>CDM:</b> NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528).

Permit: AIR 06-1020 - A **Issue Date:**10-05-06 **Effective Date:**10-05-06  
**NOC:** Transition of the Plutonium Finishing Plant  
**WDOH NOC ID:** 655 **Date In AOP:** 01-01-07 **Page in AOP:** EU0389-001

Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 2.40E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).	Continuous	<b>CDM:</b> Annual Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007.
This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC	Continuous	<b>CDM:</b> FH work Management, and Job Control System.

Requirement	Compliance Status	Compliance Determination Method
<p>246-247-030(16), may be conducted.</p> <p>The proposed activities involve transitioning the PFP Complex to a state of low-risk, low-cost, long-term surveillance and maintenance pending final disposition. All work would be performed in accordance with the approved radiological control procedures and as low as reasonably achievable (ALARA) program requirements as implemented by the project radiological control manual, as amended. These requirements would be carried out through the activity work packages and associated radiological work permits.</p> <p>This activity includes deactivation of buildings and also includes deactivation of systems no longer necessary once stabilization and storage activities and planned legacy hold-up removal have been concluded; removal/disposition of equipment/components; contamination characterization and reduction/mitigation; packaging plutonium holdup material meeting waste acceptance criteria; maintaining and operating muffle furnaces, as needed, for removed plutonium holdup material; and demolition of radiologically contaminated, non-process ancillary buildings.</p> <p>This activity also includes deactivation activities or activities to prepare and place a facility in a safe and stable condition to minimize the long-term cost of a surveillance and maintenance program while being protective of personnel, the public, and the environment until demolition of former processing and material storage buildings occurs. Deactivation activities would include those actions foreseeable necessary for implementation of the proposed action, such as associated transportation activities, waste removal and disposal, and award of grants and contracts. Specific actions could include the following work involving the potential for radioactive contamination:</p> <ul style="list-style-type: none"> <li>-Draining and/or de-energizing systems as appropriate.</li> <li>-Stabilizing contaminated areas (e.g., with fixatives, sealants, paint).</li> <li>-Stabilizing or removing gloveboxes, process equipment, tanks, piping, fume hoods, and support equipment.</li> <li>-Removing fencing and paved parking areas adjacent to facilities.</li> <li>-Installing alternate environmental monitoring, surveillance, and safety components (e.g., lighting, fencing) if necessary.</li> <li>-Removing/packaging radioactive (including equipment calibration sources and laboratory standards) and hazardous materials and waste, including stabilization and/or removal of asbestos, and removal cleanup, and disposition of polychlorinated biphenyls and other regulated materials and transportation to existing waste management facilities.</li> <li>-Removing equipment and system components.</li> <li>-Size-reducing process equipment for disposal as waste.</li> <li>-Performing physical or chemical treatment processes (e.g., neutralization, solidification, filtering) to render a material less hazardous or to reduce the volume (such processes will not increase the potential release rates).</li> <li>-Decontamination to support the excess of surplus equipment.</li> <li>-Removing excess combustible material.</li> <li>-Disconnecting utilities, piping, and communication service systems (if the systems are not necessary to maintain required environmental monitoring or building safety systems), including associated excavation.</li> <li>-Ensuring adequate freeze and heat protection.</li> <li>-Stabilizing, reducing, combining, or removing waste materials at outdoor locations within the PFP Complex (such processes will not increase the potential release rates provided in this NOC).</li> <li>-Sealing cracks, gratings, and openings to the building exterior, and repairing roofs.</li> <li>-Conducting general housekeeping activities (e.g., vacuuming, sweeping, dusting) in areas where radiological contamination is not anticipated (e.g., radiological buffer area) but could be encountered.</li> </ul>		

Requirement	Compliance Status	Compliance Determination Method															
<p>-Removing or reducing radioactive or hazardous contamination from facilities and equipment by washing, heating, chemical or electrochemical action, mechanical cleaning, or other similar techniques.</p> <p>-Removing residual plutonium holdup material, which might remain throughout the PFP Complex after stabilization activities described in the PFP EIS have been completed; packaging residual plutonium holdup meeting waste acceptance criteria for shipment to an onsite waste management facility, or thermally stabilizing material in muffle furnace operations and packaging for storage in existing PFP Complex vaults.</p> <p>-Designing and executing changes to utility service systems and/or utility structures necessary to place a facility in surveillance and maintenance, pending demolition.</p> <p>-Conducting final process operations to stabilize or eliminate residual operational materials or effluents, such as final process runs; cleaning of vessels, valve pits and pipe trenches; installation and operation of small evaporators; flushing piping systems; removal or replacement of filters; and other similar closeout actions.</p> <p>-Demolishing non-process ancillary buildings.</p> <p>-Deactivation activities will require actions to provide for continued routine maintenance, repair, and replacement-in-kind of operating portions of PFP.</p> <p>Other actions include:</p> <p>-Remove residual plutonium from gloveboxes, filterboxes, equipment, piping, ductwork, and the building surfaces and package for disposition to onsite or offsite disposal facilities.</p> <p>-Remove internal equipment from gloveboxes and building equipment/system components and package for disposition to onsite or offsite disposal facilities.</p> <p>-Decontaminate gloveboxes, filterboxes, ductwork, and equipment to less than transuranic levels if possible.</p> <p>-Remove gloveboxes, filterboxes, ductwork, and equipment and packager disposition to onsite or offsite disposal facilities.</p> <p>-Decontaminate or fix contamination on building interior and exterior.</p> <p>-Disconnect utilities and services not necessary for monitoring.</p> <p>-Perform radiological and chemical characterization in preparation for dismantlement.</p> <p>In preparation for the proposed transition activities, housekeeping, assays, preventive maintenance, minor decontamination, and reactivation of glovebox access ports would occur.</p> <p>See additional process description in the following Conditions/Limitations.</p>																	
<p>The PTE for this project ad determined under WAC 246-247-030(21)(a-e)[as specified in the application] is 8.90E+02 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Alpha-0 5.00E-03 Liquid/Particulate Solid WAC 246-247-030 (21) (a) Using Pu-239 as a conservative alpha isotope.</p> <p>B/G-0 1.20E-07 Liquid/Particulate Solid WAC 246-247-030 (21) (a) Using SR-90 as a conservative beta isotope.</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <table border="0"> <tr> <td>Am-241</td> <td>Np-237</td> <td>Pu-238</td> <td>Pu-239</td> <td>Pu-240</td> </tr> <tr> <td>Pu-241</td> <td>Pu-242</td> <td>U-233</td> <td>U-234</td> <td>U-235</td> </tr> <tr> <td>U-236</td> <td>U-237</td> <td>U-238</td> <td></td> <td></td> </tr> </table> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than</p>	Am-241	Np-237	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	U-233	U-234	U-235	U-236	U-237	U-238			<p>Continuous</p>	<p>CDM: Verified the basis for the PTE calculation in the NOC application unchanged.</p>
Am-241	Np-237	Pu-238	Pu-239	Pu-240													
Pu-241	Pu-242	U-233	U-234	U-235													
U-236	U-237	U-238															

Requirement	Compliance Status	Compliance Determination Method
<p>10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)) DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725( 4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>		
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The proposed methods for removing residual contamination from equipment/systems and for removing equipment would be similar to methods in use today throughout the industry and the DOE Complex. Both direct contact and remote technologies/techniques could be used. General technologies/techniques include heating, crushing, size reducing, and cutting. These could involve laboratory analyses and nondestructive assay; chemical cleaning, brushing, washing, scrubbing, vacuum cleaning, and abrasive jetting; using nibblers, shears, circular saws; potentially a remote-operated laser, and other similar methods. It is expected that should new technology become available, such technology would be evaluated for application in the PFP deactivation activities, and could be used if no increase in the potential-to-emit described in this NOC would result.</p>	Continuous	CDM: FH work Management, and Job Control System.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The PFP deactivation activities include the following:                      -Size reduction of equipment will be by mechanical means and may be accomplished by compaction, disassembling by use of wrenches, nibblers, shears, cutters, grinders, sews, or other similar methods. This equipment may be manually, hydraulically, pneumatically or electrically powered.                      -Decontamination methods include: Scraping, sweeping, chemical cleaning, brushing, washing, scrubbing, scabbling, grinding, vacuum cleaning, strippable coatings, washing using wet rags, spraying, abrasive jetting, low pressure and high pressure wash using water and/or chemicals cleaners, use of fixatives and/or physical removal of contamination by use of mechanical means such as chipping or cutting. The application of fixatives for contamination control would be accomplished via aerosol fogging, paint brush/roller, hand-held spray bottle, or an electric or pneumatic powered sprayer.                      -Containment of waste may be accomplished by coating the material with a fixative or placing the material in</p>	Continuous	CDM: FH work Management, and Job Control System.

Requirement	Compliance Status	Compliance Determination Method
<p>containers, bags and/or wrapping in plastic sheeting, utilizing adhesive tape, heat sealing or mechanical closure to prevent release of radiological contamination.</p> <p>-Miscellaneous mechanical processes that could be sued to support the proposed activity could include threading of piping, use of hot taps on piping, capping and plugging piping using threaded pipe components and expanding/compressive plugs or caps, drilling of holes in metal and concrete, core drilling concrete surfaces, installation of anchor bolts, installation and removal of bolts, installation of hose and tubing connectors, compression fittings, installation and removal of pumps, agitators and process control filters.</p>		
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>Excavation will take place in the PFP Complex to support site stabilization, isolating/blanking utilities, fence removal/installation/relocation, and soil sampling/cleanup. Access to underground piping and cable would be gained by use of a bucket-type excavator. Manual digging methods with shovels, picks, and rakes also could be used. Contaminated soil removed and covered during excavation activities would remain covered until replaced into the excavation or otherwise dispositioned (backfill would consist of the original material removed or 'clean' soil).</p> <p>If needed or chosen for use during these activities, the categorical NOCs for sitewide use of the guzzler, a portable temporary radioactive air emissions unit (PTRAEU) exhauster, or HEPA filtered vacuum radioactive air emission unit could be used. Wastes generated during deactivation would be packaged appropriately. Waste would be generated/packaged throughout the PFP Complex (i.e., in structures with registered stacks, in non-HEPA filtered structures or outdoors), resulting in filtered releases and/or diffuse and fugitive emissions. Wastes could be placed in various containers such a plastic bags, metal drums, and standard waste boxes. These wastes could be transferred to other locations within the PFP Complex for interim storage and/or repackaging before subsequent transport to approved locations/facilities pending final disposition.</p> <p>If necessary, personnel decontamination activities would be conducted in the decontamination trailer (DOE/RL-</p>	<p>Continuous</p>	<p><b>CDM:</b> FH work Management, and Job Control System.</p>

Requirement	Compliance Status	Compliance Determination Method
2003-42).		
<p>The total abated emission limit for the 296-Z-5 emission unit is limited to 2.8E-05 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the potential-to-emit for this emission unit is limited to 5.5E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).</p>	Continuous	<p><b>CDM:</b> Total abated emission is reported in the Annual Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007. Verified that the basis for the PTE calculation in the NOC application did not increase.</p>
<p>Unless maximum fan capacity for operating fans is used, effluent flow rate for this minor stack is derived by direct velocity measurement through individual HEPA filter paths within the system. The flow rates through individual HEPA filter is performed annually, using multiple transverse velocity measurements using a pitot tube. Flow is derived by averaging the velocity measurement times the duct area. Stack flow is derived by summing the effluent flow from the contributing HEPA filters. The effluent flow rates are used to establish effluent discharge volume by multiplying the flow rate by the time of operation.</p>	Continuous	<p><b>CDM:</b> Verified stack flow was derived by summing the flow from each HEPA filter.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>-Outer Can Weld Module. The Outer Can Weld Module will receive a leak-checked BTC&gt; The BTC shall be placed in an outer container. The outer can head space shall hen be backfilled with helium, and an outer container lid shall be welded onto the container in accordance with the requirements of DOE Standard 3013.</p> <p>-Outer Can Leak Test Module. The Outer Can Leak Test Module will receive an outer welded container (3013 package) and operations in this module will verify that the package meets or exceeds the leak tightness requirements of 3013.</p> <p>-NDA Laboratory Modification Module. The Nondestructive Analysis (NDA) Laboratory will receive the 3013 package and will analyze the 3013 package for isotopic distribution, heat load, and container baseline.</p>	Continuous	<p><b>CDM:</b> FH work Management, and Job Control System.</p>
<p>As the required indication device for the Z-5 emission unit, the differential pressure magnehelic gauges associated with the final stage of HEPA filters will have a functional test conducted annually.</p>	Continuous	<p><b>CDM:</b> Verified completion of functional test via work packages 2Z-07-04166 and 2Z-07-02121</p>

Requirement	Compliance Status	Compliance Determination Method
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>Security enhancement program activities include those actions foreseeably necessary for implementation of the proposed action, such as associated transportation activities, waste removal and disposal, and award of grants and contracts. Specific actions include the following work involving the potential for radioactive contamination:</p> <ul style="list-style-type: none"> <li>-Excavations, inside and outside the PP protected area (PA) to support installation of utilities and security-related devices and structures (e.g., barricades, patrol offices) and relocation of displaced activities. Security enhancement program will require some excavation in areas of potential below grade or surface contamination. In addition to excavations for building and structure foundations, it is estimated that approximately 5,000 linear feet of below grade ducting will be installed, a portion of the water line will require replacement, and connections to sewer and water lines will be required.</li> <li>-Modifications to existing structures (e.g., moving walls, doors, railing, security monitoring equipment, electrical equipment upgrades) and/or construction of new buildings (non-radioactive).</li> <li>-Continued operations at 2736-Z/ZB Buildings for 3013-container packaging systems monitoring and maintenance.</li> </ul> <p>No modifications to the existing abatement equipment associated with registered stacks are allowed.</p>	Continuous	<b>CDM:</b> FH work Management, and Job Control System.

**P-296Z006-001**

WDOH Emission Unit ID : 390

Page in AOP : EU0390-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<p><b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b> 2 parallel banks with each bank</p>	Continuous	<b>CDM:</b> Facility Walk down, review of essential equipment operations and drawings.

Requirement	Compliance Status	Compliance Determination Method
containing a 2-stage HEPA filter; one bank operational. Abatement credit given for one HEPA filter in the operating bank.		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 1 <b>Add'l Description:</b> 2 fans in parallel. Only one fan required to be operating.	Continuous	<b>CDM:</b> Facility Walk down, review of essential equipment operations and drawings.
<b>Required Sampling:</b> Record Sample. <b>Sampling Frequency:</b> 4 week sample/year <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> ABCASH data, Fluor Hanford notification procedure and notification logbook. <b>Comment:</b> ABCASH EDP code Z802
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93[b][4][i] & WAC 246-247-075[3] <b>Permit Monitoring and Testing Procedure:</b> Actions to assure quality of periodic confirmatory measurement as described in section 4.0 of the Standard Conditions.	Continuous	<b>CDM:</b> NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528).
Permit: AIR 06-1020 - B <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>NOC:</b> Transition of the Plutonium Finishing Plant <b>WDOH NOC ID:</b> 655 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0390-001		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 2.40E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).	Continuous	<b>CDM:</b> Annual Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The proposed activities involve transitioning the PFP Complex to a state of low-risk, low-cost, long-term surveillance and maintenance pending final disposition. All work would be performed in accordance with the approved radiological control procedures and as low as reasonably achievable (ALARA) program requirements as implemented by the project radiological control manual, as amended. These requirements would be carried out through the activity work packages and associated radiological work permits.</p> <p>This activity includes deactivation of buildings and also includes deactivation of systems no longer necessary once stabilization and storage activities and planned legacy hold-up removal have been concluded; removal/disposition of equipment/components; contamination characterization and reduction/mitigation; packaging plutonium holdup material meeting waste acceptance criteria; maintaining and operating muffle furnaces, as needed, for removed plutonium holdup material; and demolition of radiologically contaminated, non-process ancillary buildings.</p>	Continuous	<b>CDM:</b> FH Work Management, and Job Control System.

Requirement	Compliance Status	Compliance Determination Method
<p>This activity also includes deactivation activities or activities to prepare and place a facility in a safe and stable condition to minimize the long-term cost of a surveillance and maintenance program while being protective of personnel, the public, and the environment until demolition of former processing and material storage buildings occurs. Deactivation activities would include those actions foreseeable necessary for implementation of the proposed action, such as associated transportation activities, waste removal and disposal, and award of grants and contracts. Specific actions could include the following work involving the potential for radioactive contamination:</p> <ul style="list-style-type: none"> <li>-Draining and/or de-energizing systems as appropriate.</li> <li>-Stabilizing contaminated areas (e.g., with fixatives, sealants, paint).</li> <li>-Stabilizing or removing gloveboxes, process equipment, tanks, piping, fume hoods, and support equipment.</li> <li>-Removing fencing and paved parking areas adjacent to facilities.</li> <li>-Installing alternate environmental monitoring, surveillance, and safety components (e.g., lighting, fencing) if necessary.</li> <li>-Removing/packaging radioactive (including equipment calibration sources and laboratory standards) and hazardous materials and waste, including stabilization and/or removal of asbestos, and removal cleanup, and disposition of polychlorinated biphenyls and other regulated materials and transportation to existing waste management facilities.</li> <li>-Removing equipment and system components.</li> <li>-Size-reducing process equipment for disposal as waste.</li> <li>-Performing physical or chemical treatment processes (e.g., neutralization, solidification, filtering) to render a material less hazardous or to reduce the volume (such processes will not increase the potential release rates).</li> <li>-Decontamination to support the excess of surplus equipment.</li> <li>-Removing excess combustible material.</li> <li>-Disconnecting utilities, piping, and communication service systems (if the systems are not necessary to maintain required environmental monitoring or building safety systems), including associated excavation.</li> <li>-Ensuring adequate freeze and heat protection.</li> <li>-Stabilizing, reducing, combining, or removing waste materials at outdoor locations within the PFP Complex (such processes will not increase the potential release rates provided in this NOC).</li> <li>-Sealing cracks, gratings, and openings to the building exterior, and repairing roofs.</li> <li>-Conducting general housekeeping activities (e.g., vacuuming, sweeping, dusting) in areas where radiological contamination is not anticipated (e.g., radiological buffer area) but could be encountered.</li> <li>-Removing or reducing radioactive or hazardous contamination from facilities and equipment by washing, heating, chemical or electrochemical action, mechanical cleaning, or other similar techniques.</li> <li>-Removing residual plutonium holdup material, which might remain throughout the PFP Complex after stabilization activities described in the PFP EIS have been completed; packaging residual plutonium holdup meeting waste acceptance criteria for shipment to an onsite waste management facility, or thermally stabilizing material in muffle furnace operations and packaging for storage in existing PFP Complex vaults.</li> <li>-Designing and executing changes to utility service systems and/or utility structures necessary to place a facility in surveillance and maintenance, pending demolition.</li> <li>-Conducting final process operations to stabilize or eliminate residual operational materials or effluents, such as final process runs; cleaning of vessels, valve pits and pipe trenches; installation and operation of small evaporators; flushing piping systems; removal or replacement of filters; and other similar closeout actions.</li> <li>-Demolishing non-process ancillary buildings.</li> <li>-Deactivation activities will require actions to provide for continued</li> </ul>		

Requirement	Compliance Status	Compliance Determination Method															
<p>routine maintenance, repair, and replacement-in-kind of operating portions of PFP. Other actions include: -Remove residual plutonium from gloveboxes, filterboxes, equipment, piping, ductwork, and the building surfaces and package for disposition to onsite or offsite disposal facilities. -Remove internal equipment from gloveboxes and building equipment/system components and package for disposition to onsite or offsite disposal facilities. -Decontaminate gloveboxes, filterboxes, ductwork, and equipment to less than transuranic levels if possible. -Remove gloveboxes, filterboxes, ductwork, and equipment and packager disposition to onsite or offsite disposal facilities. -Decontaminate or fix contamination on building interior and exterior. -Disconnect utilities and services not necessary for monitoring. -Perform radiological and chemical characterization in preparation for dismantlement. In preparation for the proposed transition activities, housekeeping, assays, preventive maintenance, minor decontamination, and reactivation of glovebox access ports would occur.</p> <p>See additional process description in the following Conditions/Limitations.</p>																	
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e)[as specified in the application] is 8.90E+02 mrem/year. Approved are the associated potential release rates (Curies/year) of: Alpha-0 5.00E-03 Liquid/Particulate Solid WAC 246-247-030(21)(a) Using Pu-239 as a conservative alpha isotope.</p> <p>B/G-0 1.20E-07 Liquid/Particulate Solid WAC 246-247-030(21)(a) Using SR-90 as a conservative beta isotope. The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <table border="0"> <tr> <td>Am-241</td> <td>Np-237</td> <td>Pu-238</td> <td>Pu-239</td> <td>Pu-240</td> </tr> <tr> <td>Pu-241</td> <td>Pu-242</td> <td>U-233</td> <td>U-234</td> <td>U-235</td> </tr> <tr> <td>U-236</td> <td>U-237</td> <td>U-238</td> <td></td> <td></td> </tr> </table> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)) DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>	Am-241	Np-237	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	U-233	U-234	U-235	U-236	U-237	U-238			<p>Continuous</p>	<p><b>CDM:</b> Verified the basis for the PTE calculation in the NOC application unchanged.</p>
Am-241	Np-237	Pu-238	Pu-239	Pu-240													
Pu-241	Pu-242	U-233	U-234	U-235													
U-236	U-237	U-238															
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The proposed methods for removing residual</p>	<p>Continuous</p>	<p><b>CDM:</b> FH Work Management, and Job Control System.</p>															

Requirement	Compliance Status	Compliance Determination Method
<p>contamination from equipment/systems and for removing equipment would be similar to methods in use today throughout the industry and the DOE Complex. Both direct contact and remote technologies/techniques could be used. General technologies/techniques include heating, crushing, size reducing, and cutting. These could involve laboratory analyses and nondestructive assay; chemical cleaning, brushing, washing, scrubbing, vacuum cleaning, and abrasive jetting; using nibblers, shears, circular saws; potentially a remote-operated laser, and other similar methods. It is expected that should new technology become available, such technology would be evaluated for application in the PFP deactivation activities, and could be used if no increase in the potential-to-emit described in this NOC would result.</p>		
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The PFP deactivation activities include the following:</p> <ul style="list-style-type: none"> <li>-Size reduction of equipment will be by mechanical means and may be accomplished by compaction, disassembling by use of wrenches, nibblers, shears, cutters, grinders, sews, or other similar methods. This equipment may be manually, hydraulically, pneumatically or electrically powered.</li> <li>-Decontamination methods include: Scraping, sweeping, chemical cleaning, brushing, washing, scrubbing, scabbling, grinding, vacuum cleaning, strippable coatings, washing using wet rags, spraying, abrasive jetting, low pressure and high pressure wash using water and/or chemicals cleaners, use of fixatives and/or physical removal of contamination by use of mechanical means such as chipping or cutting. The application of fixatives for contamination control would be accomplished via aerosol fogging, paint brush/roller, hand-held spray bottle, or an electric or pneumatic powered sprayer.</li> <li>-Containment of waste may be accomplished by coating the material with a fixative or placing the material in containers, bags and/or wrapping in plastic sheeting, utilizing adhesive tape, heat sealing or mechanical closure to prevent release of radiological contamination.</li> <li>-Miscellaneous mechanical processes that could be sued to support the proposed activity could include threading of piping, use of hot taps on piping, capping and plugging piping using threaded pipe components and expanding/compressive plugs or caps, drilling of holes in metal and concrete, core drilling concrete surfaces,</li> </ul>	<p>Continuous</p>	<p>CDM: FH Work Management, and Job Control System.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>installation of anchor bolts, installation and removal of bolts, installation of hose and tubing connectors, compression fittings, installation and removal of pumps, agitators and process control filters.</p>		
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>Excavation will take place in the PFP Complex to support site stabilization, isolating/blanking utilities, fence removal/installation/relocation, and soil sampling/cleanup. Access to underground piping and cable would be gained by use of a bucket-type excavator. Manual digging methods with shovels, picks, and rakes also could be used. Contaminated soil removed and covered during excavation activities would remain covered until replaced into the excavation or otherwise dispositioned (backfill would consist of the original material removed or 'clean' soil).</p> <p>If needed or chosen for use during these activities, the categorical NOCs for sitewide use of the guzzler, a portable temporary radioactive air emissions unit (PTRAEU) exhauster, or HEPA filtered vacuum radioactive air emission unit could be used. Wastes generated during deactivation would be packaged appropriately. Waste would be generated/packaged throughout the PFP Complex (i.e., in structures with registered stacks, in non-HEPA filtered structures or outdoors), resulting in filtered releases and/or diffuse and fugitive emissions. Wastes could be placed in various containers such a plastic bags, metal drums, and standard waste boxes. These wastes could be transferred to other locations within the PFP Complex for interim storage and/or repackaging before subsequent transport to approved locations/facilities pending final disposition.</p> <p>If necessary, personnel decontamination activities would be conducted in the decontamination trailer (DOE/RL-2003-42).</p>	<p>Continuous</p>	<p>CDM: FH Work Management, and Job Control System.</p>
<p>The total abated emission limit for the 296-Z-6 emission unit is limited to 2.8E-05 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the potential-to-emit for this emission unit is limited to 5.5E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).</p>	<p>Continuous</p>	<p>CDM: Total abated emission is reported in the Annual Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007. Verified that the basis for the PTE calculation in the NOC application did not increase.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>Unless maximum fan capacity for operating fans is used, effluent flow rate for this minor stack is derived by direct velocity measurement through individual HEPA filter paths within the system. The flow rates through individual HEPA filter is performed annually, using multiple transverse velocity measurements using a pitot tube. Flow is derived by averaging the velocity measurement times the duct area. Stack flow is derived by summing the effluent flow from the contributing HEPA filters. The effluent flow rates are used to establish effluent discharge volume by multiplying the flow rate by the time of operation.</p>	<p>Not Applicable</p>	<p><b>CDM:</b> Maximum fan capacity of 14,000 CFM was used therefore did not trigger this requirement to sum the effluent flows.</p>
<p>The secure storage locations in the 2736Z Building shall accommodate the 3013 packages. These packages shall be sealed, offering no additional potential-to-emit (PTE).</p>	<p>Continuous</p>	<p><b>CDM:</b> Verified by personnel interview that surveillances are ongoing.</p>
<p>As the required indication device for the Z-6 emission unit, the differential pressure magnehelic gauges associated with the final stage of HEPA filters will have a functional test conducted annually.</p>	<p>Continuous</p>	<p><b>CDM:</b> Verified completion of functional test via work package 2Z-07-02125.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>Security enhancement program activities include those actions foreseeably necessary for implementation of the proposed action, such as associated transportation activities, waste removal and disposal, and award of grants and contracts. Specific actions include the following work involving the potential for radioactive contamination:</p> <ul style="list-style-type: none"> <li>-Excavations, inside and outside the PP protected area (PA) to support installation of utilities and security-related devices and structures (e.g., barricades, patrol offices) and relocation of displaced activities. Security enhancement program will require some excavation in areas of potential below grade or surface contamination. In addition to excavations for building and structure foundations, it is estimated that approximately 5,000 linear feet of below grade ducting will be installed, a portion of the water line will require replacement, and connections to sewer and water lines will be required.</li> <li>-Modifications to existing structures (e.g., moving walls, doors, railing, security monitoring equipment, electrical equipment upgrades) and/or construction of new buildings (non-radioactive).</li> </ul>	<p>Continuous</p>	<p><b>CDM:</b> FH Work Management, and Job Control System.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>-Continued operations at 2736-Z/ZB Buildings for 3013-container packaging systems monitoring and maintenance.</p> <p>No modifications to the existing abatement equipment associated with registered stacks are allowed.</p>		

**P-291Z001-001**  
WDOH Emission Unit ID : 393  
Page in AOP : EU0393-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<p><b>Zone or Area:</b> Operating Area <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b> Multiple parallel filter banks available.</p>	Intermittent	<p><b>CDM:</b> Facility Walk down, review of essential equipment operations and drawings.</p> <p><b>Comment:</b> Aerosol testing and filter room maintenance issues are subject of ongoing discussions with WDOH.</p>
<p><b>Zone or Area:</b> Operating Area <b>Abatement Technology:</b> Fan <b>Required Units:</b> 1 <b>Add'l Description:</b> Multiple parallel fans available.</p>	Continuous	<p><b>CDM:</b> Facility Walk down, review of essential equipment operations and drawings.</p>
<p><b>Required Sampling:</b> Record Sample. <b>Sampling Frequency:</b> Continuous. <b>Radionuclide Requiring Measurement:</b> Each radionuclide that could contribute greater than 10 percent of the potential-to-emit TEDE</p>	Continuous	<p><b>CDM:</b> ABCASH data, Fluor Hanford notification procedure and notification logbook.</p> <p><b>Comment:</b> ABCASH EDP code is Z810</p>
<p><b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) &amp; WAC 246-247-075(2) <b>Permit Monitoring and Testing Procedure:</b> Alternative effluent flow rate not to exceed 290,000 cfm. 40 CFR 61, Appendix B, Method 114; 61.93(b)(2)(II) ANSI N13.1</p>	Continuous	<p><b>CDM:</b> NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528). Review of essential equipment operations to verify all fans never operated at the same time.</p> <p><b>Comment:</b> 290,000 cfm represents maximum fan capacity.</p>

Requirement	Compliance Status	Compliance Determination Method
<p align="center">Permit: AIR 06-1020 - C <b>Issue Date:</b>10-05-06 <b>Effective Date:</b>10-02-06  <b>NOC:</b> Transition of the Plutonium Finishing Plant  <b>WDOH NOC ID:</b> 655 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0393-001</p>		
Requirement	Compliance Status	Compliance Determination Method
<p>The total abated emission limit for this Notice of Construction is limited to 2.40E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).</p>	Continuous	<p><b>CDM:</b> Annual Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The proposed activities involve transitioning the PFP Complex to a state of low-risk, low-cost, long-term surveillance and maintenance pending final disposition. All work would be performed in accordance with the approved radiological control procedures and as low as reasonably achievable (ALARA) program requirements as implemented by the project radiological control manual, as amended. These requirements would be carried out through the activity work packages and associated radiological work permits.</p> <p>This activity includes deactivation of buildings and also includes deactivation of systems no longer necessary once stabilization and storage activities and planned legacy hold-up removal have been concluded; removal/disposition of equipment/components; contamination characterization and reduction/mitigation; packaging plutonium holdup material meeting waste acceptance criteria; maintaining and operating muffle furnaces, as needed, for removed plutonium holdup material; and demolition of radiologically contaminated, non-process ancillary buildings.</p> <p>This activity also includes deactivation activities or activities to prepare and place a facility in a safe and stable condition to minimize the long-term cost of a surveillance and maintenance program while being protective of personnel, the public, and the environment until demolition of former processing and material storage buildings occurs. Deactivation activities would include those actions foreseeable necessary for implementation of the proposed action, such as associated transportation activities, waste removal and disposal, and award of grants and contracts. Specific actions could include the following work involving the potential for radioactive contamination:</p> <ul style="list-style-type: none"> <li>-Draining and/or de-energizing systems as appropriate.</li> <li>-Stabilizing contaminated areas (e.g., with fixatives, sealants, paint).</li> <li>-Stabilizing or removing gloveboxes, process equipment, tanks, piping, fume hoods, and support equipment.</li> <li>-Removing fencing and paved parking areas adjacent to facilities.</li> <li>-Installing alternate environmental monitoring, surveillance, and safety components (e.g., lighting, fencing) if required.</li> <li>-Removing/packaging radioactive (including equipment calibration sources and laboratory standards) and hazardous materials and waste, including stabilization and/or removal of asbestos, and removal cleanup, and disposition of polychlorinated biphenyls and other regulated materials and transportation to existing waste management facilities.</li> <li>-Removing equipment and system components.</li> <li>-Size-reducing process equipment for disposal as waste.</li> <li>-Performing physical or chemical treatment processes (e.g., neutralization, solidification, filtering) to render a material less</li> </ul>	Continuous	<p><b>CDM:</b> FH work Management, and Job Control System.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>hazardous or to reduce the volume (such processes will not increase the potential release rates).</p> <ul style="list-style-type: none"> <li>-Decontamination to support the excess of surplus equipment.</li> <li>-Removing excess combustible material.</li> <li>-Disconnecting utilities, piping, and communication service systems (if the systems are not necessary to maintain required environmental monitoring or building safety systems), including associated excavation.</li> <li>-Ensuring adequate freeze and heat protection.</li> <li>-Stabilizing, reducing, combining, or removing waste materials at outdoor locations within the PFP Complex (such processes will not increase the potential release rates provided in this NOC).</li> <li>-Sealing cracks, gratings, and openings to the building exterior, and repairing roofs.</li> <li>-Conducting general housekeeping activities (e.g., vacuuming, sweeping, dusting) in areas where radiological contamination is not anticipated (e.g., radiological buffer area) but could be encountered.</li> <li>-Removing or reducing radioactive or hazardous contamination from facilities and equipment by washing, heating, chemical or electrochemical action, mechanical cleaning, or other similar techniques.</li> <li>-Removing residual plutonium holdup material, which might remain throughout the PFP Complex after stabilization activities described in the PFP EIS have been completed; packaging residual plutonium holdup meeting waste acceptance criteria for shipment to an onsite waste management facility, or thermally stabilizing material in muffle furnace operations and packaging for storage in existing PFP Complex vaults.</li> <li>-Designing and executing changes to utility service systems and/or utility structures necessary to place a facility in surveillance and maintenance, pending demolition.</li> <li>-Conducting final process operations to stabilize or eliminate residual operational materials or effluents, such as final process runs; cleaning of vessels, valve pits and pipe trenches; installation and operation of small evaporators; flushing piping systems; removal or replacement of filters; and other similar closeout actions.</li> <li>-Demolishing non-process ancillary buildings.</li> <li>-Deactivation activities will require actions to provide for continued routine maintenance, repair, and replacement-in-kind of operating portions of PFP.</li> </ul> <p>Other actions include:</p> <ul style="list-style-type: none"> <li>-Remove residual plutonium from gloveboxes, filterboxes, equipment, piping, ductwork, and the building surfaces and package for disposition to onsite or offsite disposal facilities.</li> <li>-Remove internal equipment from gloveboxes and building equipment/system components and package for disposition to onsite or offsite disposal facilities.</li> <li>-Decontaminate gloveboxes, filterboxes, ductwork, and equipment to less than transuranic levels if possible.</li> <li>-Remove gloveboxes, filterboxes, ductwork, and equipment and packager disposition to onsite or offsite disposal facilities.</li> <li>-Decontaminate or fix contamination on building interior and exterior.</li> <li>-Disconnect utilities and services not necessary for monitoring.</li> <li>-Perform radiological and chemical characterization in preparation for dismantlement.</li> </ul> <p>In preparation for the proposed transition activities, housekeeping, assays, preventive maintenance, minor decontamination, and reactivation of glovebox access ports would occur.</p> <p>See additional process description in the following Conditions/Limitations.</p>		
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e)[as specified in the application] is 8.90E+02 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p>	<p>Continuous</p>	<p>CDM: Verified the basis for the PTE calculation in the NOC application</p>

Requirement	Compliance Status	Compliance Determination Method															
<p>Am-241 1.70E+01 Liquid/Particulate Solid WAC 246-247-030(21) (a) Pu-238 6.00E+00 Liquid/Particulate Solid WAC 246-247-030(21) (a) Pu-239 9.00E+00 Liquid/Particulate Solid WAC 246-247-030(21) (a) Pu-240 6.00E+00 Liquid/Particulate Solid WAC 246-247-030(21) (a) Pu-241 1.70E+02 Liquid/Particulate Solid WAC 246-247-030(21) (a)</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <table border="0"> <tr> <td>Am-241</td> <td>Np-237</td> <td>Pu-238</td> <td>Pu-239</td> <td>Pu-240</td> </tr> <tr> <td>Pu-241</td> <td>Pu-242</td> <td>U-233</td> <td>U-234</td> <td>U-235</td> </tr> <tr> <td>U-236</td> <td>U-237</td> <td>U-238</td> <td></td> <td></td> </tr> </table> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)) DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725( 4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>	Am-241	Np-237	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	U-233	U-234	U-235	U-236	U-237	U-238				unchanged.
Am-241	Np-237	Pu-238	Pu-239	Pu-240													
Pu-241	Pu-242	U-233	U-234	U-235													
U-236	U-237	U-238															
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted. The proposed methods for removing residual contamination from equipment/systems and for removing equipment would be similar to methods in use today throughout the industry and the DOE Complex. Both direct contact and remote technologies/techniques could be used. General technologies/techniques include heating, crushing, size reducing, and cutting. These could involve laboratory analyses and nondestructive assay; chemical cleaning, brushing, washing, scrubbing, vacuum cleaning, and abrasive jetting; using nibblers, shears, circular saws; potentially a remote-operated laser, and other similar methods. It is expected that should new technology become available, such technology would be evaluated for application in the PFP deactivation activities, and could be used if no increase in the potential-to-emit described in this NOC would result.</p>	Continuous	CDM: FH work Management, and Job Control System.															
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted. The PFP deactivation activities include the</p>	Continuous	CDM: FH work Management, and Job Control System.															

Requirement	Compliance Status	Compliance Determination Method
<p>following: -Size reduction of equipment will be by mechanical means and may be accomplished by compaction, disassembling by use of wrenches, nibblers, shears, cutters, grinders, sews, or other similar methods. This equipment may be manually, hydraulically, pneumatically or electrically powered. -Decontamination methods include: Scraping, sweeping, chemical cleaning, brushing, washing, scrubbing, scabbling, grinding, vacuum cleaning, strippable coatings, washing using wet rags, spraying, abrasive jetting, low pressure and high pressure wash using water and/or chemicals cleaners, use of fixatives and/or physical removal of contamination by use of mechanical means such as chipping or cutting. The application of fixatives for contamination control would be accomplished via aerosol fogging, paint brush/roller, hand-held spray bottle, or an electric or pneumatic powered sprayer. -Containment of waste may be accomplished by coating the material with a fixative or placing the material in containers, bags and/or wrapping in plastic sheeting, utilizing adhesive tape, heat sealing or mechanical closure to prevent release of radiological contamination. -Miscellaneous mechanical processes that could be sued to support the proposed activity could include threading of piping, use of hot taps on piping, capping and plugging piping using threaded pipe components and expanding/compressive plugs or caps, drilling of holes in metal and concrete, core drilling concrete surfaces, installation of anchor bolts, installation and removal of bolts, installation of hose and tubing connectors, compression fittings, installation and removal of pumps, agitators and process control filters.</p>		
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted. Excavation will take place in the PFP Complex to support site stabilization, isolating/blanking utilities, fence removal/installation/relocation, and soil sampling/cleanup. Access to underground piping and cable would be gained by use of a bucket-type excavator. Manual digging methods with shovels, picks, and rakes also could be used. Contaminated soil removed and covered during excavation activities would remain covered until replaced into the excavation or otherwise dispositioned (backfill would consist of the original material removed or 'clean' soil). If needed or chosen for use during these activities, the categorical NOCs for sitewide use of the guzzler, a portable temporary radioactive air emissions unit (PTRAEU) exhauster, or HEPA filtered vacuum radioactive air emission unit could be used. Wastes generated during deactivation</p>	<p>Continuous</p>	<p>CDM: FH work Management, and Job Control System.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>would be packaged appropriately. Waste would be generated/packaged throughout the PFP Complex (i.e., in structures with registered stacks, in non-HEPA filtered structures or outdoors), resulting in filtered releases and/or diffuse and fugitive emissions. Wastes could be placed in various containers such a plastic bags, metal drums, and standard waste boxes. These wastes could be transferred to other locations within the PFP Complex for interim storage and/or repackaging before subsequent transport to approved locations/facilities pending final disposition. If necessary, personnel decontamination activities would be conducted in the decontamination trailer (DOE/RL-2003-42).</p>		
<p>The total abated emission limit for the 296-Z-1 emission unit is limited to 1.8E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the potential-to-emit for this emission unit is limited to 3.5E+02 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).</p>	Continuous	<p><b>CDM:</b> Total abated emission is reported in Annual Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007. Verified that the basis for the PTE calculation in the NOC application did not increase.</p>
<p>Air movers or newly added ducting fitted with HEPA filters (testable)[not to include HEPA Vacs] that exhaust upstream of the existing Z-1 stack monitor are approved for use if their emissions (1) will not result in greater than an accumulative 1% contribution to the stack flow and (2) would not increase the project PTW (i.e., would be limited to the PTE currently addressed in the NOC specific to the Z-1 stack or the diffuse/fugitive emissions described in the NOC as a fraction of the Z-1 PTE).</p>	Continuous	<p><b>CDM:</b> Air movers or newly added ducting (for alternate ventilation paths) were not utilized during the compliance period.</p>
<p>Fuel De-Inventory This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted. PFP will repackage fuel assemblies and/or fuel pins into storage and/or transport containers for staging at PFP. These containers would be loaded via crane operations onto trucks for transport either to storage onsite or to appropriate offsite facilities pending final disposition. Fuel assemblies and/or fuel pins could be mechanically handled by transferring directly to containers (emissions would be considered as diffuse and fugitive if work conducted in locale providing potential for unfiltered emissions). Fuel pins could be transferred to glovebox (es) (emissions discharging through the 291-Z-1 or 296-Z-7 stacks) where they would be size reduced (using bolt cutters or equivalent means) and placed into a container. The pins/containers could be subjected to NDA at any point(s) during repackaging activities. Minor alterations</p>	Continuous	<p><b>CDM:</b> FH work Management, and Job Control System.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>(e.g., removing interior walls, installation of temporary scaffolding) to the 234-5Z Building would be necessary to support fuel de-inventory operations.</p>		
<p>It is the intent of the facility to continue to operate the system with all S-10 dampers manual positioned in the "closed" position, except for testing and evaluation purposes, with periodic monitoring of the S-10 duct header pressure. The "closed" position for the S-10 dampers was determined based on minimum in leakage and does not represent a no-flow condition. Subsequent to the February 16, 2006 meeting, engineered controls have been implemented to control the "closed" damper positions and an operating minimum pressure parameter established for the S-10 system. Based on the characteristics of S-10 duct, a safe operating pressure of -1.5 inch water gauge as measured on the S-10 duct just down stream of the non-operating S-10 fan ahs been established. The -1.5 inch water gauge value is the actual gauge reading as it relates to equipment room, not adjusted to atmospheric pressure.</p>	<p>Continuous</p>	<p>CDM: Engineering controls remain in place. Pressure surveillance confirms specified operating pressure range maintained.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted. Security enhancement program activities include those actions foreseeably necessary for implementation of the proposed action, such as associated transportation activities, waste removal and disposal, and award of grants and contracts. Specific actions include the following work involving the potential for radioactive contamination: -Excavations, inside and outside the PP protected are (PA) to support installation of utilities and security-related devices and structures (e.g., barricades, patrol offices) and relocation of displaced activities. Security enhancement program will require some excavation in areas of potential below grade or surface contamination. In addition to excavations for building and structure foundations, it is estimated that approximately 5,000 linear feet of below grade ducting will be installed, a portion of the water line will require replacement, and connections to sere and water lines will be required. -Modifications to existing structures (e.g., moving walls, doors, railing, security monitoring equipment, electrical equipment upgrades) and/or construction of new buildings (non-radioactive). -Continued operations at 2736-Z/ZB Buildings for 3013-container packaging systems monitoring and maintenance. No modifications to the existing abatement equipment associated with registered stacks are allowed.</p>	<p>Continuous</p>	<p>CDM: FH work Management, and Job Control System.</p>

**P-FFTFRESB-001**  
WDOH Emission Unit ID : 395  
Page in AOP : EU0395-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 1 <b>Add'l Description:</b> Intermittent use No other controls	Continuous	<b>CDM:</b> Verified by visual inspection and discussions with the Cognizant Engineer that the system has not been changed and is the same as the As-Built drawing.
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 4 week sample/ year <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> Sampling is verified by information in ABCASH. The Statement of Work for Services Provided by the Waste Sampling and Characterization Facility for the Environmental Compliance Program during Calendar Year 2007 (HNF-EP-0835) defines what analyses are performed and the frequency.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93 (b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> The NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528) specifies the hardware and method used to sample and the analytical methods used in the laboratory.
No active NOC approvals in the AOP for this certification period.		

**P-FFTFHTTR-001**  
WDOH Emission Unit ID : 396  
Page in AOP : EU0396-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Prefilter <b>Required Units:</b> 1 <b>Add'l Description:</b> Backup	Continuous	<b>CDM:</b> Verified by visual inspection and discussions with the Cognizant Engineer that the system has not been changed and is the same as the As-Built drawing.
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1	Continuous	<b>CDM:</b> Verified by visual inspection and discussions with the Cognizant Engineer that the system has not been

Requirement	Compliance Status	Compliance Determination Method
<b>Add'l Description:</b> Backup		changed and is the same as the As-Built drawing.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan (Booster) <b>Required Units:</b> 1 <b>Add'l Description:</b> Backup	Continuous	<b>CDM:</b> Verified by visual inspection and discussions with the Cognizant Engineer that the system has not been changed and is the same as the As-Built drawing.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 2 <b>Add'l Description:</b> In parallel, intermittent use	Continuous	<b>CDM:</b> Verified by visual inspection and discussions with the Cognizant Engineer that the system has not been changed and is the same as the As-Built drawing.
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 4 week sample/ year <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> Sampling is verified by information in ABCASH. The Statement of Work for Services Provided by the Waste Sampling and Characterization Facility for the Environmental Compliance Program during Calendar Year 2007 (HNF-EP-0835) defines what analyses are performed and the frequency.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93 (b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> The NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528) specifies the hardware and method used to sample and the analytical methods used in the laboratory.
<b>Permit:</b> AIR 06-1011 - B <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>NOC:</b> Sodium Residuals Reaction/Removal and other Deactivation Work Activities at the Fast Flux Test Facility <b>WDOH NOC ID:</b> 646 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0396-001		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 5.70E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).	Continuous	<b>CDM:</b> The Annual Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The activity will involve reaction of sodium residuals associated with the Fast Flux Test Facility Project systems and equipment. This activity could be conducted in place or at designated cleaning locations. Typically, the sodium residuals would be reacted with superheated steam. The primary advantages of the superheated steam process (SSP) are that it does not allow condensation to occur and</p>	Continuous	<b>CDM:</b> FFTF-36419, FFTF Closure Project Documented Safety Analysis, inquiry of facility personnel, and review of facility records associated with HNF-PRO-12115, Work Management, and Job Control System.

Requirement	Compliance Status	Compliance Determination Method
<p>component cleaning can be performed in a shorter time period. Prior to steam injection into the system to be cleaned the steam is heated to ~ 204 C (400 F). The equipment to be cleaned is heated to a minimum of 100 C (212 F) and higher if possible. Most systems will require multiple injection points. As the superheated steam reacts with the metallic sodium, the temperature increases. The temperature is controlled such that the maximum reaction temperature is no greater than ~538 C (1,000 F).</p> <p>Because of the high initial temperature and the increase of the temperature caused by the reaction, no condensation occurs. The caustic formed is a liquid at the processing temperatures and because it is -denser than the liquid sodium, it settles to the bottom of any pools leaving the sodium on top where it is always exposed to the superheated steam. Due to the continued exposure of the molten sodium to the superheated steam, the reaction continues at a constant rate. Superheated steam injection is continued until hydrogen is no longer being generated. The system is then cooled and rinsed and the fluid is drained from the system.</p> <p><b>PERFORM IN PLACE CLEANING OF VESSELS, COMPONENTS, AND LARGE BORE PIPE</b> A PTRAEU would be used to clean, in place, large bore sodium pipe [greater than or equal to --20 centimeter (8 inch) diameter], components and vessels in the primary and secondary sodium cooling systems. The PTRAEU also would be used to clean the Interim Decay Storage (IDS) and Fuel Storage Facility (FSF) vessels [Note: Select components in the primary sodium system, and large diameter piping and components in the secondary sodium system may be removed and cleaned in FSF or the Maintenance and Storage Facility (MASF), as described below].</p> <p>Typically, penetrations into the piping/vessels would be made at appropriate locations using a low speed drill. Existing sodium heating systems would be energized, and piping/vessels heated to liquefy the existing sodium residuals. A PTRAEU would be connected to the penetration points, and used at various locations to inject the superheated steam into plant systems.</p> <p>The superheated steam would be injected. Hydrogen generation would be monitored to follow the reaction. Sulfuric acid would be added to the resultant process liquid (i.e., sodium hydroxide solution) to reduce the pH to &lt;13. This solution would be routed for offloading to tanker transport for overland transfer to Liquid Effluent Treatment Facility (LERF) and subsequent treatment at 200 Area Effluent Treatment Facility (ETF). If needed or chosen for use during these activities, the categorical NOC for sitewide use of tanker loading for wastewater could be used.</p> <p><b>REMOVE SMALL BORE PIPE AND COMPONENTS FOR REACTION N A CLEANING STATION</b> Small bore piping [&lt;20 centimeter (8 inch) diameter], valves and other components [e.g., core component pots from IDS, fuel storage tubes from FSF, and dump heat exchangers (DHX) tube bundles] may be removed and processed in a proposed stationary cleaning station that would be located in FSF. Mechanical means (e.g., portable saws, pipe cutters) would be used to cut the pipe, valves, and components into manageable size. All heat exchanger tube bundles, which contain multiple parallel flow paths, would be dismantled to ensure effective cleaning.</p> <p>The proposed FSF stationary cleaning station would consist of a chamber with removable rack for loading piping and components. The piping would be loaded at an angle, allowing the residual sodium to drain to a catch basin when heated before the injection of inert gas</p>		

Requirement	Compliance Status	Compliance Determination Method										
<p>and/or reaction medium. The process in the cleaning station would be consistent with the in place process where the resultant waste sodium hydroxide solution is collected, the pH reduced to &lt;13, and transported to the 200 Areas. The FSF is considered an appropriate location due to availability of sufficient floor space, existing overhead crane, available utilities, and proximity to proposed operations. If needed or chosen for use during these activities, the categorical NOC for sitewide use of tanker loading for wastewater could be used.</p> <p>Cleaned piping and components would be disposed of in a Hanford Site solid waste management facility.</p> <p><b>REMOVE LARGE COMPONENTS FOR CLEANING</b> The large diameter cleaning vessel (LDCV) located in the existing MASF could be used for cleaning large components following removal (e.g., primary sodium pumps, intermediate heat exchanger (IHX) tube bundles, and instrument trees). The LDCV could be retrofitted with a new super heated steam supply and associated control system for use in cleaning the aforementioned components. The IHX tube bundles, which contain multiple parallel sodium flow paths, may be dismantled to ensure effective cleaning. Small bore pipe and components also could be cleaned in MASF, if necessary.</p> <p><b>OTHER DEACTIVATION ACTIVITIES</b> Other related routine, continued deactivation activities that could occur as part of the proposed action are: remove/dispose of asbestos; remove/stabilize existing hazards in conjunction with systems and equipment deactivation associated with sodium residuals; remove/recycle/dispose excess deactivated equipment and components; and remove depleted uranium and/or lead shielding.</p>												
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 5.70E-03 mrem/year.</p> <p>Approved are the associated potential release rates (Curies/year) of: Alpha-0 4.90E-09 Liquid/Particulate Solid WAC 246-247-030 (21) (e) Alpha release rate based on Pu-239.</p> <p>B/G-0 1.30E-01 Liquid/Particulate Solid WAC 246-247-030 (21) (e) Beta/Gamma release rate based on Cs-I 37.</p> <p><b>The radioactive isotopes identified for this emission unit are (no quantities specified):</b></p> <table border="0"> <tr> <td>Ba-137 m</td> <td>Co-60</td> <td>Cs-134</td> <td>Cs-137</td> <td>H-3</td> </tr> <tr> <td>Mn-54</td> <td>Na-22</td> <td>Pu-239</td> <td>Ru-106</td> <td>Zn-65</td> </tr> </table> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-03006). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)) DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>	Ba-137 m	Co-60	Cs-134	Cs-137	H-3	Mn-54	Na-22	Pu-239	Ru-106	Zn-65	<p>Continuous</p>	<p><b>CDM:</b> Verified the basis of the PTE calculation in the NOC application.</p>
Ba-137 m	Co-60	Cs-134	Cs-137	H-3								
Mn-54	Na-22	Pu-239	Ru-106	Zn-65								

Requirement	Compliance Status	Compliance Determination Method
<p>Operations shall be performed in accordance with the controls specified in radiation work planning documents and/or operating procedures aid shall be available for inspection upon request.</p>	<p>Continuous</p>	<p><b>CDM:</b> FFTF-36419, FFTF Closure Project Documented Safety Analysis, HNF-5173, PHMC Radiological Control Manual, FFTF-POL-6-14, FFTF Plant Policy Manual, inquiry of facility personnel, and review of facility records associated with HNF-PRO-12115, Work Management, and Job Control System.</p>
<p>All activities shall be conducted under the auspices of radiological or health physics control technicians or personnel. Routine field surveys, including swipes/smears, shall be conducted. Fixatives, covers, or other standard measures shall be used, as necessary to contain contamination.</p>	<p>Continuous</p>	<p><b>CDM:</b> FFTF-36419, FFTF Closure Project Documented Safety Analysis, HNF-5173, PHMC Radiological Control Manual, FFTF-POL-6-14, FFTF Plant Policy Manual, inquiry of facility personnel, and review of facility records associated with HNF-PRO-12115, Work Management, and Job Control System.</p>
<p>Appropriate spill prevention procedures shall be in place to minimize the release of radioactive liquid waste to the environment, and to provide immediate cleanup of any liquid spills.</p>	<p>Continuous</p>	<p><b>CDM:</b> FFTF-36419, FFTF Closure Project Documented Safety Analysis, HNF-IP-0263, Building Emergency Plan for FFTF Property Protected Area, FFTF-POL-6-14, FFTF Plant Policy Manual, inquiry of facility personnel, and review of facility records associated with HNF-PRO-12115, Work Management, and Job Control System.</p>
<p>The total amount of sodium reacted from all emission units shall not exceed 4,000 gallons per year with no more than 2,000 gallons challenging a single emission unit.</p>	<p>Continuous</p>	<p><b>CDM:</b> FFTF-36419, FFTF Closure Project Documented Safety Analysis, FFTF-POL-6-14, FFTF Plant Policy Manual, inquiry of facility personnel, and review of facility records associated with HNF-PRO-12115, Work Management, and Job Control System.</p>
<p>Other radioisotopes may be present due to activation products, fission products, decay products, and tracer gases. These other isotopes are approved for this emission unit and will not contribute significantly to the calculated potential-to-emit.</p>	<p>Not Applicable</p>	<p><b>CDM:</b> This is a statement of fact. Compliance determination is not necessary.</p>

**P-FFTFCEBEX-001**  
WDOH Emission Unit ID : 397  
Page in AOP : EU0397-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> Bldg 405 Process Operations <b>Abatement Technology:</b> Prefilter <b>Required Units:</b> 1 <b>Add'l Description:</b> Backup	Continuous	<b>CDM:</b> Verified by visual inspection and discussions with the Cognizant Engineer that the system has not been changed and is the same as the As-Built drawing.
<b>Zone or Area:</b> Bldg 405 Process Operations <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b> Backup	Continuous	<b>CDM:</b> Verified by visual inspection and discussions with the Cognizant Engineer that the system has not been changed and is the same as the As-Built drawing.
<b>Zone or Area:</b> Bldg 405 Process Operations <b>Abatement Technology:</b> Fan <b>Required Units:</b> 2 <b>Add'l Description:</b> In parallel (intermittent use)	Continuous	<b>CDM:</b> Verified by visual inspection and discussions with the Cognizant Engineer that the system has not been changed and is the same as the As-Built drawing.
<b>Zone or Area:</b> Access Control Area Process Operations <b>Abatement Technology:</b> Prefilter <b>Required Units:</b> 1 <b>Add'l Description:</b> Backup	Continuous	<b>CDM:</b> Verified by visual inspection and discussions with the Cognizant Engineer that the system has not been changed and is the same as the As-Built drawing.
<b>Zone or Area:</b> Access Control Area Process <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b> Backup	Continuous	<b>CDM:</b> Verified by visual inspection and discussions with the Cognizant Engineer that the system has not been changed and is the same as the As-Built drawing.
<b>Zone or Area:</b> Access Control Area Process <b>Abatement Technology:</b> Fan <b>Required Units:</b> 2 <b>Add'l Description:</b> 2 in parallel, one leg has 2 in series, intermittent use	Continuous	<b>CDM:</b> Verified by visual inspection and discussions with the Cognizant Engineer that the system has not been changed and is the same as the As-Built drawing.
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 4 week sample/ year <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA Tritium	Continuous	<b>CDM:</b> Sampling is verified by information in ABCASH. The "Statement of Work for Services Provided by the Waste Sampling and Characterization Facility for the Environmental Compliance Program during Calendar Year 2007" (HNF-EP-0835) defines what analyses are performed and the frequency. The "NESHAP Quality Assurance Project

Requirement	Compliance Status	Compliance Determination Method
		Plan for Radioactive Air Emissions" (HNF-EP-0528) specifies the quality assurance requirements.
<p><b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93 (b)(4)(i) &amp; WAC 246-247-075(3)  <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)</p>	Continuous	<p><b>CDM:</b> The NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528) specifies the hardware and method used to sample and the analytical methods used in the laboratory.</p>
<p style="text-align: center;">Permit: AIR 06-1011 - C Issue Date:10-05-06 Effective Date:10-05-06  <b>NOC: Sodium Residuals Reaction/Removal and other Deactivation Work Activities at the Fast Flux Test Facility</b>  <b>WDOH NOC ID: 646 Date In AOP: 01-01-07 Page in AOP: EU0397-001</b></p>		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 5.70E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).	Continuous	<p><b>CDM:</b> The Annual Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The activity will involve reaction of sodium residuals associated with the Fast Flux Test Facility Project systems and equipment. This activity could be conducted in place or at designated cleaning locations. Typically, the sodium residuals would be reacted with superheated steam. The primary advantages of the superheated steam process (SSP) are that it does not allow condensation to occur and component cleaning can be performed in a shorter time period. Prior to steam injection into the system to be cleaned the steam is heated to ~ 204 C (400 F). The equipment to be cleaned is heated to a minimum of 100 C (212 F) and higher if possible. Most systems will require multiple injection points. As the superheated steam reacts with the metallic sodium, the temperature increases. The temperature is controlled such that the maximum reaction temperature is no greater than ~538 C (1,000 F).</p> <p>Because of the high initial temperature and the increase of the temperature caused by the reaction, no condensation occurs. The caustic formed is a liquid at the processing temperatures and because it is -denser than the liquid sodium, it settles to the bottom of any pools leaving the sodium on top where it is always exposed to the superheated steam. Due to the continued exposure of the molten sodium to the superheated steam, the reaction continues at a constant rate. Superheated steam injection is continued until hydrogen is no longer being generated. The system is then cooled and rinsed and the fluid is drained from the system.</p> <p><b>PERFORM IN PLACE CLEANING OF VESSELS, COMPONENTS, AND LARGE BORE PIPE</b>  A PTRAEU would be used to clean, in place, large bore sodium pipe [greater than or equal to --20 centimeter (8 inch) diameter], components and vessels in the primary and secondary sodium cooling</p>	Continuous	<p><b>CDM:</b> FFTF-36419, FFTF Closure Project Documented Safety Analysis, inquiry of facility personnel, and review of facility records associated with HNF-PRO-12115, Work Management, and Job Control System.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>systems. The PTRAEU also would be used to clean the Interim Decay Storage (IDS) and Fuel Storage Facility (FSF) vessels [Note: Select components in the primary sodium system, and large diameter piping and components in the secondary sodium system may be removed and cleaned in FSF or the Maintenance and Storage Facility (MASF), as described below].</p> <p>Typically, penetrations into the piping/vessels would be made at appropriate locations using a low speed drill. Existing sodium heating systems would be energized, and piping/vessels heated to liquefy the existing sodium residuals. A PTRAEU would be connected to the penetration points, and used at various locations to inject the superheated steam into plant systems.</p> <p>The superheated steam would be injected. Hydrogen generation would be monitored to follow the reaction. Sulfuric acid would be added to the resultant process liquid (i.e., sodium hydroxide solution) to reduce the pH to &lt;13. This solution would be routed for offloading to tanker transport for overland transfer to Liquid Effluent Treatment Facility (LERF) and subsequent treatment at 200 Area Effluent Treatment Facility (ETF). If needed or chosen for use during these activities, the categorical NOC for sitewide use of tanker loading for wastewater could be used.</p> <p><b>REMOVE SMALL BORE PIPE AND COMPONENTS FOR REACTION NA CLEANING STATION</b></p> <p>Small bore piping [&lt;20 centimeter (8 inch) diameter], valves and other components [e.g., core component pots from IDS, fuel storage tubes from FSF, and dump heat exchangers (DHX) tube bundles] may be removed and processed in a proposed stationary cleaning station that would be located in FSF. Mechanical means (e.g., portable saws, pipe cutters) would be used to cut the pipe, valves, and components into manageable size. All heat exchanger tube bundles, which contain multiple parallel flow paths, would be dismantled to ensure effective cleaning.</p> <p>The proposed FSF stationary cleaning station would consist of a chamber with removable rack for loading piping and components. The piping would be loaded at an angle, allowing the residual sodium to drain to a catch basin when heated before the injection of inert gas and/or reaction medium. The process in the cleaning station would be consistent with the in place process where the resultant waste sodium hydroxide solution is collected, the pH reduced to &lt;13, and transported to the 200 Areas. The FSF is considered an appropriate location due to availability of sufficient floor space, existing overhead crane, available utilities, and proximity to proposed operations. If needed or chosen for use during these activities, the categorical NOC for sitewide use of tanker loading for wastewater could be used.</p> <p>Cleaned piping and components would be disposed of in a Hanford Site solid waste management facility.</p> <p><b>REMOVE LARGE COMPONENTS FOR CLEANING</b></p> <p>The large diameter cleaning vessel (LDCV) located in the existing MASF could be used for cleaning large components following removal (e.g., primary sodium pumps, intermediate heat exchanger (IHX) tube bundles, and instrument trees). The LDCV could be retrofitted with a new super heated steam supply and associated control system for use in cleaning the aforementioned components. The IHX tube bundles, which contain multiple parallel sodium flow paths, may be dismantled to ensure effective cleaning. Small bore pipe and components also could be cleaned in MASF, if necessary.</p> <p><b>OTHER DEACTIVATION ACTIVITIES</b></p> <p>Other related routine, continued deactivation activities that could occur as part of the proposed action are: remove/dispose of asbestos; remove/stabilize existing hazards in conjunction with systems and</p>		

Requirement	Compliance Status	Compliance Determination Method										
<p>equipment deactivation associated with sodium residuals; remove/recycle/dispose excess deactivated equipment and components; and remove depleted uranium and/or lead shielding.</p>												
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 5.70E-03 mrem/year.</p> <p>Approved are the associated potential release rates (Curies/year) of: Alpha-0 3.10E-08 Liquid/Particulate Solid WAC 246-247-030 (21) (e) Alpha release rate based on Pu-239.</p> <p>B/G -0 3.70E+00 Liquid/Particulate Solid WAC 246-247-030 (21) (e) Beta/Gamma release rate based on Cs-I 37.</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <table border="0"> <tr> <td>Ba-137 m</td> <td>Cn-60</td> <td>Cs-134</td> <td>Cs-137</td> <td>H-3</td> </tr> <tr> <td>Mn-54</td> <td>Na-22</td> <td>Pu-239</td> <td>Ru-106</td> <td>Zn-65</td> </tr> </table> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-03006). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)) DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>	Ba-137 m	Cn-60	Cs-134	Cs-137	H-3	Mn-54	Na-22	Pu-239	Ru-106	Zn-65	<p>Continuous</p>	<p>CDM: Verified the basis of the PTE calculation in the NOC application.</p>
Ba-137 m	Cn-60	Cs-134	Cs-137	H-3								
Mn-54	Na-22	Pu-239	Ru-106	Zn-65								
<p>Operations shall be performed in accordance with the controls specified in radiation work planning documents and/or operating procedures and shall be available for inspection upon request.</p>	<p>Continuous</p>	<p>CDM: FFTF-36419, FFTF Closure Project Documented Safety Analysis, HNF-5173, PHMC Radiological Control Manual, FFTF-POL-6-14, FFTF Plant Policy Manual, inquiry of facility personnel, and review of facility records associated with HNF-PRO-12115, Work Management, and Job Control System.</p>										
<p>All activities shall be conducted under the auspices of radiological or health physics control technicians or personnel. Routine field surveys, including swipes/smears, shall be conducted. Fixatives, covers, or other standard measures shall be used, as necessary to contain contamination.</p>	<p>Continuous</p>	<p>CDM: FFTF-36419, FFTF Closure Project Documented Safety Analysis, HNF-5173, PHMC Radiological Control Manual, FFTF-POL-6-14, FFTF Plant Policy Manual, inquiry of facility personnel, and review of facility records associated with HNF-PRO-12115, Work Management, and Job Control System.</p>										
<p>Appropriate spill prevention procedures shall be in place to minimize the release of radioactive liquid waste to the environment, and to provide immediate cleanup of any</p>	<p>Continuous</p>	<p>CDM: FFTF-36419, FFTF Closure Project Documented Safety Analysis, HNF-IP-0263, Building Emergency</p>										

Requirement	Compliance Status	Compliance Determination Method
liquid spills.		Plan for FFTF Property Protected Area, FFTF-POL-6-14, FFTF Plant Policy Manual, inquiry of facility personnel, and review of facility records associated with HNF-PRO-12115, Work Management, and Job Control System.
The total amount of sodium reacted from all emission units shall not exceed 4,000 gallons per year with no more than 2,000 gallons challenging a single emission unit.	Continuous	CDM: FFTF-36419, FFTF Closure Project Documented Safety Analysis, FFTF-POL-6-14, FFTF Plant Policy Manual, inquiry of facility personnel, and review of facility records associated with HNF-PRO-12115, Work Management, and Job Control System.
Other radioisotopes may be present due to activation products, fission products, decay products, and tracer gases. These other isotopes are approved for this emission unit and will not contribute significantly to the calculated potential-to-emit.	Not Applicable	CDM: This is a statement of fact. Compliance determination is not necessary.

### Sodium Storage Facility

WDOH Emission Unit ID : 398

Page in AOP : EU0398-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
No active Abatement Controls in the AOP for this certification period.		
<b>Required Sampling:</b> None <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	CDM: Sampling is performed in accordance with the NOC. Compliance is verified by information in ABCASH and review of routine radiological survey data performed in the building. The Statement of Work for Services Provided by the Waste Sampling and Characterization Facility for the Environmental Compliance Program during Calendar Year 2007 (HNF-EP-0835) defines what analyses are performed and the frequency.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93 (b)(4)(i) & WAC 246-247-075(3)	Continuous	CDM: The NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528) specifies the hardware and method used to sample and the analytical methods

Requirement	Compliance Status	Compliance Determination Method
		used in the laboratory.
Permit: AJR 06-1007 <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>NOC:</b> Construction and Operation of Sodium Storage Facility <b>WDOH NOC ID:</b> 639 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0398-001		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 1.60E-06 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).	Continuous	<b>CDM:</b> The Annual Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>Offloading approximately 984,100 liters of sodium from the FFTF to tank storage in the Sodium Storage Facility (SSF). Unused, carbon steel sodium tanks (three 302,800-liter tanks and one 196,800-liter tank) originally built for the Clinch River Breeder Reactor Plant shall be transported from their current location in the 300 Area and installed adjacent to the FFTF complex. Once the storage tanks are in place, a concrete building will be constructed around and over them to provide shielding and weather protection for the tanks and associated equipment. The sodium will be stored in a solid state, under an inert nitrogen or argon gas blanket.</p> <p>Sodium shall be transferred to the SSF in batches from several different sodium storage/drain vessels within the FFTF. Following the transfer, the sodium shall be allowed to solidify.</p> <p>Sodium transfers shall be accomplished in the following manner:</p> <ol style="list-style-type: none"> <li>1. The receiving tank and interconnecting piping shall be preheated to between 150°C and 200°C by electric heaters.</li> <li>2. When the proper temperatures have been established, the sodium shall be transferred from the supply tank to the receiving tank by establishing a differential pressure between the supply tank and receiving tank as needed to facilitate the transfer of sodium between the tanks.</li> </ol> <p>The supply tank shall be pressurized using the existing FFTF argon piping. The receiving tank in the SSF will be evacuated using a vacuum pump and a high-efficiency particulate air (HEPA) type process filter connected to the tanks at the tank vent line.</p> <ol style="list-style-type: none"> <li>3. The gas system valves shall be operated as needed to maintain the covergas differential pressure and the sodium valves opened, allowing the sodium to flow from one tank to the other. The transfers will occur in batches, with more than one cycle needed to completely fill one SSF storage tank. The inert gas displaced from the tanks during the filling evolution shall be directed out the HEPA or HEPA type filtered exhaust paths.</li> <li>4. After all the transfers for a tank are complete, the inert gas system shall be used to establish the desired cover gas pressure and the tank shall be allowed to cool to ambient temperature, allowing the sodium to solidify.</li> </ol>	Continuous	<b>CDM:</b> FFTF-36419, FFTF Closure Project Documented Safety Analysis, inquiry of facility personnel, and review of facility records associated with HNF-PRO-12115, Work Management, and Job Control System.

Requirement	Compliance Status	Compliance Determination Method
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 1.60E-06 mrem/year.</p> <p>Approved are the associated potential release rates (Curies/year) of: Cs-137   1.70E-11   Liquid/Particulate Solid   WAC 246-247-030(21)(a)</p> <p>Any radionuclide on the chart of nuclides could be encountered during Sodium Storage Any radionuclide on the chart of nuclides could be encountered during Sodium Storage Facility loading operations. The radionuclides specifically listed in the NOC application were chosen to conservatively represent all radionuclide emissions that may occur in particulate or gaseous form. Although any radionuclide could be present, for conservatism all beta-gamma is assumed to be Cs-137 and all alpha is assumed to be Pu-239 for dose</p> <p>H-3   4.60E-02   Liquid/Particulate Solid   WAC 246-247-030(21)(a)</p> <p>Any radionuclide on the chart of nuclides could be encountered during Sodium Storage Facility loading operations. The radionuclides specifically listed in the NOC application were chosen to conservatively represent all radionuclide emissions that may occur in particulate or gaseous form. Although any radionuclide could be present, for conservatism all beta-gamma is assumed to be Cs-137 and all alpha is assumed to be Pu-239 for dose</p> <p>Na-22   3.50E-08   Liquid/Particulate Solid   WAC 246-247-030(21)(a)</p> <p>Any radionuclide on the chart of nuclides could be encountered during Sodium Storage Facility loading operations. The radionuclides specifically listed in the NOC application were chosen to conservatively represent all radionuclide emissions that may occur in particulate or gaseous form. Although any radionuclide could be present, for conservatism all beta-gamma is assumed to be Cs-137 and all alpha is assumed to be Pu-239 for dose calculation estimates. Other radionuclides may be encountered and are approved so long as they are conservatively represented by the total alpha and total beta-gamma constituents.</p> <p>Pu-239   2.30E-13   Liquid/Particulate Solid   WAC 246-247-030(21)(a)</p> <p>Any radionuclide on the chart of nuclides could be encountered during Sodium Storage Facility loading operations. The radionuclides specifically listed in the NOC application were chosen to conservatively represent all radionuclide emissions that may occur in particulate or gaseous form. Although any radionuclide could be present, for conservatism all beta-gamma is assumed to be Cs-137 and all alpha is assumed to be Pu-239 for dose</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <p>Cs-137   H-3   Na-22   Pu-239</p> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the AIR Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of</p>	<p>Continuous</p>	<p>CDM: Verified the basis for the PTE calculation in the NOC application.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>		
<p>During the periods when sodium transfers are performed, the estimated emissions from the SSF shall be calculated using the following method.</p> <p>Assumptions: The equivalent of one tank volume at standard temperature and pressure is evacuated after the initial contamination-free pump down.</p> <p>If the uncontaminated receiving tank is initially evacuated, it may provide a sufficient pressure drop to complete the sodium transfer with no release of contaminated gas; however, for purposes of providing a conservative estimate of potential emissions it is assumed an entire tank volume of contaminated cover gas is released to the atmosphere.</p> <p>The concentration of tritium in the primary sodium, conservatively assumed to fill three of the 302,800-liter tanks, is the same as historical concentrations of tritium in the reactor cover gas in 1992 (about <math>5 \times 10^{-5}</math> uCi/ml).</p> <p>The concentration of tritium in the secondary sodium (assumed to fill the 196,800 liter tank) is equal to the historical concentration of the secondary sodium cover gas in 1992 (about <math>4E^{-6}</math> uCi/ml). The remaining 52,996 liters of secondary sodium will go to a 302,800 liter tank.</p> <p>The amount of tritium released during the fill of one tank with primary sodium would be:</p> <p>(Volume of sodium transferred in liters) (103 ml/liter) (<math>5 E^{-5}</math> uCi/ml) = Amount in uCi</p> <p>This shall be tracked via an approved log.</p>	<p>Continuous</p>	<p>CDM: FFTF-36419, FFTF Closure Project Documented Safety Analysis, inquiry of facility personnel, and review of facility records associated with HNF-PRO-12115, Work Management, and Job Control System.</p>
<p>During the storage periods when no new sources are added to the SSF, the sodium shall be in a solid form after cooling. Radiological smear surveys of the facility and the near field monitoring program samplers, operated the Pacific Northwest National Laboratory shall provide periodic confirmatory measurement. This program has four samplers located around the 400 Area. Individual analytical results from each sampler shall be reported in the Annual Air Emissions Report. Any change to this near-field ambient monitoring program must be approved by the Department.</p>	<p>Continuous</p>	<p>CDM: The Annual Radionuclide Air Emissions Report for the Hanford Site Calendar Year 2007. Inquiry of radiological control personnel, and review of survey records.</p>

**P-437-002**

WDOH Emission Unit ID : 399

Page in AOP : EU0399-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Prefilter <b>Required Units:</b> 1 <b>Add'l Description:</b> 16 Parallel flow paths, each path provides 1 prefilter minimum of 1 in operation intermitttent operation	Continuous	<b>CDM:</b> Verified by visual inspection and discussion with the Cognizant Engineer.
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b> 16 Parallel flow paths, each path provides 1 prefilter minimum of 1 in operation; intermitttent operation	Continuous	<b>CDM:</b> Verified by visual inspection and discussion with the Cognizant Engineer.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 1 <b>Add'l Description:</b> Intermitttent operation	Continuous	<b>CDM:</b> Verified by visual inspection and discussion with the Cognizant Engineer.
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 4 week sample/ year <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> Sampling is verified by information in ABCASH. The Statement of Work for Services Provided by the Waste Sampling and Characterization Facility for the Environmental Compliance Program during Calendar Year 2007 (HNF-EP-0835) defines what analyses are performed and the frequency.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93 (b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> The NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528) specifies the hardware and method used to sample and the analytical methods used in the laboratory.
Permit: AIR 06-1011 - D <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>NOC:</b> Sodium Residuals Reaction/Removal and other Deactivation Work Activities at the Fast Flux Test Facility <b>WDOH NOC ID:</b> 646 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0399-001		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 5.70E-03 mrem/year to the	Continuous	<b>CDM:</b> The Annual Radionuclide Air Emissions Report for the Hanford Site

Requirement	Compliance Status	Compliance Determination Method
Maximally Exposed Individual (WAC 246-247-040(5)).		Calendar Year 2007.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The activity will involve reaction of sodium residuals associated with the Fast Flux Test Facility Project systems and equipment. This activity could be conducted in place or at designated cleaning locations. Typically, the sodium residuals would be reacted with superheated steam. The primary advantages of the superheated steam process (SSP) are that it does not allow condensation to occur and component cleaning can be performed in a shorter time period. Prior to steam injection into the system to be cleaned the steam is heated to ~ 204 C (400 F). The equipment to be cleaned is heated to a minimum of 100 C (212 F) and higher if possible. Most systems will require multiple injection points. As the superheated steam reacts with the metallic sodium, the temperature increases. The temperature is controlled such that the maximum reaction temperature is no greater than ~538 C (1,000 F).</p> <p>Because of the high initial temperature and the increase of the temperature caused by the reaction, no condensation occurs. The caustic formed is a liquid at the processing temperatures and because it is -denser than the liquid sodium, it settles to the bottom of any pools leaving the sodium on top where it is always exposed to the superheated steam. Due to the continued exposure of the molten sodium to the superheated steam, the reaction continues at a constant rate. Superheated steam injection is continued until hydrogen is no longer being generated. The system is then cooled and rinsed and the fluid is drained from the system.</p> <p><b>PERFORM IN PLACE CLEANING OF VESSELS, COMPONENTS, AND LARGE BORE PIPE</b> A PTRAEU would be used to clean, in place, large bore sodium pipe [greater than or equal to --20 centimeter (8 inch) diameter], components and vessels in the primary and secondary sodium cooling systems. The PTRAEU also would be used to clean the Interim Decay Storage (IDS) and Fuel Storage Facility (FSF) vessels [Note: Select components in the primary sodium system, and large diameter piping and components in the secondary sodium system may be removed and cleaned in FSF or the Maintenance and Storage Facility (MASF), as described below].</p> <p>Typically, penetrations into the piping/vessels would be made at appropriate locations using a low speed drill. Existing sodium heating systems would be energized, and piping/vessels heated to liquefy the existing sodium residuals. A PTRAEU would be connected to the penetration points, and used at various locations to inject the superheated steam into plant systems.</p> <p>The superheated steam would be injected. Hydrogen generation would be monitored to follow the reaction. Sulfuric acid would be added to the resultant process liquid (i.e., sodium hydroxide solution) to reduce the pH to &lt;13. This solution would be routed for offloading to tanker transport for overland transfer to Liquid Effluent Treatment Facility (LERF) and subsequent treatment at 200 Area Effluent Treatment Facility (ETF). If needed or chosen for use during these activities, the categorical NOC for sitewide use of tanker loading for wastewater could be used.</p> <p><b>REMOVE SMALL BORE PIPE AND COMPONENTS FOR REACTION IN A CLEANING STATION</b> Small bore piping [&lt;20 centimeter (8 inch) diameter], valves and other</p>	Continuous	<p><b>CDM:</b> FFTF-36419, FFTF Closure Project Documented Safety Analysis, inquiry of facility personnel, and review of facility records associated with HNF-PRO-12115, Work Management, and Job Control System.</p>

Requirement	Compliance Status	Compliance Determination Method										
<p>components [e.g., core component pots from IDS, fuel storage tubes from FSF, and dump heat exchangers (DHX) tube bundles] may be removed and processed in a proposed stationary cleaning station that would be located in FSF. Mechanical means (e.g., portable saws, pipe cutters) would be used to cut the pipe, valves, and components into manageable size. All heat exchanger tube bundles, which contain multiple parallel flow paths, would be dismantled to ensure effective cleaning.</p> <p>The proposed FSF stationary cleaning station would consist of a chamber with removable rack for loading piping and components. The piping would be loaded at an angle, allowing the residual sodium to drain to a catch basin when heated before the injection of inert gas and/or reaction medium. The process in the cleaning station would be consistent with the in place process where the resultant waste sodium hydroxide solution is collected, the pH reduced to &lt;13, and transported to the 200 Areas. The FSF is considered an appropriate location due to availability of sufficient floor space, existing overhead crane, available utilities, and proximity to proposed operations. If needed or chosen for use during these activities, the categorical NOC for sitewide use of tanker loading for wastewater could be used.</p> <p>Cleaned piping and components would be disposed of in a Hanford Site solid waste management facility.</p> <p><b>REMOVE LARGE COMPONENTS FOR CLEANING</b> The large diameter cleaning vessel (LDCV) located in the existing MASF could be used for cleaning large components following removal (e.g., primary sodium pumps, intermediate heat exchanger (IHX) tube bundles, and instrument trees). The LDCV. could be retrofitted with a new super heated steam supply and associated control system for use in cleaning the aforementioned components. The IHX tube bundles, which contain multiple parallel sodium flow paths, may be dismantled to ensure effective cleaning. Small bore pipe and components also could be cleaned in MASF, if necessary.</p> <p><b>OTHER DEACTIVATION ACTIVITIES</b> Other related routine, continued deactivation activities that could occur as part of the proposed action are: remove/dispose of asbestos; remove/stabilize existing hazards in conjunction with systems and equipment deactivation associated with sodium residuals; remove/recycle/dispose excess deactivated equipment and components; and remove depleted uranium and/or lead shielding.</p>												
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 5.70E-03 mrem/year.</p> <p>Approved are the associated potential release rates (Curies/year) of: Alpha-0 9.00E-15 Liquid/Particulate Solid WAC 246-247-030 (21) (e) Alpha release rate based on Pu-239.</p> <p>B/G-0 1.30E-01 Liquid/Particulate Solid WAC 246-247-030 (21) (e) Beta/Gamma release rate based on Cs-I 37.</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <table border="0"> <tr> <td>Ba-137 m</td> <td>Co-60</td> <td>Cs-134</td> <td>Cs-137</td> <td>H-3</td> </tr> <tr> <td>Mn-54</td> <td>Na-22</td> <td>Pu-239</td> <td>Ru-106</td> <td>Zn-65</td> </tr> </table> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-03006). DOE must notify</p>	Ba-137 m	Co-60	Cs-134	Cs-137	H-3	Mn-54	Na-22	Pu-239	Ru-106	Zn-65	<p>Continuous</p>	<p><b>CDM:</b> Verified the basis for the PTE calculation in the NOC application.</p>
Ba-137 m	Co-60	Cs-134	Cs-137	H-3								
Mn-54	Na-22	Pu-239	Ru-106	Zn-65								

Requirement	Compliance Status	Compliance Determination Method
<p>the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)) DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>		
<p>Operations shall be performed in accordance with the controls specified in radiation work planning documents and/or operating procedures and shall be available for inspection upon request.</p>	Continuous	<p><b>CDM:</b> FFTF-36419, FFTF Closure Project Documented Safety Analysis, HNF-5173, PHMC Radiological Control Manual, FFTF-POL-6-14, FFTF Plant Policy Manual, inquiry of facility personnel, and review of facility records associated with HNF-PRO-12115, Work Management, and Job Control System.</p>
<p>All activities shall be conducted under the auspices of radiological or health physics control technicians or personnel. Routine field surveys, including swipes/smears, shall be conducted. Fixatives, covers, or other standard measures shall be used, as necessary to contain contamination.</p>	Continuous	<p><b>CDM:</b> FFTF-36419, FFTF Closure Project Documented Safety Analysis, HNF-5173, PHMC Radiological Control Manual, FFTF-POL-6-14, FFTF Plant Policy Manual, inquiry of facility personnel, and review of facility records associated with HNF-PRO-12115, Work Management, and Job Control System.</p>
<p>Appropriate spill prevention procedures shall be in place to minimize the release of radioactive liquid waste to the environment, and to provide immediate cleanup of any liquid spills.</p>	Continuous	<p><b>CDM:</b> FFTF-36419, FFTF Closure Project Documented Safety Analysis, HNF-IP-0263, Building Emergency Plan for FFTF Property Protected Area, FFTF-POL-6-14, FFTF Plant Policy Manual, inquiry of facility personnel, and review of facility records associated with HNF-PRO-12115, Work Management, and Job Control System.</p>
<p>The total amount of sodium reacted from all emission units shall not exceed 4,000 gallons per year with no more than 2,000 gallons challenging a single emission unit.</p>	Continuous	<p><b>CDM:</b> FFTF-36419, FFTF Closure Project Documented Safety Analysis, FFTF-POL-6-14, FFTF Plant Policy Manual, inquiry of facility personnel, and review of facility records associated with HNF-PRO-12115, Work Management, and Job Control System.</p>
<p>Other radioisotopes may be present due to activation products, fission products, decay products, and tracer gases. These other isotopes are approved for this</p>	Not Applicable	<p><b>CDM:</b> This is a statement of fact. Compliance determination is not necessary.</p>

Requirement	Compliance Status	Compliance Determination Method
emission unit and will not contribute significantly to the calculated potential-to-emit.		
Emissions would be routed through the existing MASF ventilation system; for conservatism no filtration is assumed.	Continuous	CDM: Verified by visual inspection and discussion with the Cognizant Engineer that the system has not been changed and is the same as the As-Built drawing.

**P-296B001-001**  
WDOH Emission Unit ID : 402  
Page in AOP : EU0402-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Prefilter <b>Required Units:</b> 2 <b>Add'l Description:</b> Two trains, one bank in each train	Continuous	CDM: Field walk downs and drawings H-2-828927 and H-2-828928
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 4 <b>Add'l Description:</b> Two trains, 2 banks in each train	Continuous	CDM: Field walk downs and drawings H-2-828927 and H-2-828928
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 2 <b>Add'l Description:</b> Only one fan operates at a time.	Continuous	CDM: Field walk downs and drawings, H-2-828924 <b>Comment:</b> Timely notification of short disruptions made to WDOH
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> Continuous <b>Radionuclide Requiring Measurement:</b> 137Cs, 90Sr	Continuous	CDM: Analytical results in ABCASH
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(2) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B Method 114	Continuous	CDM: Required sampling and NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528)
Permit: AIR 06-1010 <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>NOC:</b> B Plant Modification of the Ventilation System (Emission Point: 296-B-1) <b>WDOH NOC ID:</b> 645 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0402-001		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 4.52E-02 mrem/year to the	Continuous	CDM: The Annual Radionuclide Air Emissions Report for the Hanford Site,

Requirement	Compliance Status	Compliance Determination Method
Maximally Exposed Individual (WAC 246-247-040(5)).		Calendar Year 2007.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>Operate the installed ventilation systems and conduct S&amp;M activities.</p>	Continuous	CDM: Field interviews, and work planning/control documents and procedures
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 7.87E+01 mrem/year.</p> <p>Approved are the associated potential release rates (Curies/year) of: Am-241 2.56E-01 Liquid/Particulate Solid WAC 246-247-030 (21) (b)</p> <p>Cs-137 8.40E+02 Liquid/Particulate Solid WAC 246-247-030 (21) (b)</p> <p>Pu-238 3.60E-02 Liquid/Particulate Solid WAC 246-247-030 (21) (b)</p> <p>Pu-239/240 3.84E+00 Liquid/Particulate Solid WAC 246-247-030 (21) (b)</p> <p>Sb-125 Liquid/Particulate Solid WAC 246-247-030 (21) (b)</p> <p>Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% fo the abated dose.</p> <p>Y-90 Liquid/Particulate Solid WAC 246-247-030 (21) (b)</p> <p>Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% fo the abated dose.</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified): Am-241 Cs-137 Pu-238 Pu-239/240 Sb-125 Sr-90 Y-90</p> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)) DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>	Continuous	CDM: Field interviews, PTE calculations in the NOC application and radionuclide emissions data, DOE/RL-97-17.
The new HEPA filters must be fully compatible with ANSI 509/510 standards.	Continuous	CDM: Field interviews.

Requirement	Compliance Status	Compliance Determination Method
<p><b>Permit:ALARACT 28 Issue Date:01-01-07</b>  <b>NOC: Shutdown of Stack System(s) (Maintenance and incidental)</b>  <b>WDOH NOC ID: Date In AOP: 01-01-07 Page in AOP:</b></p>		
<p><b>1. Description of Activity/Requirements</b></p> <p>The listed facilities are currently under Surveillance and Maintenance (S&amp;M) status, meaning active processing has ceased with radioactive feed materials no longer brought in. Surveillances and maintenance activities are performed in these facilities including, but not limited to minor activities such as exterior and interior inspections; checking for door security, for any unauthorized building intrusions, and for structural integrity; water intrusion cleanup; waste handling/removal; maintaining radiological airborne control zones; animal or insect intrusion abatement; maintaining operating systems and building integrity, eliminating utilities when possible; identifying and reducing hazards; and housekeeping. The primary ventilation systems and associated record sampling systems operate at each facility as described in the Hanford Site Air Operating Permit. At certain times to support these various S&amp;M activities, or related to maintenance or replacement-in-kind, any one of these primary ventilation systems may be shut down for a period exceeding two days duration. The four ventilation systems which may be shut down are: 332 REDOX, 402 B-Plant, 369 PUREX, 310 U-Plant.</p>	<p>Continuous</p>	<p><b>CDM: Field interviews, and work planning/control documents and procedures.</b></p>
<p><b>2. Radiological Controls</b></p> <p>It was agreed that an As Low As Reasonably Achievable Control Technology (ALARACT) demonstration is appropriate to address control and monitoring of potential radioactive air emissions during these extended periods of shutdown.</p> <p>During shutdown periods exceeding two days, the following controls will be implemented:</p> <p>Inform the Washington Department of Health (WDOH) by telecon or email at the start of each use of this ALARACT action or as soon as it is realized that the systems will be shutdown for more than two days.</p> <p>To provide assurance that containment of airborne contamination is maintained during the subject periods of shutdown, Fluor Hanford (or successor)</p> <p>Contractor Radiological Control Technicians (RCTs) will perform daily (during normal work days i.e., not weekends or holidays) radiological swipe surveys on a representative few normally accessible outer facility doors. If an increase in removable (smearable) contamination is detected at any of these locations during the period of shutdown, notify the WDOH and describe containment measures to be taken.</p> <p>During the subject periods of shutdown, to avoid situations which might encourage increased diffuse or fugitive emissions, no activities will be conducted inside the facility except those approved for unfiltered containment in accordance with established Radiological Control criteria.</p> <p>If the fans are not restarted within the scheduled time discussed with WDOH, WDOH will be contacted, and continued monitoring and/or airborne controls will be discussed.</p>	<p>Continuous</p>	<p><b>CDM: Field interviews, contact log and radiological surveys.</b></p>
<p><b>3. Monitoring</b></p> <p>It was agreed that an As Low As Reasonably Achievable</p>	<p>Continuous</p>	<p><b>CDM: ALARACT documents completed as discussed/directed with</b></p>

Requirement	Compliance Status	Compliance Determination Method
Control Technology (ALARACT) demonstration is appropriate to address control and monitoring of potential radioactive air emissions during these extended periods of shutdown.		WDOH.
4. Records/Documentation None.	Continuous	CDM: Contact log and radiological surveys.

**EP-331-01-V Life Sciences Laboratory I**

WDOH Emission Unit ID : 412

Page in AOP : EU0412-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> 1 <b>Abatement Technology:</b> Fan <b>Required Units:</b> 1 <b>Add'l Description:</b> 1 of 2 fans operating.	Continuous	<b>CDM:</b> Reviewed 2007 Exhaust Fan PM Results (42190, 42200) & confirmed with Building Engineer.
<b>Zone or Area:</b> 1 <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b> Required for room or hood where dispersible material is used.	Continuous	<b>CDM:</b> Reviewed 2007 HEPA Filter PM Results (PM-55020) and confirmed with Building Engineer.
<b>Zone or Area:</b> 2 <b>Abatement Technology:</b> Fan <b>Required Units:</b> 1 <b>Add'l Description:</b> 1 of 3 fans operating.	Continuous	<b>CDM:</b> Reviewed 2007 Exhaust Fan PM Results (42160, 42170, and 42180) and confirmed with Building Engineer.
<b>Zone or Area:</b> 2 <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b> Required for room or hood where dispersible material is used.	Continuous	<b>CDM:</b> Reviewed 2007 HEPA Filter PM Results (PM-55020) and confirmed with Building Engineer.
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> Continuous <b>Radionuclide Requiring Measurement:</b> Each radionuclide that could contribute greater than 10% of the potential-to-emit TEDE.	Continuous	<b>CDM:</b> Emission data is maintained in the Gaseous Emission Database (GED). A query of the database confirmed all required samples were collected during the reporting period, including the start and end dates of sample periods. Radionuclides contributing greater than 0.1 mrem/yr to the MEI are evaluated during the annual NESHAPS inventory assessment. These isotopes are then analyzed isotopically on semi-annual composites. Semi-annual composite data was included as part of the

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<p><b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) &amp; WAC 246-247-075(2)  <b>Permit Monitoring and Testing Procedure:</b> Appendix B, Method 114(3)</p>	Continuous	<p>emission data review.</p> <p><b>CDM:</b> A NESHAPs Inventory of radioactive materials is conducted for PNNL facilities on an annual basis in accordance with PNNL-10855 Rev. 4, "Assessment of Unabated Facility Emission Potentials for Evaluating Airborne Radionuclide Monitoring Requirements at PNNL-2007". The "Pacific Northwest National Laboratory Effluent Management Quality Assurance Plan" (EM-QA-01) specifies quality assurance requirements. The "Airborne Radionuclide Emission Sample Analysis Statement of Work" (Rev. 7, April 2007) specifies radionuclide analysis methods.</p>

Permit: AIR 06-1061 Issue Date:10-05-06 Effective Date:10-05-06  
 NOC: Life Sciences Laboratory -1 (331 Building)  
 WDOH NOC ID: 710 Date In AOP: 01-01-07 Page in AOP: EU0412-001

Requirement	Compliance Status	Compliance Determination Method
<p>The total abated emission limit for this Notice of Construction is limited to 9.10E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).</p>	Continuous	<p><b>CDM:</b> The radionuclide air emissions data for the calendar year 2007 was reviewed to verify the abated emissions from the 331 Building were below the NOC limits.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247- 030(16), may be conducted.</p> <p>The mission of the 331 Building is to conduct fundamental science and to develop environmental technology. Research activities conducted in the 331 Building support the Hanford Site environmental mission and other key DOE missions of national and international importance. Research activities performed within the 331 Building include the use of radioactive materials. Laboratory processes are conducted "continuously" (i.e., year-round, during normal business, swing-shift, night-shift, and weekend hours). The 331 Building provides research capabilities to study the interactions of chemicals and radionuclides with plants, animals, and microorganisms and the fate of chemicals and radionuclides in the environment. The building also has research capabilities for conducting studies on the uptake and transformation effects of radioactive material and chemicals in soils, plants, animals, and microorganisms.</p> <p>The inventory of radioactive material in the building can include gram quantities of fissionable materials and up to curie quantities of other radionuclides. The laboratory activities conducted in the 331 Building include:</p>	Continuous	<p><b>CDM:</b> Under the PNNL Standards-Based Management System (SBMS) each new research project is required to be reviewed via the Electronic Prep &amp; Risk (EPR) assessment process. The reviews are recorded in the EPR database.</p> <p>Facility changes are required to be reviewed via the SBMS Subject Area for Engineering Calculations, Drawings and Specifications, Creating and Modifying.</p> <p>Projects with potential air emissions are reviewed by Effluent Management (EM) under the SBMS Airborne Emission Subject Area, and the records retained by EM.</p>

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<ul style="list-style-type: none"> <li>-Experimental studies with molecular and cellular processes.</li> <li>-Studies to determine precise cross-species and low-dose extrapolation of health risks and to understand disease mechanisms.</li> <li>-Basic and applied research concerning microorganisms and/or their processes in various environments.</li> <li>-Subsurface microbiology including the physiology and ecology of subsurface microorganisms, degradation of organic contaminants and bioremediation, enzymatic reductions of metals, and biogeochemical cycling of nutrients.</li> <li>-Studies investigating macromolecular structure and dynamics and consequences of observables on molecular function.</li> <li>-Development of instrumentation and analytical methods.</li> <li>-Development of comprehensive environmental monitoring programs.</li> <li>-Development of advanced scientific and technological solutions for long-term stewardship of waste sites.</li> <li>-Waste management activities including satellite accumulation areas and less than 90 day storage areas.</li> <li>-Characterizing and monitoring aquatic and terrestrial ecosystems including the development and monitoring of new technologies and methods.</li> <li>-Studies of impacts of water use practices on fisheries and wildlife and the response of the ecosystems to engineered structures and natural and man-induced stresses.</li> <li>-Activities involving nuclear process engineering, radiomaterials characterization, and radiochemical separations and processing.</li> <li>-Studies of the health effects of chemical and radiation exposure on animals (rodents) and in cells grown in culture.</li> <li>-Examining the uptake and transformation effects of radionuclides in soils, plants, animals and microorganisms.</li> <li>-Studies with radioactive tracer materials in biological and non-biologic systems.</li> <li>-Research to promote the understanding of the chemical and biological processes that govern the mobility and degradation of a range of inorganic, radionuclide and organic contaminants in soils, sediments, and ground water systems.</li> <li>-Measurements of exposures to physical, radiological, and chemical agents.</li> <li>-Developing technology for the separation, purification, production, and delivery of radioisotopes (e.g., for medical purposes, and standards development):</li> <li>-Research and laboratory activities that may include processes where the temperature may be equal to or exceed 100°C.</li> <li>-Research activities involving mixed activation products (MAP) and mixed fission products (MFP).</li> <li>-Laboratory setup projects involving fume hood removals/upgrades and ductwork tie-in.</li> </ul>		
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 3.60E+00 mrem/year.</p> <p>Approved are the associated potential release rates (Curies/year) of:</p> <p>Ac-225   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ac-227   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ac-228   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p>	<p>Continuous</p>	<p><b>CDM:</b> A NESHAPs Inventory of radioactive materials is conducted for PNNL facilities on an annual basis in accordance with PNNL-10855 Rev. 4, "Assessment of Unabated Facility Emission Potentials for Evaluating Airborne Radionuclide Monitoring Requirements at PNNL-2007".</p> <p>Reviewed the 2007 NESHAPs radionuclide inventory assessment results to verify compliance.</p>

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<p>Ag-108   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ag-108 m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ag-109m   Liquid/Particulate Solid - WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ag-110   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ag-110 m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ag-111   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>AI-26   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>AI-28   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Am-241   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Am-241   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Am-242   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Am-242 m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Am-243   8.40E-04   Liquid/Particulate Solid   WAC 246-247-030(21)(a)</p> <p>Am-245   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ar-37   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ar-39   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ar-41   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated</p>		

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<p>dose.</p> <p>Ar-42   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>As-74   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>As-76   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>At-217   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Au-195   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Au-198   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ba-131   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ba-133   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ba-133m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ba-137m   4.60E+04   Liquid/Particulate Solid   WAC 246-247-030(21)(a)</p> <p>Ba-139   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ba-140   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ba-141   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ba-142   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Be-10   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Be-7   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Bi-207   Liquid/Particulate Solid   WAC 246-247-030(21)(a)</p>		

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<p>Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Bi-210   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Bi-211   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Bi-212   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Bi-213   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Bi-214   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Bk-249   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Bk-250   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Br-82   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Br-83   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Br-84   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Br-85   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>C-11   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>C-14   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>C-14   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>C-15   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ca-41   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than</p>		

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<p>10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ca-45   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ca-47   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cd-109   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cd-113   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cd-113 m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cd-115   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cd-115 m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ce-139   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ce-141   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ce-142   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ce-143   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ce-144   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cf-249   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cf-250   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cf-251   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cf-252   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated</p>		

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<p>dose.            Cl-36   Gas   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Cm-241   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Cm-242   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Cm-243   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Cm-244   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Cm-245   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Cm-246   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Cm-247   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Cm-248   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Co-56   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Co-57   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Co-58   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Co-60   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Cr-55   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Cs-131   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.            Cs-134   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p>		

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<p>Cs-134 m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cs-135   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cs-136   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cs-137   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cs-137   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cs-138   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cs-139   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cu-64   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Es-254   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Eu-150   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Eu-152   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Eu-152 m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Eu-154   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Eu-155   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Eu-156   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Eu-157   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>F-18   Liquid/Particulate Solid   WAC 246-247-030(21)(a)</p>		

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<p>Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Fe-55   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Fe-59   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Fr-221   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Fr-223   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ga-67   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ga-72   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Gd-148   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Gd-149   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Gd-151   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Gd-152   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Gd-153   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ge-68   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>H-3   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>H-3   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Hf-175   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Hf-178   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than</p>		

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<p>10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Hf-178 m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Hf-181   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Hf-182   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Hg-203   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ho-166   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ho-166 m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>I-122   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>I-123   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>I-125   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>I-129   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>I-130   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>I-131   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>I-131   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>I-132   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>I-133   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>I-134   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated</p>		

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<p>dose.</p> <p>I-135   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>In-106   Liquid/Particulate Solid   WAC-246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>In-113 m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>In-114   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>In-114 m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>In-115   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>In-115 m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ir-192   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>K-40   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>K-42   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Kr-81   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Kr-83 m   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Kr-85   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Kr-85 m   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Kr-87   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, a</p>		
<p>Condition 3 continued:</p> <p>Ta-179   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated</p>	Continuous	CDM: A NESHAPs Inventory of radioactive materials is conducted for PNNL facilities on an annual basis in

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<p>dose.  Ta-182   Liquid/Particulate Solid   WAC 246-247-030(21)(a)  Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.  Ta-183   Liquid/Particulate Solid   WAC 246-247-030(21)(a)  Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.  Tb-160   Liquid/Particulate Solid   WAC 246-247-030(21)(a)  Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.  Tc-101   Liquid/Particulate Solid   WAC 246-247-030(21)(a)  Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.  Tc-95m   Liquid/Particulate Solid   WAC 246-247-030(21)(a)  Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.  Tc-97   Liquid/Particulate Solid   WAC 246-247-030(21)(a)  Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.  Tc-97m   Liquid/Particulate Solid   WAC 246-247-030(21)(a)  Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.  Tc-98   Liquid/Particulate Solid   WAC 246-247-030(21)(a)  Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.  Tc-99   Liquid/Particulate Solid   WAC 246-247-030(21)(a)  Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.  Tc-99m   Liquid/Particulate Solid   WAC 246-247-030(21)(a)  Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.  Te-121   Liquid/Particulate Solid   WAC 246-247-030(21)(a)  Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.  Te-121m   Liquid/Particulate Solid   WAC 246-247-030(21)(a)  Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.  Te-123   Liquid/Particulate Solid   WAC 246-247-030(21)(a)  Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.  Te-123m   Liquid/Particulate Solid   WAC 246-247-030(21)(a)  Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.  Te-125m   Liquid/Particulate Solid   WAC 246-247-030(21)(a)  Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.  Te-127   Liquid/Particulate Solid   WAC 246-247-030(21)(a)  Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p>		<p>accordance with PNNL-10855 Rev. 4, "Assessment of Unabated Facility Emission Potentials for Evaluating Airborne Radionuclide Monitoring Requirements at PNNL-2007".</p> <p>Reviewed the 2007 NESHAPs radionuclide inventory assessment results to verify compliance.</p>

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<p>Te-127m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Te-129   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Te-129m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Te-131   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Te-131m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Te-132   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Te-133   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Te-133m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Te-134   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Th-227   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Th-228   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Th-229   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Th-230   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Th-231   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Th-232   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Th-233   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p>		

Requirement	Compliance Status	Compliance Determination Method
<p>Th-234   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ti-44   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ti-51   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ti-204   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ti-207   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ti-208   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Ti-209   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Tm-170   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Tm-171   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>U-232   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>U-233   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>U-234   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>U-235   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>U-236   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>U-237   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>U-238   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>U-239   Liquid/Particulate Solid   WAC 246-247-030(21)(a)</p>		

Requirement	Compliance Status	Compliance Determination Method
<p>Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>U-240   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>V-48   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>V-49   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>W-181   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>W-185   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>W-187   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>W-188   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Xe-122   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Xe-123   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Xe-125   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Xe-127   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Xe-131m   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Xe-133   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Xe-133m   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Xe-135   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Xe-135m   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than</p>		

Requirement	Compliance Status	Compliance Determination Method
<p>10% of the unabated PTE and represents less than 25% of the abated dose. Xe-137   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Xe-138   Gas   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Y-88   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Y-90   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Y-90 m Liquid/Particulate Solid WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Y-91   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Y-91m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Y-92   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Y-93   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Yb-164   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Yb-175   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Yb-177   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Zn-65   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Zn-69   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Zn-69m   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Zr-88   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated</p>		

Requirement	Compliance Status	Compliance Determination Method
<p>dose. Zr-89   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Zr-93   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose. Zr-95   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p>		
<p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p>		
<p>Ac-225 Ac-227 Ac-228 Ag-108m Ag-108 Ag-109 m Ag-110 m Ag-110 Ag-111 Al-26 Al-28 Am-241 Am-242 m Am-242 Am-243 Am-245 Ar-37 Ar-39 Ar-41 Ar-42 As-74 As-76 At-217 Au-195 Au-198 Ba-131 Ba-133 Ba-133 m Ba-137 m Ba-139 Ba-140 Ba-141 Ba-142 Be-10 Be-7 Bi-207 Bi-210 Bi-211 Bi-212 Bi-213 Bi-214 Bk-249 Bk-250 Br-82 Br-83 Br-84 Br-85 Br-11 C-14 C-15 Ca-41 Ca-45 Ca-47 Cd-109 Cd-113 m Cd-113 Cd-115 m Cd-115 Ce-139 Ce-141 Ce-142 Ce-143 Ce-144 Cf-249 Cf-250 Cf-251 Cf-252 Cl-36 Cm-241 Cm-242 Cm-243 Cm-244 Cm-245 Cm-246 Cm-247 Cm-248 Co-56 Co-57 Co-58 Co-60 Cr-51 Cr-55 Cs-131 Cs-134 Cs-134 m Cs-135 Cs-136 Cs-137 Cs-138 Cs-139 Cu-64 Es-254 Eu-150 Eu-152 Eu-152 m Eu-154 Eu-155 Eu-156 Eu-157 F-18 Fe-55 Fe-59 Fr-221 Fr-223 Ga-67 Ga-72 Gd-148 Gd-149 Gd-151 Gd-152 Gd-153 Ge-68 H-3 Hf-175 Hf-178 Hf-178 m Hf-181 Hf-182 Hg-203 Ho-166 Ho-166 m I-122 I-123 I-125 I-129 I-130 I-131 I-132 I-133 I-134 I-135 In-106 In-113 m In-114 m In-114 In-115 In-115 m Ir-192 K-40 K-42 Kr-81 Kr-83 m Kr-85 Kr-85 m Kr-87 Kr-88 Kr-89 Kr-90 La-138 La-140 La-141 La-142 Lu-177 Mg-27 Mn-52 Mn-54 Mn-56 Mo-93 Mo-99 N-13 Na-22 Na-24 Nb-91 Nb-91 m Nb-92 Nb-93 m Nb-94 Nb-95 Nb-95 m Nb-97 Nb-97 m Nd-144 Nd-147 Ni-56 Ni-59 Ni-63 Ni-65 Np-235 Np-236 Np-237 Np-238 Np-239 Np-240 Np-240 m O-15 P-32 Pa-231 Pa-233 Pa-234 Pa-234 m Pb-209 Pb-210 Pb-211 Pb-212 Pb-214 Pd-107 Pd-109 Pm-145 Pm-146 Em-147 Pm-148 m Pm-148 Pm-149 Pm-151 Po-208 Po-209 Po-210 Po-211 Po-212 Po-213 Po-214 Po-215 Po-216 Po-218 Pr-143 Pr-144 Pr-144 m Pu-234 Pu-236 Pu-237 Pu-238 Pu-239 Pu-240 Pu-241 Pu-242 Pu-243 Pu-244 Ra-223 Ra-224 Ra-225 Ra-226 Ra-228 Ra-228 Rb-86 Rb-87 Rb-88 Rb-89 Rb-90 Rb-90 m Re-186 Re-187 Re-188 Rh-102 Rh-103 m Rh-105 Rh-105 m Rh-106 Rn-219 Rn-220 Rn-222 Ru-103 Ru-105 Ru-106 Ru-97 S-35 Sb-124 Sb-125 Sb-126 Sb-126 m Sb-127 Sc-46 Sc-47 Se-75 Se-79 Si-31 Sm-145 Sm-146 Sm-147 Sm-151 Sm-153 Sm-157 Sn-113 Sn-117 m Sn-119 m Sn-121 m Sn-123 Sn-125 Sn-126 Sr-85 Sr-89 Sr-90 Sr-91 Sr-92 Ta-179 Ta-182 Ta-183 Tb-160 Tc-101 Tc-95 m Tc-97 Tc-97 m Tc-98 Tc-99 Tc-99 m Te-121 m Te-121 Te-123 Te-123 m Te-125 m Te-127 m Te-127 Te-129 m Te-129 Te-131 Te-131 m Te-132 Te-133 Te-133 m Te-134 Th-227 Th-228 Th-229 Th-230 Th-231 Th-232 Th-233 Th-234 Ti-44 Ti-51 Tl-204 Tl-207 Tl-208 Tl-209 Tm-170 Tm-171 U-232 U-233 U-234 U-235 U-236</p>		

Requirement	Compliance Status	Compliance Determination Method
<p>U-237      U-238      U-239      U-240      V-48  V-49      W-181      W-185      W-187      W-188  Xe-122      Xe-123      Xe-125      Xe-127      Xe-131 m  Xe-133      Xe-133 m      Xe-135      Xe-135 m      Xe-137  Xe-138      Y-88      Y-90      Y-90 m      Y-91  Y-91 m      Y-92      Y-93      Yb-164      Yb-175  Yb-177      Zn-65      Zn-69      Zn-69 m      Zr-88  Zr-89      Zr-93      Zr-95</p> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. WAC 246-247-110(9). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>		
<p>To account for all radioisotopes that may be affected by a process in which the temperature may be equal to or exceed 100 degrees Celsius, a release factor of one is applied to a gaseous form of Am-241 and Cs-137.</p>	Not Applicable	<p><b>CDM:</b> This is a statement of fact, as there is no action to be taken by the permittee. This condition conveys information stated as a footnote to emission estimates included in the NOC application submitted to WDOH for this approval order.</p>
<p>Total design flow through each HEPA filter bank shall not exceed the maximum rated flow rate for the individual HEPA filters multiplied by the number of filters. This does not limit the design flow rate of the stack, just that of the filters.</p>	Continuous	<p><b>CDM:</b> Reviewed 2007 HEPA Filter PM Results and confirmed with Building Engineer.</p>

**EP-3730-01-S**

WDOH Emission Unit ID : 417

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Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<p><b>Zone or Area:</b>  <b>Abatement Technology:</b> HEPA  <b>Required Units:</b> 2  <b>Add'l Description:</b> In series</p>	Continuous	<p><b>CDM:</b> Reviewed 2007 HEPA Filter PM Results (PM-55190) and confirmed with Building Manager.</p>
<p><b>Zone or Area:</b>  <b>Abatement Technology:</b> Fan  <b>Required Units:</b> 1  <b>Add'l Description:</b></p>	Continuous	<p><b>CDM:</b> Reviewed Exhaust Fan PM results (PM-41471) and confirmed with Building Manager.</p>

Requirement	Compliance Status	Compliance Determination Method
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 2 week sample/year <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> Emission data is maintained in the Gaseous Emission Database (GED). A query of the database confirmed all required samples were collected during the reporting period, including the start and end dates of sample periods.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> A NESHAPs Inventory of radioactive materials is conducted for PNNL facilities on an annual basis in accordance with PNNL-10855 Rev. 4, "Assessment of Unabated Facility Emission Potentials for Evaluating Airborne Radionuclide Monitoring Requirements at PNNL-2007". The "Pacific Northwest National Laboratory Effluent Management Quality Assurance Plan" (EM-QA-01) specifies quality assurance requirements. The "Airborne Radionuclide Emission Sample Analysis Statement of Work" (Rev. 7, April 2007) specifies radionuclide analysis methods.
No active NOC approvals in the AOP for this certification period.		

**P-340DECON-001**  
 WDOH Emission Unit ID : 422  
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Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Prefilter <b>Required Units:</b> 1 <b>Add'l Description:</b> 3 in parallel, Change Room doesn't pass through prefilter	Continuous	<b>CDM:</b> As Built Drawings. H-3-34188
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> In series, both HEPA filters are tested as a single unit	Continuous	<b>CDM:</b> As Built Drawings. H-3-34188
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 1	Continuous	<b>CDM:</b> As Built Drawings. H-3-34188

Requirement	Compliance Status	Compliance Determination Method
<b>Add'l Description:</b>		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Moisture separator <b>Required Units:</b> 1 <b>Add'l Description:</b> Serves the decon sump	Continuous	<b>CDM:</b> As Built Drawings. H-3-34188
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> 4 weeks/year <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> Review of data in ABCASH. <b>Comment:</b> ABCASH EDP number F009
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93[b][4][i] WAC 246-247-075[3] <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528).
No active NOC approvals in the AOP for this certification period.		

**P-340NTEX-001**

WDOH Emission Unit ID : 423

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Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Prefilter <b>Required Units:</b> 1 <b>Add'l Description:</b> 3 parallel flow paths, (Minimum of 2 active flow paths providing 1 stage prefiltration and 2 stages HEPA filtration)	Continuous	<b>CDM:</b> As built Drawings. H-2-34404
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> In series. 3 parallel flow paths, (Minimum of 2 active flow paths providing 1 stage prefiltration and 2 stages HEPA filtration)	Continuous	<b>CDM:</b> As Built Drawings. H-2-34404
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 2 <b>Add'l Description:</b> In parallel, (only one fan operates at a time, one is a backup)	Continuous	<b>CDM:</b> As Built Drawings. H-2-34404
<b>Zone or Area:</b> <b>Abatement Technology:</b> Moisture separator <b>Required Units:</b> 1	Continuous	<b>CDM:</b> As Built Drawings. H-2-34404

Requirement	Compliance Status	Compliance Determination Method
<b>Add'l Description:</b> Serves the vessel off-gas portion of the treatment system		
<b>Required Sampling:</b> Record Sampling <b>Sampling Frequency:</b> The sample requirements is to take 4 one week duration samples each year (utilizing the stack record sampling system). <b>Radionuclide Requiring Measurement:</b> Total Alpha and Total Beta.	Continuous	<b>CDM:</b> Reveiw of ABCASH data and facility procedures. RadCon Task Order J-Q001.005 Air Sample Exchange Doc.  <b>Comment:</b> ABCASH EDP number F002
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-75(3) <b>Permit Monitoring and Testing Procedure:</b> Actions to assure quality of periodic confirmatory measurement as described in section 4.0 of the Standard Conditions.	Continuous	<b>CDM:</b> NESHAP Quality Assurance Plan for Radioactive Air Emissions (HNF-EP-0528, latest revision).
<b>Permit: AIR 06-1058 Issue Date:10-05-06 Effective Date:10-05-06</b> <b>NOC: Operation of the 340 Waste Storage</b> <b>WDOH NOC ID: 704 Date In AOP: 01-01-07 Page in AOP: EU0423-001</b>		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 4.00E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).	Continuous	<b>CDM:</b> The Annual Radioactive Air Emissions Report for the Hanford Site, Calendar Year 2007.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The 340-NT-EX Emission unit is in surveillance and maintenance mode for ongoing current activities. These include activities like entries into the vault area to calibrate equipment in the sump, perform inspections currently required by Ecology, or corrective maintenance to remove precipitation which might accumulate via leakage through the vault roof or doorways.</p> <p>Per the approved release fraction calculation based on effluent stream samples collected upstream of all abatement controls, no activities may be performed upstream of the abatement controls. The only activities allowed are maintenance and surveillance that will not disturb the source term and will not increase the potential-to-emit.</p>	Continuous	<p><b>CDM:</b> Stack Downgrade application.</p> <p><b>Comment:</b> EC300-03-02 Internal memo from Dyekman to Simmons April 1, 2003 340-NTEX Potential to Emit Calculation.</p>

Requirement	Compliance Status	Compliance Determination Method										
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 4.00E-03 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Alpha-0   2.90E-06   Liquid/Particulate Solid   WAC 246-247-030(21)(d) Alpha release rate based on Am-241. See condition 24 for approval of alternative release fraction and basis.</p> <p>Am-241   1.90E-06   Liquid/Particulate Solid   WAC 246-247-030(21)(d) See condition 24 for approval of alternative release fraction and basis.</p> <p>B/G-0   2.50E-05   Liquid/Particulate Solid   WAC 246-247-030(21)(d) Beta/Gamma release rate based on Sr-90. See condition 24 for approval of alternative release fraction and basis.</p> <p>Co-57   Liquid/Particulate Solid   WAC 246-247-030(21)(d) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Co-60   4.40E-04   Liquid/Particulate Solid   WAC 246-247-030(21)(d) See condition 24 for approval of alternative release fraction and basis.</p> <p>Cs-134   Liquid/Particulate Solid   WAC 246-247-030(21)(d) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cs-137   1.30E-03   Liquid/Particulate Solid   WAC 246-247-030(21)(d) See condition 24 for approval of alternative release fraction and basis.</p> <p>Eu-152   Liquid/Particulate Solid   WAC 246-247-030(21)(d) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Eu-154   Liquid/Particulate Solid   WAC 246-247-030(21)(d) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Eu-155   Liquid/Particulate Solid   WAC 246-247-030(21)(d) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Sb-125   Liquid/Particulate Solid   WAC 246-247-030(21)(d) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <table border="0"> <tr> <td>Am-241</td> <td>Co-57</td> <td>Co-60</td> <td>Cs-134</td> <td>Cs-137</td> </tr> <tr> <td>Eu-152</td> <td>Eu-154</td> <td>Eu-155</td> <td>Sb-125</td> <td></td> </tr> </table> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)) DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of</p>	Am-241	Co-57	Co-60	Cs-134	Cs-137	Eu-152	Eu-154	Eu-155	Sb-125		<p>Continuous</p>	<p>CDM: Stack Downgrade application.</p> <p>Comment: EC300-03-02 Internal memo from Dyckman to Simmons April 1, 2003 340-NTEX Potential to Emit Calculation.</p>
Am-241	Co-57	Co-60	Cs-134	Cs-137								
Eu-152	Eu-154	Eu-155	Sb-125									

Requirement	Compliance Status	Compliance Determination Method
notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.		
The current abatement controls must be maintained and be operational until the source term is removed or as approved by the department.	Continuous	CDM: AS Built Drawing. H-2-34404
The department approves the release fractions as demonstrated by the upstream air sampling and doses calculated and reported via letter 03-RCA-0231, dated May 8, 2003. The basis of this approval is the assurance that any increase in potential-to-emit will be determined prior to commencement of any source term disturbing activity. This determination shall be maintained as part of the air emissions record and will be available for inspection upon request.	Continuous	CDM: Field Walkdowns, Review of Facility Records. 03-RCA-0231

**P-296H212 001**

WDOH Emission Unit ID : 435

Page in AOP : EU0435-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> double stage, operation in parallel, one HEPA at a time and one in backup mode	Continuous	CDM: As Built Drawings. H-2-129588
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 2 <b>Add'l Description:</b> operates in parallel, one fan at a time and one in backup mode	Continuous	CDM: As Built Drawings. H-2-129588
<b>Required Sampling:</b> The record filter is replaced monthly and analyzed quarterly (either destructive or non-destructive technique) using a gamma spectrometer calibrated to Cs-137. <b>Sampling Frequency:</b> The record filter is to be counted annually (either a destructive or non-destructive technique) using a gamma spectrometer calibrated to Cs-137. <b>Radionuclide Requiring Measurement:</b> Each radionuclide that could contribute greater than 10% of the potential-to-emit TEDE.	Continuous	CDM: Facility Procedure PS-414, Canister Storage Building Radioactive Air. The Statement of Work for Services Provided by the Waste Characterization Facility for the Environmental Compliance Program during Calendar Year 2007 (HNF-EP-0835) defines what analyses are performed and the frequency.  <b>Comment:</b> ABCASH EDP code number C601

Requirement	Compliance Status	Compliance Determination Method
<p><b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) &amp; WAC 246-247-075(2)  <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114</p>	Continuous	<p><b>CDM:</b> NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528, latest revision).</p>
<p>Permit: AIR 06-1017 <b>Issue Date:</b>10-05-06 <b>Effective Date:</b>10-05-06  <b>NOC:</b> Canister Storage Building, Building 212-H  <b>WDOH NOC ID:</b> 652 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0435-001</p>		
Requirement	Compliance Status	Compliance Determination Method
<p>The total abated emission limit for this Notice of Construction is limited to 1.64E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).</p>	Continuous	<p><b>CDM:</b> The Annual Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The use of the Canister Storage Building (CSB) for storage of spent nuclear fuel (SNF). The CSB shall consist of load-in/load-out areas, mechanical and electrical support areas, a multi-canister overpack (MCO) weld/sample station, and a subgrade vault storage area. The SNF shall be received in MCOs that shall be shipped in a cask.</p> <p>The subgrade reinforced concrete vault area shall accommodate three equal-sized, below grade compartments with each compartment cooled by natural convection and having separate air inlet and exhaust plenums. Because there is physical separation from the SNF source term to the air space in this below grade vault, there is no control technology or emission monitoring of the exhaust from this area. The physical separation shall consist of the following barriers: MCO and storage tube.</p> <p>Over the vault shall be a structural steel and metal sided building with heating and ventilation systems, and a material handling machine for use in the handling and movement of MCOs. The air space above the operating deck shall be at a negative pressure with respect to atmosphere during all MCO handling, storage, and monitoring operations. The exhaust from this portion of the building ventilation system shall be filtered by testable high-efficiency particulate air (HEPA) filters and sampled before exhausting through a separate building operating area stack. An operating deck shall separate the subgrade vault from the above grade level working area.</p> <p>A continuous air emission monitoring system (CAEMS) shall be installed in the process exhaust stack.</p> <p>There shall be no more than 226 penetration holes in the operating deck in each of the three compartments in the vaulted area. MCOs containing the SNF shall be stored in the 226 vertical steel storage tubes in the north vault (also know as vault 1). Vaults 2 and 3 shall be used for the storage of sealed/immobilized high-level waste.</p> <p>The steel storage tubes shall prevent migration of radiological contamination and shall be inserted through existing penetrations and extend from the operating deck to the floor of the vault. Access to the interior of the tubes shall be through penetrations in the operating deck.</p>	Continuous	<p><b>CDM:</b> Process Standard 331-PS-414, Canister Storage Building Radioactive Air Emissions;  Drawings H-2-117795, H-2-117798, H-2-129588, H-2-119276, H-2-123502; SNF-6154, Design Basis</p>

Requirement	Compliance Status	Compliance Determination Method
<p>Each tube shall contain no more than two MCOs and be equipped with a shield plug that shall be vented to the operating deck but which can also be isolated.</p> <p>The function of the MCO shall be to confine, contain, and maintain the SNF in a critically safe array to ensure safe operations and to support processing the 105 K Basins SNF at the Cold Vacuum Drying Facility, processing the Shippingport PWR SNF at the T Plant, and transport to the CSB.</p> <p>A cover cap shall be welded on top of the MCO covering the MCO shield plug. This shall be performed at the sample and weld station located in the CSB, thus hermetically sealing the SNF contained in the MCO.</p> <p>The sampling and weld station shall be located at the south end of the CSB operating area. This area shall consist of seven process pits, four feet in diameter and 19 feet 8 inches deep. Two of the pits shall be equipped for MCO gas sampling and for welding the cover caps on the MCOs. Weld inspection and helium leak checking of the seal weld shall also be accomplished here.</p> <p>An exhaust enclosure shall be provided for confinement around the top of the MCO during sampling and welding. The function of the enclosure shall be to capture any potential airborne contamination. Airflow shall be into the enclosure. An exhaust duct shall run from the enclosure to a fan and through a testable HEPA filter that shall exhaust into the building ventilation exhaust system for the CSB operating area upstream of the building exhaust testable HEPA filters.</p> <p>The tube vent and purge cart will house the storage tube purge system, which shall monitor and maintain an inert gas environment around any MCO placed in the overpack storage tubes and to monitor the atmosphere in any of the other storage tubes as required. The vent and purge cart may be driven to any of the 226 storage tubes.</p> <p>The vent and purge cart equipment shall include inert gas supply cylinders, flexible steel hoses, an airtight sampling connection, a radioactive gas monitor, a hydrogen gas monitor and associated interlocks and alarms, a vacuum pump and its cooling unit, a HEPA filter, and an oxygen monitor and associated alarms.</p> <p>The heating, ventilation, and air conditioning (HVAC) system shall provide contamination confinement and contamination control within the CSB. The HVAC system shall provide a controlled pressure gradient flow of air from outside the CSB inward through uncontaminated areas to potentially contaminated areas of the building and out through HEPA filters and a monitored exhaust.</p>		
<p>The PTE for this project as determined under WAC 246-247-030(21a-e) [as specified in the application] is 3.64E+01 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Ag-110 1.42E-09 Liquid/Particulate Solid WAC 246-247-030(21) (a)</p> <p>Ag-110 m 1.07E-07 Liquid/Particulate Solid WAC 246-247-030(21) (a)</p> <p>Am-241 1.87E+00 Liquid/Particulate Solid WAC 246-247-030(21) (a)</p> <p>Am-242 9.74E-04 Liquid/Particulate Solid WAC 246-247-030(21) (a)</p> <p>Am-242 m 9.79E-04 Liquid/Particulate Solid WAC 246-247-030(21) (a)</p> <p>Am-243 6.00E-04 Liquid/Particulate Solid</p>	<p>Continuous</p>	<p>CDM: Verification of NOC Application, HNF-7880.</p>

Requirement	Compliance Status	Compliance Determination Method
WAC 246-247-030(21) (a)		
Ba-137 m 6.25E+01 Liquid/Particulate Solid		
WAC 246-247-030(21) (a)		
C-14 8.66E-01 Gas		
WAC 246-247-030(21) (a)		
C-14 6.90E-04 Liquid/Particulate Solid		
WAC 246-247-030(21) (a)		
Cd-113 m 1.77E-02 Liquid/Particulate Solid		
WAC 246-247-030(21) (a)		
Ce-144 4.57E-03 Liquid/Particulate Solid		
WAC 246-247-030(21) (a)		
Cm-242 8.09E-04 Liquid/Particulate Solid		
WAC 246-247-030(21) (a)		
Cm-244 7.19E-03 Liquid/Particulate Solid		
WAC 246-247-030(21) (a)		
Co-60 1.98E-02 Liquid/Particulate Solid		
WAC 246-247-030(21) (a)		
Cs-134 7.94E-02 Liquid/Particulate Solid		
WAC 246-247-030(21) (a)		
Cs-135 3.87E-04 Liquid/Particulate Solid		
WAC 246-247-030(21) (a)		
Cs-137 6.59E+01 Liquid/Particulate Solid		
WAC 246-247-030(21) (a)		
Eu-152 4.72E-03 Liquid/Particulate Solid		
WAC 246-247-030(21) (a)		
Eu-154 5.35E-01 Liquid/Particulate Solid		
WAC 246-247-030(21) (a)		
Eu-155 1.10E-01 Liquid/Particulate Solid		
WAC 246-247-030(21) (a)		
Fe-55 1.83E-03 Liquid/Particulate Solid		
WAC 246-247-030(21) (a)		
Gd-153 6.39E-10 Liquid/Particulate Solid		
WAC 246-247-030(21) (a)		
H-3 3.65E-02 Liquid/Particulate Solid		
WAC 246-247-030(21) (a)		
H-3 4.58E+01 Gas		
WAC 246-247-030(21) (a)		
I-129 6.34E-06 Liquid/Particulate Solid		
WAC 246-247-030(21) (a)		
I-129 7.96E-03 Gas		
WAC 246-247-030(21) (a)		
In-113 m 1.07E-12 Liquid/Particulate Solid		
WAC 246-247-030(21) (a)		
Kr-85 7.38E+02 Gas		
WAC 246-247-030(21) (a)		
Kr-85 5.88E-01 Liquid/Particulate Solid		
WAC 246-247-030(21) (a)		
Nb-93 m 1.23E-03 Liquid/Particulate Solid		
WAC 246-247-030(21) (a)		
Nb-95 1.87E-17 Liquid/Particulate Solid		
WAC 246-247-030(21) (a)		
Nb-95 m 6.25E-20 Liquid/Particulate Solid		
WAC 246-247-030(21) (a)		
Ni-59 2.05E-04 Liquid/Particulate Solid		
WAC 246-247-030(21) (a)		
Ni-63 2.24E-02 Liquid/Particulate Solid		
WAC 246-247-030(21) (a)		
Np-237 2.86E-04 Liquid/Particulate Solid		
WAC 246-247-030(21) (a)		
Pd-107 8.14E-05 Liquid/Particulate Solid		
WAC 246-247-030(21) (a)		
Pm-147 2.31E+00 Liquid/Particulate Solid		
WAC 246-247-030(21) (a)		
Pr-144 4.51E-03 Liquid/Particulate Solid		
WAC 246-247-030(21) (a)		
Pr-144 m 5.50E-05 Liquid/Particulate Solid		

Requirement	Compliance Status	Compliance Determination Method
WAC 246-247-030 (21) (a)		
Pu-238 5.55E-01 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Pu-239 1.09E+00 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Pu-240 5.95E-01 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Pu-241 3.34E+01 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Pu-242 2.74E-04 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Rh-106 9.09E-03 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Ru-106 9.09E-03 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Sb-124 1.51E-23 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Sb-125 1.67E-01 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Sb-126 1.09E-04 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Sb-126 m 7.79E-04 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Se-79 4.31E-04 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Sm-151 8.79E-01 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Sn-113 1.07E-12 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Sn-119 m 1.48E-06 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Sn-121 m 3.98E-04 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Sn-123 8.69E-11 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Sn-126 7.79E-04 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Sr-90 5.05E+01 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Tb-160 1.38E-20 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Tc-99 1.44E-02 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Te-123 m 1.38E-16 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Te-125 m 4.09E-02 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Te-127 4.74E-12 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Te-127 m 4.84E-12 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
U-234 4.37E-03 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
U-235 1.68E-04 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
U-236 6.34E-04 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
U-238 3.48E-03 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Y-90 5.05E+01 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Y-91 1.11E-19 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Zr-93 2.00E-03 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Zr-95 8.44E-18 Liquid/Particulate Solid		

Requirement	Compliance Status	Compliance Determination Method																																																																						
<p>WAC 246-247-030 (21) (a)</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <table border="0"> <tr> <td>Ag-110 m</td> <td>Ag-110</td> <td>Am-241</td> <td>Am-242 m</td> <td>Am-242</td> </tr> <tr> <td>Am-243</td> <td>Ba-137 m</td> <td>C-14</td> <td>Cd-113 m</td> <td>Ce-144</td> </tr> <tr> <td>Cm-242</td> <td>Cm-244</td> <td>Co-60</td> <td>Cs-134</td> <td>Cs-135</td> </tr> <tr> <td>Cs-137</td> <td>Eu-152</td> <td>Eu-154</td> <td>Eu-155</td> <td>Fe-55</td> </tr> <tr> <td>Gd-153</td> <td>H-3</td> <td>I-129</td> <td>In-113 m</td> <td>Kr-85</td> </tr> <tr> <td>Nb-93 m</td> <td>Nb-95</td> <td>Nb-95 m</td> <td>Ni-59</td> <td>Ni-63</td> </tr> <tr> <td>Np-237</td> <td>Pd-107</td> <td>Pm-147</td> <td>Pr-144</td> <td>Pr-144 m</td> </tr> <tr> <td>Pu-238</td> <td>Pu-239</td> <td>Pu-240</td> <td>Pu-241</td> <td>Pu-242</td> </tr> <tr> <td>Rh-106</td> <td>Ru-106</td> <td>Sb-124</td> <td>Sb-125</td> <td>Sb-126</td> </tr> <tr> <td>Sb-126 m</td> <td>Se-79</td> <td>Sm-151</td> <td>Sn-113</td> <td>Sn-119 m</td> </tr> <tr> <td>Sn-121 m</td> <td>Sn-123</td> <td>Sn-126</td> <td>Sr-90</td> <td>Tb-160</td> </tr> <tr> <td>Tc-99</td> <td>Te-125 m</td> <td>Te-125 m</td> <td>Te-127 m</td> <td>Te-127</td> </tr> <tr> <td>U-234</td> <td>U-235</td> <td>U-236</td> <td>U-238</td> <td>Y-90</td> </tr> <tr> <td>Y-91</td> <td>Zr-93</td> <td>Zr-95</td> <td></td> <td></td> </tr> </table> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEL, or greater than 25% of the TEDE to the MEL after controls. (WAC 246-247-110(9)). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the AIR Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>	Ag-110 m	Ag-110	Am-241	Am-242 m	Am-242	Am-243	Ba-137 m	C-14	Cd-113 m	Ce-144	Cm-242	Cm-244	Co-60	Cs-134	Cs-135	Cs-137	Eu-152	Eu-154	Eu-155	Fe-55	Gd-153	H-3	I-129	In-113 m	Kr-85	Nb-93 m	Nb-95	Nb-95 m	Ni-59	Ni-63	Np-237	Pd-107	Pm-147	Pr-144	Pr-144 m	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Rh-106	Ru-106	Sb-124	Sb-125	Sb-126	Sb-126 m	Se-79	Sm-151	Sn-113	Sn-119 m	Sn-121 m	Sn-123	Sn-126	Sr-90	Tb-160	Tc-99	Te-125 m	Te-125 m	Te-127 m	Te-127	U-234	U-235	U-236	U-238	Y-90	Y-91	Zr-93	Zr-95				
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Np-237	Pd-107	Pm-147	Pr-144	Pr-144 m																																																																				
Pu-238	Pu-239	Pu-240	Pu-241	Pu-242																																																																				
Rh-106	Ru-106	Sb-124	Sb-125	Sb-126																																																																				
Sb-126 m	Se-79	Sm-151	Sn-113	Sn-119 m																																																																				
Sn-121 m	Sn-123	Sn-126	Sr-90	Tb-160																																																																				
Tc-99	Te-125 m	Te-125 m	Te-127 m	Te-127																																																																				
U-234	U-235	U-236	U-238	Y-90																																																																				
Y-91	Zr-93	Zr-95																																																																						
<p>Continuous monitoring must be in place prior to operating. This will include continuous ambient air sampling for this project. The ambient air monitors shall be checked for operability at least once per week, and if an ambient air monitor is found not operating, the ambient air monitor shall be returned to service within seven working days from when it was found not operating. Notification to DOH per (WAC 246-247-080(5)) is required when an ambient air monitor is shut down for more than seven consecutive working days from time of discovery. At that time, i.e. when the ambient air monitor is shut down for more than seven consecutive days from time of discover, operations involving the handling of spent nuclear fuel shall be suspended until the ambient air monitor is returned to service.</p>	Continuous	CDM: Process Standard 331-PS-414, Canister Storage Building Radioactive Air.																																																																						
<p>The differential pressure shall be monitored and recorded daily during operational rounds to determine impacts due to moisture. If the differential pressures are outside of the designed operating range, the cause will be determined and the department will be notified within 24 hours.</p>	Continuous	CDM: Process Standard 331-PS-414, Canister Storage Building Radioactive Air.																																																																						
<p>The process for validating the process parameters with respect to storing the MCOs in a sealed configuration is approved, however, the total number of representative</p>	Continuous	CDM: Process Standard 331-PS-414, Canister Storage Building Radioactive Air.																																																																						

Requirement	Compliance Status	Compliance Determination Method
samples was not given to us. By telephone, it was indicated that the total number of MCOs tested should not exceed twelve. Twelve is the limit, unless a more specific number is negotiated with the department.		
Total system flow shall not exceed 9,000 CFM (allowing for the tolerances of the measuring devices).	Continuous	CDM: Process Standard 331-PS-414, Canister Storage Building Radioactive Air.
Ventilation systems used to control the release of particulate airborne radiological contamination from individual processes must include:  1. MHM cask extract ventilation and HEPA exhaust system. 2. Sampling/weld station ventilation and HEPA exhaust system. 3. Overpack storage tube purge system. 4. Temporary containment enclosure with HEPA exhaust system for contamination control. 5. The building HEPA filters are still required. 6. All controls must be ANSI N509/510 compliant.	Continuous	CDM: Process Standard 331-PS-414, Canister Storage Building Radioactive Air; CSB Design Basis Document, SNF-6154

**P-296K142 001**

WDOH Emission Unit ID : 436

Page in AOP : EU0436-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> Process Bay General Exhaust <b>Abatement Technology:</b> Isolation Damper <b>Required Units:</b> 2 <b>Add'l Description:</b>	Continuous	CDM: Verified by field inspection.
<b>Zone or Area:</b> Process Bay General Exhaust <b>Abatement Technology:</b> Fan <b>Required Units:</b> 2 <b>Add'l Description:</b>	Continuous	CDM: Verified by field inspection.
<b>Zone or Area:</b> Process Bay Local Exhaust <b>Abatement Technology:</b> Isolation Damper <b>Required Units:</b> 2 <b>Add'l Description:</b>	Continuous	CDM: Verified by field inspection.
<b>Zone or Area:</b> Process Bay General Exhaust <b>Abatement Technology:</b> Prefilter <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	CDM: Verified by field inspection.

Requirement	Compliance Status	Compliance Determination Method
<b>Zone or Area:</b> Process Bay General Exhaust <b>Abatement Technology:</b> Backdraft Damper <b>Required Units:</b> 2 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Verified by field inspection.
<b>Zone or Area:</b> Process Bay Recirculation <b>Abatement Technology:</b> Fan <b>Required Units:</b> 4 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Verified by field inspection.
<b>Zone or Area:</b> Process Bay General Exhaust <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b> Two Stage HEPA.	Continuous	<b>CDM:</b> Verified by field inspection.
<b>Zone or Area:</b> Process Bay Local Exhaust <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b> Two stage HEPA.	Continuous	<b>CDM:</b> Verified by field inspection.
<b>Zone or Area:</b> Process Bay Local Exhaust <b>Abatement Technology:</b> Backdraft Damper <b>Required Units:</b> 2 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Verified by field inspection.
<b>Zone or Area:</b> Process Bay Local Exhaust <b>Abatement Technology:</b> Fan <b>Required Units:</b> 2 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Verified by field inspection.
<b>Zone or Area:</b> Process Bay Recirculation <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 4 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Verified by field inspection.  <b>Comment:</b> Bays 2, 3, 4 and 5 have HEPA filters. Only Bays 4 and 5 are DOP tested as Bays 4 and 5 are the only bays operational to process MCOs.
<b>Required Sampling:</b> Record Sample <b>Sampling Frequency:</b> Monthly Sample <b>Radionuclide Requiring Measurement:</b> Each radionuclide that could contribute greater than 10% of the potential to emit TEDE.	Continuous	<b>CDM:</b> Sampling verified by information in ABCASH. HNF-EP-0835, Statement of Work for Services Provided by the Waste Sampling and Characterization Facility for the Effluent and Environmental Monitoring Program Calendar Year 2007 defines what analyses are performed and frequency. Verified sampling was conducted as described in INOC application, DOE/RL-96-110, per technical procedure RP-50-002V.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(2) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR	Continuous	<b>CDM:</b> The NESHAP Quality Assurance Project Plan for Radioactive Air Emission" (HNF-EP-0528, current

Requirement	Compliance Status	Compliance Determination Method
61, Appendix B, Method 114		<p>revision) specifies the hardware and methods used to sample and the analytical methods used in the laboratory.</p> <p>Other documents that demonstrate compliance to requirements are:            PNNL-13401 Cold Vacuum Drying Facility Stack Air Sampling System qualification Tests;            DOE/RL-96-110, Revision 1 Radioactive Air Emissions Notice of Construction Cold Vacuum Drying Facility Phase II;            K Basins Closure Project Process Standard 416, Cold Vacuum Drying Facility Radioactive Air Emissions;            OP-94-014V, Conduct Operator Rounds;            SP-30-004V, CVDF Filter Checks;            SP-50-001V, Functional Check of Stack Monitor Sampling System Mass Flow Meters;            SP-50-002V, Stack Monitor Annual Detector Calibration Checks;            SP-50-003V, Inspection of Stack Monitor Flow Element and Impulse Lines;            SP-50-004V, Inspection and Leak Check of Stack Monitor HEPA Filter Sample Transport Line;            SP-50-008V, Calibrate Stack Monitor Mass Flow Controller;            SP-50-009V, Calibration of Stack Monitor Effluent Flow Measurement Devices;            SP-50-011V, Functional Check of Stack Monitor Effluent flow Rate System;            SP-50-012V, Annual CVDF Stack Flow Verification;            SP-00014, RP-50-003V, GEMS-100 Stack Monitor Monthly Operational Checks; and            RP-50-002V, Sample Filter Replacement and Operational Checks.</p>

Requirement	Compliance Status	Compliance Determination Method																											
<p>Permit: AIR 06-1009 <b>Issue Date:</b>10-05-06 <b>Effective Date:</b>10-05-06  <b>NOC:</b> Construction and Operation of the Cold Vacuum Drying Facility (CVDF)  <b>WDOH NOC ID:</b> 643 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0436-001</p>																													
<p>The total abated emission limit for this Notice of Construction is limited to 4.95E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).</p>	<p>Continuous</p>	<p><b>CDM:</b> Radionuclide Air Emissions report for the Hanford Site, Calendar Year 2007 and PS 416 Cold Vacuum Drying Facility Radioactive Air Emissions.</p>																											
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The CVDF located to the west of the K Basins in the 100 K Area of the Hanford Site. The CVDF is limited to the following three adjoining radiological areas: the process bay area, the process support area, and the process water tank room. The process bay area shall contain four process bays and one bay used to off load water. Immediately adjacent and contiguous to the process bay area is the process support area, a steel-framed, two-story metal building that encloses the traffic corridor, process bay support rooms, and the second floor mechanical equipment room. Immediately adjacent to the process bay area on the north side is a single-story concrete and structural steel building that encloses the process water tank room.</p> <p>Each operational process bay shall contain a process equipment skid, a safety-class helium system, a process hood, and a process bay recirculation heating, ventilation, and air conditioning (HVAC) system. Each process equipment skid shall contain a vacuum and purge system and a tempered water (annulus) system.</p> <p>The CVDF interfaces with the 100 K Area, Hanford Site infrastructure services, and the Canister Storage Basin (CSB). The CVDF operation interfaces with K Basins operations by receiving cask-MCO packages for processing. Water removed from the MCO and water used for system flushes shall be cleaned and transported by tanker truck for appropriate dispositioning. The CVDF also interfaces with the CSB operation when the cask-MCO packages are shipped to the CSB after the cold vacuum drying process has been completed.</p> <p>The stack sample line shall be reconfigured in a manner to facilitate inspections and testing as required by ANSI N13.1-1999 (i.e. removable: spool piece(s) and tees for installation of pressure gauges). During reconfiguration, there will be no stack sampling and no MCO processing within the facility.</p>	<p>Continuous</p>	<p><b>CDM:</b> Verified by field inspection.</p>																											
<p>The PTE for this project as determined under WAC 246-247-030(21a-e) [as specified in the application] is 1.27e+01 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <table border="0"> <tr> <td>Ag-110</td> <td>2.57E-10</td> <td>Liquid/Particulate Solid</td> </tr> <tr> <td>WAC 246-247-030(21) (a)</td> <td></td> <td></td> </tr> <tr> <td>Ag-110 m</td> <td>1.94E-08</td> <td>Liquid/Particulate Solid</td> </tr> <tr> <td>WAC 246-247-030(21) (a)</td> <td></td> <td></td> </tr> <tr> <td>Am-241</td> <td>3.39E-01</td> <td>Liquid/Particulate Solid</td> </tr> <tr> <td>WAC 246-247-030(21) (a)</td> <td></td> <td></td> </tr> <tr> <td>Am-242</td> <td>1.76E-04</td> <td>Liquid/Particulate Solid</td> </tr> <tr> <td>WAC 246-247-030(21) (a)</td> <td></td> <td></td> </tr> <tr> <td>Am-242m</td> <td>1.77E-04</td> <td>Liquid/Particulate Solid</td> </tr> </table>	Ag-110	2.57E-10	Liquid/Particulate Solid	WAC 246-247-030(21) (a)			Ag-110 m	1.94E-08	Liquid/Particulate Solid	WAC 246-247-030(21) (a)			Am-241	3.39E-01	Liquid/Particulate Solid	WAC 246-247-030(21) (a)			Am-242	1.76E-04	Liquid/Particulate Solid	WAC 246-247-030(21) (a)			Am-242m	1.77E-04	Liquid/Particulate Solid	<p>Continuous</p>	<p><b>CDM:</b> During CY 2007 there was no SNF processing at CVDF. The PTE reflects a source term equivalent to 1/2 of the original K Basins SNF inventory; therefore there were no exceedences of the PTE.</p>
Ag-110	2.57E-10	Liquid/Particulate Solid																											
WAC 246-247-030(21) (a)																													
Ag-110 m	1.94E-08	Liquid/Particulate Solid																											
WAC 246-247-030(21) (a)																													
Am-241	3.39E-01	Liquid/Particulate Solid																											
WAC 246-247-030(21) (a)																													
Am-242	1.76E-04	Liquid/Particulate Solid																											
WAC 246-247-030(21) (a)																													
Am-242m	1.77E-04	Liquid/Particulate Solid																											

Requirement	Compliance Status	Compliance Determination Method
WAC 246-247-030 (21) (a)		
Am-243 1.09E-04 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Ba-137m 1.13E+01 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
C-14 1.35E-01 Gas		
WAC 246-247-030 (21) (a)		
C-14 3.46E-04 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Cd-113m 3.21E-03 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Cd-115m 0.00E+00 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Ce-141 0.00E+00 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Ce-144 8.27E-04 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Cm-242 1.47E-04 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Cm-244 1.30E-03 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Co-60 3.58E-03 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Cs-134 1.44E-02 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Cs-135 7.01E-05 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Pd-107 1.47E-05 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Pm-147 4.18E-01 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Pm-148 0.00E+00 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Pm-148m 0.00E+00 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Pr-143 0.00E+00 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Pr-144 8.17E-04 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Pr-144m 9.95E-06 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Pu-238 1.00E-01 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Pu-239 1.97E-01 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Pu-240 1.08E-01 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Pu-241 6.04E+00 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Pu-242 4.97E-05 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Rh-103m 0.00E+00 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Rh-106 1.65E-03 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Ru-103 0.00E+00 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Ru-106 1.65E-03 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Sb-124 2.74E-24 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Sb-125 3.03E-02 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Sb-126 1.97E-05 Liquid/Particulate Solid		
WAC 246-247-030 (21) (a)		
Sb-126m 1.41E-04 Liquid/Particulate Solid		

Requirement	Compliance Status	Compliance Determination Method		
WAC 246-247-030(21) (a)				
Se-79 7.80E-05 Liquid/Particulate Solid				
WAC 246-247-030(21) (a)				
Sm-151 1.59E-01 Liquid/Particulate Solid				
WAC 246-247-030(21) (a)				
Sn-113 1.94E-13 Liquid/Particulate Solid				
WAC 246-247-030(21) (a)				
Sn-119m 2.69E-07 Liquid/Particulate Solid				
WAC 246-247-030(21) (a)				
Sn-121m 7.20E-05 Liquid/Particulate Solid				
WAC 246-247-030(21) (a)				
Sn-123 1.57E-11 Liquid/Particulate Solid				
WAC 246-247-030(21) (a)				
Sn-126 1.41E-04 Liquid/Particulate Solid				
WAC 246-247-030(21) (a)				
Sr-89 0.00E+00 Liquid/Particulate Solid				
WAC 246-247-030(21) (a)				
Sr-90 9.14E+00 Liquid/Particulate Solid				
WAC 246-247-030(21) (a)				
Tb-160 2.51E-21 Liquid/Particulate Solid				
WAC 246-247-030(21) (a)				
Tc-99 2.61E-03 Liquid/Particulate Solid				
WAC 246-247-030(21) (a)				
Te-123m 2.50E-17 Liquid/Particulate Solid				
WAC 246-247-030(21) (a)				
Te-125m 7.40E-03 Liquid/Particulate Solid				
WAC 246-247-030(21) (a)				
Te-127 8.85E-13 Liquid/Particulate Solid				
WAC 246-247-030(21) (a)				
Te-127m 8.77E-13 Liquid/Particulate Solid				
WAC 246-247-030(21) (a)				
Te-129 0.00E+00 Liquid/Particulate Solid				
WAC 246-247-030(21) (a)				
Te-129m 0.00E+00 Liquid/Particulate Solid				
WAC 246-247-030(21) (a)				
U-234 7.91E-04 Liquid/Particulate Solid				
WAC 246-247-030(21) (a)				
U-235 3.05E-05 Liquid/Particulate Solid				
WAC 246-247-030(21) (a)				
U-236 1.15E-04 Liquid/Particulate Solid				
WAC 246-247-030(21) (a)				
U-238 6.30E-04 Liquid/Particulate Solid				
WAC 246-247-030(21) (a)				
Y-90 9.14E+00 Liquid/Particulate Solid				
WAC 246-247-030(21) (a)				
Y-91 2.02E-20 Liquid/Particulate Solid				
WAC 246-247-030(21) (a)				
Zr-93 3.62E-04 Liquid/Particulate Solid				
WAC 246-247-030(21) (a)				
Zr-95 1.53E-18 Liquid/Particulate Solid				
WAC 246-247-030(21) (a)				
The radioactive isotopes identified for this emission unit are (no quantities specified):				
Ag-110 m	Ag-110	Am-241	Am-242 m	Am-242
Am-243	Ba-137 m	C-14	Cd-113 m	Cd-115 m
Ce-141	Ce-144	Cm-242	Cm-244	Co-60
Cs-134	Cs-135	Cs-137	Eu-152	Eu-154
Eu-155	Fe-55	Gd-153	H-3	I-129
In-113 m	Kr-85	Nb-95 m	Nb-95	Nb-95 m
Ni-59	Ni-63	Np-237	Pd-107	Pm-147
Pm-148 m	Pm-148	Pr-143	Pr-144	Pr-144 m
Pu-238	Pu-239	Pu-240	Pu-241	Pu-242
Rh-103 m	Rh-106	Ru-103	Ru-106	Sb-124
Sb-125	Sb-126	Sb-126 m	Se-79	Sm-151
Sn-113	Sn-119 m	Sn-121 m	Sn-123	Sn-126
Sr-89	Sr-90	Tb-160	Tc-99	Te-123
Te-125 m	Te-127 m	Te-127	Te-129 m	Te-129
U-234	U-235	U-236	U-238	Y-90
Y-91	Zr-93	Zr-95		

Requirement	Compliance Status	Compliance Determination Method
<p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the AIR Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>		
<p>The following shut down of the CVDF emission control systems under circumstances specified are allowed and are excluded from the 24 hour reporting requirement:            A) Shutdown of the process bay recirculation system when there is no MCO processing within that bay.            B) Shutdown of the process bay local exhaust system when there is no MCO processing within that bay.            C) Shutdown of the general exhaust system for no more than eight hours during which time there will be no MCO within the CVDF not transfer of water from process water conditioning tank PWC-TK-40001 to a tanker truck for disposal nor opening of the process bay roll up doors.</p>	Continuous	<p><b>CDM:</b> These conditions are implemented procedurally as described in Process Standard 416.</p>
<p>The first annual leak testing of the stack emissions sample line is allowed to be deferred until January 2002 to allow installation of an access port in the stack. Future annual leak test shall be based on this new test date.</p>	Continuous	<p><b>CDM:</b> The original leak testing of the stack emission sample line was performed on January 16, 2002 as documented in JCS work package 1C-01-00678. Annual leak tests have been performed per a JCS recall process. The CY 2007 leak results are documented in JCS package 1C-07-04854.</p>

**S-296S023-001**

WDOH Emission Unit ID : 438

Page in AOP : EU0438-001

Requirement	Compliance Status	Compliance Determination Method
<p>For the time period of : (01-01-07 to 12-31-07)</p>		
<p><b>Zone or Area:</b>  <b>Abatement Technology:</b> Prefilter  <b>Required Units:</b> 1  <b>Add'l Description:</b></p>	Continuous	<p><b>CDM:</b> Field interviews.</p>

Requirement	Compliance Status	Compliance Determination Method
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> In series	Continuous	<b>CDM:</b> Field interviews, CH2M HILL notification procedure and notification logbook. <b>Comment:</b> HEPA filter failed annual aerosol test during the reporting; reported per the CH2M HILL notification procedure.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Field interviews.
<b>Required Sampling:</b> NDA <b>Sampling Frequency:</b> 1 every 2 years <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> NDA and field interviews. <b>Comment:</b> NDA performed May 10, 2007.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> CH2M HILL NESHAP quality assurance program.
No active NOC approvals in the AOP for this certification period.		

**J-CWC 001**

WDOH Emission Unit ID : 439  
Page in AOP : EU0439-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
No active Abatement Controls in the AOP for this certification period.		
<b>Required Sampling:</b> Environment Sampling; Ambient air monitors N-449, N-457, N-964, and N-433. <b>Sampling Frequency:</b> Near field ambient monitoring program as specified in the Conditions and Limitations.	Continuous	<b>CDM:</b> Review of information and data in ABCASH.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> NESHAP Quality Assurance Project Plan for Radioactive Air Emissions HNF-EP-0528 specifies the hardware and methods used to sample and the analytical methods used in the laboratory.

Requirement	Compliance Status	Compliance Determination Method
<p align="center">Permit: AIR 06-1019 - A Issue Date:10-05-06 Effective Date:10-05-06            NOC: Central Waste Complex (CWC) Operations            WDOH NOC ID: 654 Date In AOP: 01-01-07 Page in AOP: EU0439-001</p>		
<p>The total abated emission limit for this Notice of Construction is limited to 2.40E-05 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).</p>	Continuous	CDM: Annual compliance evaluation.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>the process of managing five primary types of waste: low-level (LLW), low-level mixed (LLMW), transuranic (TRU), TRU-mixed waste and Toxic Substance Control Act (TSCA) regulated waste. The LLW typically contains rags, paper, rubber gloves, disposal supplies, tools, industrial waste (e.g., failed equipment), solidified wastes that are contaminated with radioactive material. This waste is considered LLW if it contains radioactive material and is not classified as TRU waste, high-level waste, or spent nuclear fuel.</p> <p>TRU and TRU-mixed waste typically contains rags, paper, rubber gloves, disposable supplies, tools, industrial waste (e.g., failed equipment), solidified process byproducts, and laboratory wastes that are contaminated with TRU material. This waste must contain at least 100 nCi of TRU material per gram of waste or it is considered LLW. The TRU waste accepted by CWC may contain varying concentrations of TRU radionuclides and limited amounts of non-TRU radionuclides. With some exceptions allowed based on safety analysis, the TRU content of waste containers is generally limited to 53 239/240 Pu dose equivalent curies (DE-Ci), where the DE-Ci is derived by multiplying the isotopic composition (i.e., weight fractions of the various TRU isotopes) by the specific activities of each isotope, and then converting that number with corrections factors taken from the Hanford Site Solid Waste Acceptance Criteria. The DE-Ci unit is designed to control inhalation dose impacts independent of radionuclide type. The radionuclides Pu-39 and Pu-240 are considered equivalent and are combined for calculation purposes.</p> <p>The unabated emissions shall be tracked by DE curies.</p> <p>The CWC stores low-level (LLW), low-level mixed (LLMW), transuranic (TRU), and TRU-mixed waste.</p> <p>The CWC is designed for the receipt and storage of contact-handled waste packages, which are defined as packages having surface dose rate of less than 2 mSv/h (200 mrem/h). Although packages up to 200 mrem/h can be stored at CWC, an operation limit of 1 mSv/h (100 mrem/h) has been established. Each waste package is characterized before receipt and based on this information; incompatible forms of waste are physically segregated.</p> <p>CWC personnel receive and inspect waste packages at the Waste Receiving and Staging Area. Transport off-load operations are performed by hand truck, forklift, or crane by qualified personnel. Packages are transported, generally by forklift to the mixed waste storage pad and then to the assigned facility/area. Alternatively, waste packages may be received, inspected, and unloaded at the specific facility/area where waste will be stored.</p> <p>Waste containers are not opened during normal operations at the CWC buildings. Under normal operating conditions there is no airborne</p>	Continuous	CDM: Facility procedures demonstrate that activities at CWC are as described in the NOC.

Requirement	Compliance Status	Compliance Determination Method																																																																						
<p>release of radioactive material expected from opening waste containers.</p> <p>Inventories of TRU content, non-TRU radionuclides, and hazardous waste constituents are controlled at all waste storage facilities at the CWC. The inventory control system ensures that each building, building quadrant, or module will comply with its established inventory limit.</p> <p>TRU waste containers are generally equipped with a pressure relief vent device, such as the NucFil filter. This filter allows the release of any gases that may be produced as a result of radiolysis inside the container, while preventing release of any particulate matter.</p> <p>Waste shipments are transported to the Waste Receiving and Staging Area where the waste containers are radiologically surveyed and the exterior visually inspected for physical integrity. Waste records are checked for completeness and accuracy in accordance with procedures that provide instructions for performing detailed entry-by-entry reviews of waste records. To the extent practicable, this work is performed before unloading. However, partial unloading of a shipment may be necessary to complete a thorough survey and inspection. Verification of container contents, which may involve the opening of containers and sampling of waste contents, is performed at a facility separate from the CWC (e.g., T-Plant).</p> <p>Waste packages meeting all acceptance criteria are accepted for storage. Non-compliant waste packages (e.g., with paperwork errors or omissions and damaged containers) are held until the non-compliant condition is corrected to the satisfaction of the responsible Solid Waste Manager or designee.</p> <p>To detect leaking or deteriorating containers, or deterioration of the containment system, all waste containers are inspected in accordance with regulatory requirements.</p> <p>PermaCon unit:</p> <p>This approval also allows the placement of a modular containment PermaCon unit within the 2404WC Building (or similar CWC building) for the purpose of sampling the head space gas within solid waste storage containers.</p>																																																																								
<p>The PTE for this project as determined under WAC 246-247-030(21a-e) [as specified in the application] is 4.80E-02 mrem/year.</p> <p>Approved are the associated potential release rates (Curies/year) of:</p> <p>DE-0    9.38E-03    Liquid/Particulate Solid WAC 246-247-030 (21) (e)</p> <p>The radioactive isotopes identified for this emission unit are (no quantity specified):</p> <table border="0"> <tr> <td>Ac-228</td> <td>Am-241</td> <td>Am-243</td> <td>Ar-41</td> <td>Ba-137</td> </tr> <tr> <td>Bi-212</td> <td>Bi-214</td> <td>C-14</td> <td>Ce-141</td> <td>Ce-144</td> </tr> <tr> <td>Cf-252</td> <td>Cm-242</td> <td>Cm-243</td> <td>Cm-244</td> <td>Co-58</td> </tr> <tr> <td>Co-60</td> <td>Cr-51</td> <td>Cs-134</td> <td>Cs-137</td> <td>Eu-152</td> </tr> <tr> <td>Eu-154</td> <td>Eu-155</td> <td>Fe-59</td> <td>H-3</td> <td>I-129</td> </tr> <tr> <td>I-131</td> <td>K-40</td> <td>Kr-85</td> <td>Mn-54</td> <td>Nb-95</td> </tr> <tr> <td>Nb-237</td> <td>Pb-212</td> <td>Pb-214</td> <td>Pm-147</td> <td>Po-210</td> </tr> <tr> <td>Po-212</td> <td>Po-216</td> <td>Pu-238</td> <td>Pu-239</td> <td>Pu-240</td> </tr> <tr> <td>Pu-241</td> <td>Pu-242</td> <td>Ra-224</td> <td>Ra-226</td> <td>Rn-220</td> </tr> <tr> <td>Ru-103</td> <td>Ru-106</td> <td>Sb-124</td> <td>Sb-125</td> <td>Sn-113</td> </tr> <tr> <td>Sr-89</td> <td>Sr-90</td> <td>Tc-99</td> <td>Th-228</td> <td>Th-232</td> </tr> <tr> <td>Th-234</td> <td>Tl-208</td> <td>U-232</td> <td>U-233</td> <td>U-234</td> </tr> <tr> <td>U-235</td> <td>U-236</td> <td>U-238</td> <td>Y-90</td> <td>Zn-65</td> </tr> <tr> <td>Zr-95</td> <td></td> <td></td> <td></td> <td></td> </tr> </table> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this</p>	Ac-228	Am-241	Am-243	Ar-41	Ba-137	Bi-212	Bi-214	C-14	Ce-141	Ce-144	Cf-252	Cm-242	Cm-243	Cm-244	Co-58	Co-60	Cr-51	Cs-134	Cs-137	Eu-152	Eu-154	Eu-155	Fe-59	H-3	I-129	I-131	K-40	Kr-85	Mn-54	Nb-95	Nb-237	Pb-212	Pb-214	Pm-147	Po-210	Po-212	Po-216	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Ra-224	Ra-226	Rn-220	Ru-103	Ru-106	Sb-124	Sb-125	Sn-113	Sr-89	Sr-90	Tc-99	Th-228	Th-232	Th-234	Tl-208	U-232	U-233	U-234	U-235	U-236	U-238	Y-90	Zn-65	Zr-95					<p>Continuous</p>	<p>CDM: Annual compliance evaluation.</p>
Ac-228	Am-241	Am-243	Ar-41	Ba-137																																																																				
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Eu-154	Eu-155	Fe-59	H-3	I-129																																																																				
I-131	K-40	Kr-85	Mn-54	Nb-95																																																																				
Nb-237	Pb-212	Pb-214	Pm-147	Po-210																																																																				
Po-212	Po-216	Pu-238	Pu-239	Pu-240																																																																				
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Requirement	Compliance Status	Compliance Determination Method
<p>approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the AIR Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>		
<p>Container inventory shall be tracked (logged) using the SWITS database.</p>	Continuous	<p>CDM: Procedure WMP-370-5.01, SWITS Data Entry for Waste.</p>
<p>Periodic confirmatory sampling is required. It must consist of: sampling quarterly using a portable sampler for a two-week interval inside the CWC building (excluding outdoor pads) containing vented containers with the highest cumulative inventory of DE curies during the quarter sampled. (Samples will be handled following the applicable sections of 40 CFR 61, Appendix B, Method 114).</p>	Continuous	<p>CDM: Solid Waste Storage and Disposal Radiological Control Scheduled Radiation Survey Task Description SWP-Q101.</p>
<p>The facility must maintain a log in an approved format (SWITS database) for this activity or emission unit.</p>	Continuous	<p>CDM: Procedure WMP-370-5.01, SWITS Data Entry for Waste.</p>
<p>The required controls are:</p> <p>Emissions control for vented containers within the CWC will consist of NucFil {tm} filters. (Under normal operating conditions, non-vented containers are not expected to produce radioactive emissions.)</p> <p>A NucFil {tm} filter consists of a porous carbon/carbon composite of non-activated carbon fibers housed in stainless steel that as a minimum, restricts the release of 99.95% of particles with a mean 0.3 microns in size.</p> <p>In addition, housekeeping (e.g., decontamination and replacing leaking containers as needed) and frequent smears throughout the CWC will be used to ensure that the emission control equipment is working properly. Smears that exceed 20 dpm/100 sqcm for alpha and 1,000 dpm/100 sqcm for beta/gamma contamination will be investigated to determine the cause of the contamination and appropriate corrective actions will be implemented.</p>	Continuous	<p>CDM:</p> <ol style="list-style-type: none"> <li>1) HNF-EP-0063, Hanford Site Solid Waste Acceptance Criteria</li> <li>2)HNF-5173, PHMC Radiological Control Manual</li> </ol> <p>Comment:</p> <ol style="list-style-type: none"> <li>1) Requires filters for venting containers.</li> <li>2) Describes corrective actions for positive smears.</li> </ol>
<p>The radioactive isotopes identified in condition 3 represent all of the significant radionuclides historically present at the Central Waste Complex (CWC), including</p>	Not Applicable	<p>CDM: No action is conveyed to the permittee by this condition. It conveys information that forms part of the basis</p>

Requirement	Compliance Status	Compliance Determination Method
some that are not significant. Any radionuclide on the chart of the nuclides could be present or received at CWC in the future. Periodic confirmatory measurements to verify low emissions are performed by taking a two-week air sample on a quarterly basis and analyzing for total alpha and total beta. Although any radionuclide could be present for conservatism all alpha is assumed to be An-241 and all beta is assumed to be Cs-137 for dose calculation estimates.		for the PTE calculations.

**300 Area Emissions**

WDOH Emission Unit ID : 443

Page in AOP : EU0443-001

EMISSION UNIT DID NOT OPERATE DURING CY 2007 SEE TABLE 2

<p>Permit: AIR 06-1039 <b>Issue Date:</b>10-05-06 <b>Effective Date:</b>10-05-06  <b>NOC:</b> 300 Area Excavation Activities  <b>WDOH NOC ID:</b> 684 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0443-001  NOC NOT UTILIZED DURING CY 2007 SEE <u>TABLE 3</u></p>
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**Sitewide Type-1, 2, 3 - Roof Replacement**

WDOH Emission Unit ID : 447

Page in AOP : EU0447-001

EMISSION UNIT DID NOT OPERATE DURING CY 2007 SEE TABLE 2

<p>Permit: AIR 06-1030 - A <b>Issue Date:</b>10-05-06 <b>Effective Date:</b>10-05-06  <b>NOC:</b> Roof Replacement Activities Involving Radioactive Contamination at Facilities on the Central Plateau  <b>WDOH NOC ID:</b> 670 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0447-003  NOC NOT UTILIZED DURING CY 2007 SEE <u>TABLE 3</u></p>
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**Sitewide Type-1, 2, 3 - Tank Farms**

WDOH Emission Unit ID : 447

Page in AOP : EU0447-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<p><b>Zone or Area:</b>  <b>Abatement Technology:</b> HEPA  <b>Required Units:</b> 1  <b>Add'l Description:</b> Type-1</p>	Continuous	CDM: Field interviews.
<p><b>Zone or Area:</b>  <b>Abatement Technology:</b> HEPA  <b>Required Units:</b> 1</p>	Continuous	CDM: Field interviews.  <b>Comment:</b> The Type-2 and Type-3 did

Requirement	Compliance Status	Compliance Determination Method
<b>Add'l Description:</b> Type-2 and Type-3		not operate during the reporting period.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Charcoal Filter <b>Required Units:</b> 1 <b>Add'l Description:</b> Type-2 and Type-3	Continuous	<b>CDM:</b> Field interviews. <b>Comment:</b> The Type-2 and Type-3 did not operate during the reporting period.
<b>Required Sampling:</b> One of the following methods may be chosen for actual emissions reporting: nondestructive assay, record sampler, or continuous air monitoring, whichever is more appropriate. <b>Sampling Frequency:</b> Annual, unless specified by the NOC. <b>Radionuclide Requiring Measurement:</b> GROSS ALPHA/BETA	Continuous	<b>CDM:</b> Field interviews.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114	Continuous	<b>CDM:</b> CH2M HILL NESHAP quality assurance program.

Permit: AIR 06-1033 - A <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>NOC:</b> Categorical Tank Farm Facility Entry and Surveillance <b>WDOH NOC ID:</b> 673 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0447-005 <b>NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3</b>
Permit: AIR 06-1044 - A <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>NOC:</b> Tank Farm Restoration and Safe Storage <b>WDOH NOC ID:</b> 689 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0447-007 <b>NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3</b>

**Sitewide Type-1, 2, 3 - B Plant**

WDOH Emission Unit ID : 447  
Page in AOP : EU0447-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b> Type-1	Continuous	<b>CDM:</b> Field Interviews.

Requirement	Compliance Status	Compliance Determination Method
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b> Type-2 and Type-3	Not Applicable	<b>CDM:</b> Type-2 and Type-3 units weren't used during the reporting period triggering this requirement.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Charcoal Filter <b>Required Units:</b> 1 <b>Add'l Description:</b> Type-2 and Type-3	Not Applicable	<b>CDM:</b> Type-2 and Type-3 units weren't used during the reporting period triggering this requirement.
<b>Required Sampling:</b> One of the following methods may be chosen for actual emissions reporting: nondestructive assay, record sampler, or continuous air monitoring, whichever is more appropriate. <b>Sampling Frequency:</b> Annual, unless specified by the NOC. <b>Radionuclide Requiring Measurement:</b> GROSS ALPHA/BETA	Continuous	<b>CDM:</b> Smears are taken of the exhaust port.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114	Continuous	<b>CDM:</b> Required sampling and NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528)
Permit: AIR 06-1025 <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 NOC: Portable/Temporary Radionuclide Airborne Emissions Units (PTRAEU) WDOH NOC ID: 664 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0447-001		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 1.91E-05 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).	Continuous	<b>CDM:</b> The Annual Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007.
This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.  Type I PTRAEUs are portable ventilation-filter units. Type II PTRAEUs are mobile sample preparation units. Type III PTRAEUs are mobile screening and analysis units. Each type of PTRAEU is described in the following paragraphs.  Most of the PTRAEUs are portable ventilation-filter units (Type I) with a capacity from approximately 50 to 2,000+ cubic feet per minute exhaust flow rate. The portable ventilation filter units control radionuclide emissions by providing filtered ventilation on sites where work activities potentially could disturb areas with radioactive contamination. Type I units that are vacuums are listed to be used as ventilation units. If the vacuum is used in any other manner/process, the WDOH must approve its use under separate application before the activity commences.  Mobile sample preparation units (Type II) decrease the chance of	Continuous	<b>CDM:</b> Filed interviews and record review.

Requirement	Compliance Status	Compliance Determination Method
<p>unintentional cross-contamination of samples and enhance personnel radiological safety. The sample preparation units enable technicians to remove material from core barrels, homogenize the material, and fill prescribed sample containers for onsite and offsite analysis. In enclosed, self-contained sample preparation units, radiological exposure and interference from environmental conditions (i.e., wind, precipitation, and exhaust fumes) are minimized.</p> <p>Mobile sample screening and analysis units (Type III) provide preliminary screening of samples to determine potential problem areas at a site. The units also screen samples to identify those samples requiring further in-depth analysis. Screening samples decreases the number of samples transported for analysis. The fast turnaround time can provide results for a field situation requiring expeditious response.</p> <p>The source of radionuclides handled by the mobile sample preparation facilities and mobile screening and analysis facilities is contaminated soils and/or liquids extracted from cribs, ditches, ponds, burial sites, and other such areas with surficial soil contamination. An additional source of radionuclides is preparation of radioactive standards to be used for instrument calibration.</p>		
<p>The PTE for this project as determined under WAC 246-247-030(21a-e) [as specified in the application] is 8.90E-02 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Release rates are not listed; emission release rates are controlled by special conditions.</p> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the AIR Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>	Continuous	CDM: Ensured by meeting the conditions of this NOC.
<p>Department of Health reserves the right to request an nondestructive analysis (NDA) after each exhaust job assignment (WAC 246-247-075(3)). The monitoring includes: emission estimates to include the methodology, all monitoring measurement results taken during the operation, copy of all logs submitted to the department on June 30th. One of the following methods may be chosen for actual emissions reporting, nondestructive assay, record sampler, or continuous air monitoring, whichever is more appropriate.</p>	Continuous	CDM: Review PTRAEU logs; see log transmittal, DOE/RL-2008-23.

Requirement	Compliance Status	Compliance Determination Method
Ductwork, seams, and potential release locations on the portable exhauster are to be monitored on a routine basis for potential radionuclide releases according to the NOC. These routine checks should be kept as retrievable records.	Not Applicable	<b>CDM:</b> A configuration with ductwork, seams and potential release locations was not used therefore; implementation of this requirement was not triggered.
The required possession quantity is RHL's calculated for a daily use because many of the activities are of short duration. In calculating the RHL's 0.1 mrem per year criteria will be used as a beginning point and the source term, which can be handled each day, is back calculate.	Not Applicable	<b>CDM:</b> Statement of fact conveying the basis for the PTE.

**Sitewide Type-1, 2, 3 - 219-S**

WDOH Emission Unit ID : 447

Page in AOP : EU0447-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b> Type-1	Continuous	<b>CDM:</b> Field interviews.
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b> Type-2 and Type-3	Continuous	<b>CDM:</b> Field interviews. <b>Comment:</b> The Type-2 and Type-3 did not operate during the reporting period.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Charcoal Filter <b>Required Units:</b> 1 <b>Add'l Description:</b> Type-2 and Type-3	Continuous	<b>CDM:</b> Field interviews. <b>Comment:</b> The Type-2 and Type-3 did not operate during the reporting period.
<b>Required Sampling:</b> One of the following methods may be chosen for actual emissions reporting: nondestructive assay, record sampler, or continuous air monitoring, whichever is more appropriate. <b>Sampling Frequency:</b> Annual, unless specified by the NOC. <b>Radionuclide Requiring Measurement:</b> GROSS ALPHA/BETA	Continuous	<b>CDM:</b> Field interviews.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114	Continuous	<b>CDM:</b> CH2M HILL NESHAP quality assurance program.

Requirement	Compliance Status	Compliance Determination Method
<p align="center">Permit: AIR 06-1025 Issue Date:10-05-06 Effective Date:10-05-06            NOC: Portable/Temporary Radionuclide Airborne Emissions Units (PTRAEU)            WDOH NOC ID: 664 Date In AOP: 01-01-07 Page in AOP: EU0447-001</p>		
<p>The total abated emission limit for this Notice of Construction is limited to 1.91E-05 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).</p>	<p>Continuous</p>	<p>CDM: Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>Type I PTRAEUs are portable ventilation-filter units. Type II PTRAEUs are mobile sample preparation units. Type III PTRAEUs are mobile screening and analysis units. Each type of PTRAEU is described in the following paragraphs.</p> <p>Most of the PTRAEUs are portable ventilation-filter units (Type I) with a capacity from approximately 50 to 2,000+ cubic feet per minute exhaust flow rate. The portable ventilation filter units control radionuclide emissions by providing filtered ventilation on sites where work activities potentially could disturb areas with radioactive contamination. Type I units that are vacuums are listed to be used as ventilation units. If the vacuum is used in any other manner/process, the WDOH must approve its use under separate application before the activity commences.</p> <p>Mobile sample preparation units (Type II) decrease the chance of unintentional cross-contamination of samples and enhance personnel radiological safety. The sample preparation units enable technicians to remove material from core barrels, homogenize the material, and fill prescribed sample containers for onsite and offsite analysis. In enclosed, self-contained sample preparation units, radiological exposure and interference from environmental conditions (i.e., wind, precipitation, and exhaust fumes) are minimized.</p> <p>Mobile sample screening and analysis units (Type III) provide preliminary screening of samples to determine potential problem areas at a site. The units also screen samples to identify those samples requiring further in-depth analysis. Screening samples decreases the number of samples transported for analysis. The fast turnaround time can provide results for a field situation requiring expeditious response.</p> <p>The source of radionuclides handled by the mobile sample preparation facilities and mobile screening and analysis facilities is contaminated soils and/or liquids extracted from cribs, ditches, ponds, burial sites, and other such areas with surficial soil contamination. An additional source of radionuclides is preparation of radioactive standards to be used for instrument calibration.</p>	<p>Continuous</p>	<p>CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>
<p>The PTE for this project as determined under WAC 246-247-030(21a-e) [as specified in the application] is 8.90E-02 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Release rates are not listed; emission release rates are controlled by special conditions.</p>	<p>Continuous</p>	<p>CDM: Field interviews, CH2M HILL work planning/controls/documents/procedures, near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site and/or database.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the AIR Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>		
<p>Department of Health reserves the right to request a nondestructive analysis (NDA) after each exhaust job assignment (WAC 246-247-075(3)). The monitoring includes: emission estimates to include the methodology, all monitoring measurement results taken during the operation, copy of all logs submitted to the department on June 30th. One of the following methods may be chosen for actual emissions reporting, nondestructive assay, record sampler, or continuous air monitoring, whichever is more appropriate.</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents/procedures, and/or database.</p>
<p>Ductwork, seams, and potential release locations on the portable exhausters are to be monitored on a routine basis for potential radionuclide releases according to the NOC. These routine checks should be kept as retrievable records.</p>	Continuous	<p><b>CDM:</b> Field interviews, operating rounds, radiological surveys, RSRs, CH2M HILL work planning/controls/documents, and procedures.</p>
<p>The required possession quantity is RHL's calculated for a daily use because many of the activities are of short duration. In calculating the RHL's 0.1 mrem per year criteria will be used as a beginning point and the source term, which can be handled each day, is back calculate.</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>

**Vented Containers - Tank Farms**  
WDOH Emission Unit ID : 448  
Page in AOP : EU0448-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
No active Abatement Controls in the AOP for this certification period.		

Requirement	Compliance Status	Compliance Determination Method
<p><b>Required Sampling:</b> Environment Sampling  <b>Sampling Frequency:</b> Air-every 2 weeks                      continuous/deposition - annually  <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents/procedures, near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site and/or database.</p>
<p><b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) &amp; WAC 246-247-075(3)  <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)</p>	Continuous	<p><b>CDM:</b> CH2M HILL NESHAP quality assurance program.</p>
<p>Permit: AIR 06-1008 Issue Date:10-05-06 Effective Date:10-05-06 Obsolete Date: 07-02-07                      NOC: Sitewide Vented Container Storage                      WDOH NOC ID: 641 Date In AOP: 01-01-07 Page in AOP: EU0448-001</p>		
Requirement	Compliance Status	Compliance Determination Method
<p>The total abated emission limit for this Notice of Construction is limited to 5.10E-09 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).</p>	Continuous	<p><b>CDM:</b> Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>Containers are used to store mixed and/or radioactive waste generated on and off the Hanford Site. Venting devices are installed when there is the potential for non-radioactive gases (I.e., hydrogen) to be generated as a result of radiolysis.</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>
<p>The PTE for this project as determined under WAC 246-247-030(21a-e) [as specified in the application] is 1.50E-05 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Release rates are not listed; emission release rates are controlled by special conditions.</p> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)). DOE must</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents/procedures, near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site and/or database.</p>

Requirement	Compliance Status	Compliance Determination Method
notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the AIR Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.		
Containers other than drums are also approved if they meet the conditions of this NOC.	Continuous	<b>CDM:</b> Field interviews.
Establishes a categorical As Low As Reasonably Achievable Control Technology (ALARACT) demonstration for existing Hanford Site vented containers.	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are a historical summary or fact, that pertain to actions to be completed in the future, or that pertain to actions required of the agency.
Establishes a categorical Best Available Radionuclide Control Technology (BARCT) demonstration for all future Hanford Site vented containers ( i.e., up to 10,000 vented container units (UVC) based on total unabated emissions and 27,000,000 UVC based on total abated emissions offering less than 0.1mrem/year to the MEI).	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are a historical summary or fact, that pertain to actions to be completed in the future, or that pertain to actions required of the agency.
NucFil(TM) filter or an equivalent filter shall be BARCT and ALARACT. Vent clips are accepted as ALARACT for existing systems to date, however, when conditions require repackaging vent clips shall be replaced by NucFil(TM) or equivalent filters.	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.
Pu239/240 equivalent curies (PE-Ci) represents the radionuclide of concern as discussed in the Hanford Site Solid Waste Acceptance Criteria, WHC-EP-0063, 1994, Westinghouse Hanford Company, Richland Washington.	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are a historical summary or fact, that pertain to actions to be completed in the future, or that pertain to actions required of the agency.
The vented container Latitude and Longitude coordinates (46 degrees 22' 13.8", 119 degrees 16' 12.3") refer to the location resulting in the highest impact to the MEI.	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are a historical summary or fact, that pertain to actions to be completed in the future, or that pertain to actions required of the agency.
These containers are used for storing mixed and or radioactive waste generated on or off Hanford Site.	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are a historical summary or fact,

Requirement	Compliance Status	Compliance Determination Method
		that pertain to actions to be completed in the future, or that pertain to actions required of the agency.
WDOH accepts vent clips as ALARACT since they are no longer installed.	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are a historical summary or fact, that pertain to actions to be completed in the future, or that pertain to actions required of the agency.
<p style="text-align: center;">Permit: AIR 07-701 Issue Date:07-02-07 Effective Date:07-02-07            NOC: Sitewide Vented Container Storage            WDOH NOC ID: 641 Date In AOP: 07-26-07 Page in AOP: EU0448-001</p>		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 3.40E-05 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).	Continuous	<b>CDM:</b> Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site, CY 2007.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>Containers are used to store mixed and/or radioactive waste generated on and off the Hanford Site. Venting devices are installed when there is the potential for non-radioactive gases (I.e., hydrogen) to be generated as a result of radiolysis.</p>	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.
<p>The PTE for this project as determined under WAC 246-247-030(21a-e) [as specified in the application] is 1.00E-01 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Release rates are not listed; emission release rates are controlled by special conditions.</p> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a</p>	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents/procedures, near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site and/or database.

Requirement	Compliance Status	Compliance Determination Method
<p>NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the AIR Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>		
<p>Containers other than drums are also approved if they meet the conditions of this NOC.</p>	Continuous	<b>CDM:</b> Field interviews.
<p>Establishes a categorical As Low As Reasonably Achievable Control Technology (ALARACT) demonstration for existing Hanford Site vented containers.</p>	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are a historical summary or fact, that pertain to actions to be completed in the future, or that pertain to actions required of the agency.
<p>Establishes a categorical Best Available Radionuclide Control Technology (BARCT) demonstration for all future Hanford Site vented containers ( i.e., up to 6667 vented container units (UVC) based on a total abated emissions offering less than 3.4E-05 mrem/year to the MEI). (WAC 246-247-040 (5))</p>	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are a historical summary or fact, that pertain to actions to be completed in the future, or that pertain to actions required of the agency.
<p>NucFil(TM) filter or an equivalent filter shall be BARCT and ALARACT. Vent clips are accepted as ALARACT for existing systems to date, however, when conditions require repackaging vent clips shall be replaced by NucFil(TM) or equivalent filters.</p>	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.
<p>Pu239/240 equivalent curies (PE-Ci) represents the radionuclide of concern as discussed in the Hanford Site Solid Waste Acceptance Criteria, WHC-EP-0063.</p>	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are a historical summary or fact, that pertain to actions to be completed in the future, or that pertain to actions required of the agency.
<p>The vented container Latitude and Longitude coordinates (46 degrees 22' 13.8", 119 degrees 16' 12.3") refer to the location resulting in the highest impact to the MEI.</p>	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are a historical summary or fact,

Requirement	Compliance Status	Compliance Determination Method
		that pertain to actions to be completed in the future, or that pertain to actions required of the agency.
These containers are used for storing mixed and or radioactive waste generated on or off Hanford Site.	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are a historical summary or fact, that pertain to actions to be completed in the future, or that pertain to actions required of the agency.
WDOH accepts vent clips as ALARACT since they are no longer installed.	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are a historical summary or fact, that pertain to actions to be completed in the future, or that pertain to actions required of the agency.

**Vented Containers - T Plant Complex**

WDOH Emission Unit ID : 448

Page in AOP : EU0448-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
No active Abatement Controls in the AOP for this certification period.		
<b>Required Sampling:</b> Environment Sampling <b>Sampling Frequency:</b> Air-every 2 weeks continuous/deposition - annually <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> Review of the data in ABCASH collected from the near-facility monitoring program.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)	Continuous	<b>CDM:</b> NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528) specifies the hardware and methods used to sample and the analytical methods used in the laboratory.

Requirement	Compliance Status	Compliance Determination Method
Permit: AIR 07-701 <b>Issue Date:</b> 07-02-07 <b>Effective Date:</b> 07-02-07 <b>NOC:</b> Sitewide Vented Container Storage <b>WDOH NOC ID:</b> 641 <b>Date In AOP:</b> 07-26-07 <b>Page in AOP:</b> EU0448-001		
<p>The total abated emission limit for this Notice of Construction is limited to 3.40E-05 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).</p>	Continuous	<p><b>CDM:</b> Data from Near-facility ambient air monitoring network reported in the Annual Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>Containers are used to store mixed and/or radioactive waste generated on and off the Hanford Site. Venting devices are installed when there is the potential for non-radioactive gases (I.e., hydrogen) to be generated as a result of radiolysis.</p>	Continuous	<p><b>CDM:</b> HNF-EP-0063, Hanford Site Solid Waste Acceptance Criteria.</p>
<p>The PTE for this project as determined under WAC 246-247-030(21a-e) [as specified in the application] is 1.00E-01 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Release rates are not listed; emission release rates are controlled by special conditions.</p> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the AIR Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>	Continuous	<p><b>CDM:</b> Annual compliance evaluation.</p>
<p>Containers other than drums are also approved if they meet the conditions of this NOC.</p>	Continuous	<p><b>CDM:</b> HNF-EP-0063, Hanford Site Solid Waste Acceptance Criteria.</p>
<p>Establishes a categorical As Low As Reasonably Achievable Control Technology (ALARACT) demonstration for existing Hanford Site vented containers.</p>	Not Applicable	<p><b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are historical summary or fact, that pertain to actions to be complete in</p>

Requirement	Compliance Status	Compliance Determination Method
		the future or that pertain to actions required of the agency.
Establishes a categorical Best Available Radionuclide Control Technology (BARCT) demonstration for all future Hanford Site vented containers ( i.e., up to 6667 vented container units (UVC) based on a total abated emissions offering less than 3.4E-05 mrem/year to the MEI). (WAC 246-247-040 (5))	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are historical summary or fact, that pertain to actions to be complete in the future or that pertain to actions required of the agency.
NucFil(TM) filter or an equivalent filter shall be BARCT and ALARACT. Vent clips are accepted as ALARACT for existing systems to date, however, when conditions require repackaging vent clips shall be replaced by NucFil(TM) or equivalent filters.	Continuous	<b>CDM:</b> HNF-EP-0063, Hanford Site Solid Waste Acceptance Criteria; facility specific safety basis documentation.
Pu239/240 equivalent curies (PE-Ci) represents the radionuclide of concern as discussed in the Hanford Site Solid Waste Acceptance Criteria, WHC-EP-0063.	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are historical summary or fact, that pertain to actions to be complete in the future or that pertain to actions required of the agency.
The vented container Latitude and Longitude coordinates (46 degrees 22' 13.8", 119 degrees 16' 12.3") refer to the location resulting in the highest impact to the MEI.	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are historical summary or fact, that pertain to actions to be complete in the future or that pertain to actions required of the agency.
These containers are used for storing mixed and or radioactive waste generated on or off Hanford Site.	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are historical summary or fact, that pertain to actions to be complete in the future or that pertain to actions required of the agency.
WDOH accepts vent clips as ALARACT since they are no longer installed.	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are historical summary or fact, that pertain to actions to be complete in the future or that pertain to actions required of the agency.

Requirement	Compliance Status	Compliance Determination Method
<p align="center">Permit: AIR 06-1008 Issue Date:10-05-06 Effective Date:10-05-06 Obsolete Date: 07-02-07            NOC: Sitewide Vented Container Storage            WDOH NOC ID: 641 Date In AOP: 01-01-07 Page in AOP: EU0448-001</p>		
<p>The total abated emission limit for this Notice of Construction is limited to 5.10E-09 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).</p>	Continuous	<p><b>CDM:</b> Data from Near-facility ambient air monitoring network reported in the Annual Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>Containers are used to store mixed and/or radioactive waste generated on and off the Hanford Site. Venting devices are installed when there is the potential for non-radioactive gases (I.e., hydrogen) to be generated as a result of radiolysis.</p>	Continuous	<p><b>CDM:</b> HNF-EP-0063, Hanford Site Solid Waste Acceptance Criteria.</p>
<p>The PTE for this project as determined under WAC 246-247-030(21a-e) [as specified in the application] is 1.50E-05 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Release rates are not listed; emission release rates are controlled by special conditions.</p> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the AIR Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>	Continuous	<p><b>CDM:</b> Annual compliance evaluation.</p>

Requirement	Compliance Status	Compliance Determination Method
Containers other than drums are also approved if they meet the conditions of this NOC.	Continuous	<b>CDM:</b> HNF-EP-0063, Hanford Site Solid Waste Acceptance Criteria.
Establishes a categorical As Low As Reasonably Achievable Control Technology (ALARACT) demonstration for existing Hanford Site vented containers.	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are historical summary or fact, that pertain to actions to be complete in the future or that pertain to actions required of the agency.
Establishes a categorical Best Available Radionuclide Control Technology (BARCT) demonstration for all future Hanford Site vented containers ( i.e., up to 10,000 vented container units (UVC) based on total unabated emissions and 27,000,000 UVC based on total abated emissions offering less than 0.1mrem/year to the MEI).	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are historical summary or fact, that pertain to actions to be complete in the future or that pertain to actions required of the agency.
NucFil(TM) filter or an equivalent filter shall be BARCT and ALARACT. Vent clips are accepted as ALARACT for existing systems to date, however, when conditions require repackaging vent clips shall be replaced by NucFil(TM) or equivalent filters.	Continuous	<b>CDM:</b> HNF-EP-0063, Hanford Site Solid Waste Acceptance Criteria; facility specific safety basis documentation.
Pu239/240 equivalent curies (PE-Ci) represents the radionuclide of concern as discussed in the Hanford Site Solid Waste Acceptance Criteria, WHC-EP-0063, 1994, Westinghouse Hanford Company, Richland Washington.	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are historical summary or fact, that pertain to actions to be complete in the future or that pertain to actions required of the agency.
The vented container Latitude and Longitude coordinates (46 degrees 22' 13.8", 119 degrees 16' 12.3") refer to the location resulting in the highest impact to the MEI.	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are historical summary or fact, that pertain to actions to be complete in the future or that pertain to actions required of the agency.
These containers are used for storing mixed and or radioactive waste generated on or off Hanford Site.	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are historical summary or fact, that pertain to actions to be complete in the future or that pertain to actions required of the agency.
WDOH accepts vent clips as ALARACT since they are no longer installed.	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are historical summary or fact,

Requirement	Compliance Status	Compliance Determination Method
		that pertain to actions to be complete in the future or that pertain to actions required of the agency.

**Vented Containers - WRAP**

WDOH Emission Unit ID : 448

Page in AOP : EU0448-001

EMISSION UNIT DID NOT OPERATE DURING CY 2007 SEE TABLE 2

<p>Permit: AIR 07-701 <b>Issue Date:</b>07-02-07 <b>Effective Date:</b>07-02-07  <b>NOC:</b> Sitewide Vented Container Storage  <b>WDOH NOC ID:</b> 641 <b>Date In AOP:</b> 07-26-07 <b>Page in AOP:</b> EU0448-001  NOC NOT UTILIZED DURING CY 2007 SEE <u>TABLE 3</u></p>
<p>Permit: AIR 06-1008 <b>Issue Date:</b>10-05-06 <b>Effective Date:</b>10-05-06 <b>Obsolete Date:</b> 07-02-07  <b>NOC:</b> Sitewide Vented Container Storage  <b>WDOH NOC ID:</b> 641 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0448-001  NOC NOT UTILIZED DURING CY 2007 SEE <u>TABLE 3</u></p>

**Vented Containers - LLBG**

WDOH Emission Unit ID : 448

Page in AOP : EU0448-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
No active Abatement Controls in the AOP for this certification period.		
<p><b>Required Sampling:</b> Environment Sampling  <b>Sampling Frequency:</b> Air-every 2 weeks continuous/deposition - annually  <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA</p>	Continuous	<p><b>CDM:</b> Review of the data in ABCASH collected from the near-facility monitoring program.</p>
<p><b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) &amp; WAC 246-247-075(3)  <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)</p>	Continuous	<p><b>CDM:</b> NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528) specifies the hardware and methods used to sample and the analytical methods used in the laboratory.</p>

Requirement	Compliance Status	Compliance Determination Method
<p align="center">Permit: AIR 07-701 Issue Date:07-02-07 Effective Date:07-02-07            NOC: Sitewide Vented Container Storage            WDOH NOC ID: 641 Date In AOP: 07-26-07 Page in AOP: EU0448-001</p>		
<p>The total abated emission limit for this Notice of Construction is limited to 3.40E-05 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).</p>	<p>Continuous</p>	<p><b>CDM:</b> Data from Near-facility ambient air monitoring network reported in the Annual Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>Containers are used to store mixed and/or radioactive waste generated on and off the Hanford Site. Venting devices are installed when there is the potential for non-radioactive gases (I.e., hydrogen) to be generated as a result of radiolysis.</p>	<p>Continuous</p>	<p><b>CDM:</b> HNF-EP-0063 and facility procedures.</p>
<p>The PTE for this project as determined under WAC 246-247-030(21a-e) [as specified in the application] is 1.00E-01 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Release rates are not listed; emission release rates are controlled by special conditions.</p> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEL, or greater than 25% of the TEDE to the MEL after controls. (WAC 246-247-110(9)). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the AIR Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>	<p>Continuous</p>	<p><b>CDM:</b> Annual compliance evaluations.</p>
<p>Containers other than drums are also approved if they meet the conditions of this NOC.</p>	<p>Continuous</p>	<p><b>CDM:</b> HNF-EP-0063, Hanford Site Solid Waste Acceptance Criteria</p>
<p>Establishes a categorical As Low As Reasonably Achievable Control Technology (ALARACT) demonstration for existing Hanford Site vented containers.</p>	<p>Not Applicable</p>	<p><b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are historical summary or fact, that pertain to action to be</p>

Requirement	Compliance Status	Compliance Determination Method
		complete in the future or that pertain to actions required of the agency.
Establishes a categorical Best Available Radionuclide Control Technology (BARCT) demonstration for all future Hanford Site vented containers ( i.e., up to 6667 vented container units (UVC) based on a total abated emissions offering less than 3.4E-05 mrem/year to the MEI). (WAC 246-247-040 (5))	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are historical summary or fact, that pertain to action to be complete in the future or that pertain to actions required of the agency.
NucFil(TM) filter or an equivalent filter shall be BARCT and ALARACT. Vent clips are accepted as ALARACT for existing systems to date, however, when conditions require repackaging vent clips shall re replaced by NucFil(TM) or equivalent filters.	Continuous	<b>CDM:</b> HNF-EP-0063, Hanford Site Solid Waste Acceptance Criteria.
Pu239/240 equivalent curies (PE-Ci) represents the radionuclide of concern as discussed in the Hanford Site Solid Waste Acceptance Criteria, WHC-EP-0063.	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are historical summary or fact, that pertain to action to be complete in the future or that pertain to actions required of the agency.
The vented container Latitude and Longitude coordinates (46 degrees 22' 13.8", 119 degrees 16' 12.3") refer to the location resulting in the highest impact to the MEI.	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are historical summary or fact, that pertain to action to be complete in the future or that pertain to actions required of the agency.
These containers are used for storing mixed and or radioactive waste generated on or off Hanford Site.	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are historical summary or fact, that pertain to action to be complete in the future or that pertain to actions required of the agency.
WDOH accepts vent clips as ALARACT since they are no longer installed.	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are historical summary or fact, that pertain to action to be complete in the future or that pertain to actions required of the agency.

Requirement	Compliance Status	Compliance Determination Method
<p align="center">Permit: AIR 06-1008 Issue Date:10-05-06 Effective Date:10-05-06 Obsolete Date: 07-02-07            NOC: Sitewide Vented Container Storage            WDOH NOC ID: 641 Date In AOP: 01-01-07 Page in AOP: EU0448-001</p>		
<p>The total abated emission limit for this Notice of Construction is limited to 5.10E-09 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).</p>	Continuous	<p>CDM: Data from Near-facility ambient air monitoring network reported in the Annual Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>Containers are used to store mixed and/or radioactive waste generated on and off the Hanford Site. Venting devices are installed when there is the potential for non-radioactive gases (I.e., hydrogen) to be generated as a result of radiolysis.</p>	Continuous	<p>CDM: HNF-EP-0063 and facility procedures.</p>
<p>The PTE for this project as determined under WAC 246-247-030(21a-e) [as specified in the application] is 1.50E-05 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Release rates are not listed; emission release rates are controlled by special conditions.</p> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the AIR Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>	Continuous	<p>CDM: Annual compliance evaluation.</p>
<p>Containers other than drums are also approved if they meet the conditions of this NOC.</p>	Continuous	<p>CDM: HNF-EP-0063, Hanford Site Solid Waste Acceptance Criteria.</p>
<p>Establishes a categorical As Low As Reasonably Achievable Control Technology (ALARACT) demonstration for existing Hanford Site vented containers.</p>	Not Applicable	<p>CDM: Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are historical summary or fact, that pertain to action to be</p>

Requirement	Compliance Status	Compliance Determination Method
		complete in the future or that pertain to actions required of the agency.
Establishes a categorical Best Available Radionuclide Control Technology (BARCT) demonstration for all future Hanford Site vented containers ( i.e., up to 10,000 vented container units (UVC) based on total unabated emissions and 27,000,000 UVC based on total abated emissions offering less than 0.1mrem/year to the MEI).	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are historical summary or fact, that pertain to action to be complete in the future or that pertain to actions required of the agency.
NucFil(TM) filter or an equivalent filter shall be BARCT and ALARACT. Vent clips are accepted as ALARACT for existing systems to date, however, when conditions require repackaging vent clips shall re replaced by NucFil(TM) or equivalent filters.	Continuous	<b>CDM:</b> HNF-EP-0063, Hanford Site Solid Waste Acceptance Criteria.
Pu239/240 equivalent curies (PE-Ci) represents the radionuclide of concern as discussed in the Hanford Site Solid Waste Acceptance Criteria, WHC-EP-0063, 1994, Westinghouse Hanford Company, Richland Washington.	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are historical summary or fact, that pertain to action to be complete in the future or that pertain to actions required of the agency.
The vented container Latitude and Longitude coordinates (46 degrees 22' 13.8", 119 degrees 16' 12.3") refer to the location resulting in the highest impact to the MEI.	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are historical summary or fact, that pertain to action to be complete in the future or that pertain to actions required of the agency.
These containers are used for storing mixed and or radioactive waste generated on or off Hanford Site.	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are historical summary or fact, that pertain to action to be complete in the future or that pertain to actions required of the agency.
WDOH accepts vent clips as ALARACT since they are no longer installed.	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are historical summary or fact, that pertain to action to be complete in the future or that pertain to actions required of the agency.

**200 Area ISA**  
WDOH Emission Unit ID : 454  
Page in AOP : EU0454-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
No active Abatement Controls in the AOP for this certification period.		
<b>Required Sampling:</b> Smear Survey <b>Sampling Frequency:</b> Annual	Continuous	<b>CDM:</b> Radiological Survey Report CB070245.
<b>Federal and State Regulatory Requirement:</b> WAC 246-247-075(3)	Continuous	<b>CDM:</b> Radiological Survey Report CB070245.
<b>Permit:</b> AIR 06-1015 <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>NOC:</b> Construction and Operation of the 200 Area Interim Storage Area <b>WDOH NOC ID:</b> 650 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0454-001		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 1.92E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).	Continuous	<b>CDM:</b> The Annual Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The construction and operation of the 200 Area ISA. The 200 Area ISA will be constructed and operated for the interim storage of non-defense production reactor SNF in dry cask storage systems (DCSSs). [Note: Dry cask storage system is a generic term referring to the various storage systems employed for SNF storage at the 200 Area ISA and does not refer to a specific storage system.]</p> <p>Dry Cask Storage System Interim Storage</p> <p>Once the DCSSs are prepared for interim storage the systems can be transferred to the 200 Area ISA for interim storage. Up to sixty Interim Storage Casks (ISCs) storing FFTF SNF, 7 NAC-1 casks storing LWR SNF, and 12 NRF TRIGA casks and 2 DOT-6M containers storing TRIGA SNF will be required for storage at the 200 Area ISA. Each of the dry cask storage systems will be transported via road to the 200 Area ISA and unloaded using a mobile crane. Each DCSS will be placed at a specific location within the 200 Area ISA.</p> <p>Dry Cask Storage System Equipment</p> <p>Different DCSSs are utilized for the different SNF types to be stored at the 200 Area ISA to accommodate the particular characteristics of the SNF. The FFTF SNF DCSS, the NRF TRIGA SNF DCSS, and the LWR SNF DCSS.</p>	Continuous	<b>CDM:</b> Process Standard 331-PS-418, 200 East Area Interim Storage Area.

Requirement	Compliance Status	Compliance Determination Method
<p>200 Area ISA Design and Construction</p> <p>The 200 Area ISA consists of concrete pads, perimeter fencing and lighting, access for transporters and mobile cranes, and conduit for potential future electrical service and instrumentation. This construction will not involve contaminated items. The 200 Area ISA will be situated within the current CSB construction site. This site is currently not a radiological area nor does it contain an underground radioactive material area. No contaminated excavation will be involved.</p>		
<p>The PTE for this project as determined under WAC 246-247-030(21a-e) [as specified in the application] is <math>1.92E-03</math> mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Am-241 2.65E-05 Liquid/Particulate Solid WAC 246-247-030 (21) (a)</p> <p>Am-242 1.11E-06 Liquid/Particulate Solid WAC 246-247-030 (21) (a)</p> <p>Am-242 m 1.12E-06 Liquid/Particulate Solid WAC 246-247-030 (21) (a)</p> <p>Ba-137m 1.18E-03 Liquid/Particulate Solid WAC 246-247-030 (21) (a)</p> <p>C-14 5.75E-03 Liquid/Particulate Solid WAC 246-247-030 (21) (a)</p> <p>Ce-144 1.92E-04 Liquid/Particulate Solid WAC 246-247-030 (21) (a)</p> <p>Cm-242 1.21E-06 Liquid/Particulate Solid WAC 246-247-030 (21) (a)</p> <p>Co-60 1.07E+03 Liquid/Particulate Solid WAC 246-247-030 (21) (a)</p> <p>Cs-134 1.56E-04 Liquid/Particulate Solid WAC 246-247-030 (21) (a)</p> <p>Cs-137 1.25E-03 Liquid/Particulate Solid WAC 246-247-030 (21) (a)</p> <p>Eu-154 3.30E-05 Liquid/Particulate Solid WAC 246-247-030 (21) (a)</p> <p>Eu-155 1.21E-04 Liquid/Particulate Solid WAC 246-247-030 (21) (a)</p> <p>Fe-55 1.01E-03 Liquid/Particulate Solid WAC 246-247-030 (21) (a)</p> <p>H-3 3.62E+00 Gas WAC 246-247-030 (21) (a)</p> <p>I-129 3.07E-04 Gas WAC 246-247-030 (21) (a)</p> <p>Kr-85 3.07E+01 Gas WAC 246-247-030 (21) (a)</p> <p>Mn-54 9.55E-04 Liquid/Particulate Solid WAC 246-247-030 (21) (a)</p> <p>Ni-63 9.18E-05 Liquid/Particulate Solid WAC 246-247-030 (21) (a)</p> <p>Np-237 1.15E-09 Liquid/Particulate Solid WAC 246-247-030 (21) (a)</p> <p>Pm-147 9.64E-04 Liquid/Particulate Solid WAC 246-247-030 (21) (a)</p> <p>Pr-144 4.15E+05 Liquid/Particulate Solid WAC 246-247-030 (21) (a)</p> <p>Pu-238 1.30E-05 Liquid/Particulate Solid WAC 246-247-030 (21) (a)</p> <p>Pu-239 5.56E-05 Liquid/Particulate Solid WAC 246-247-030 (21) (a)</p> <p>Pu-240 4.81E-05 Liquid/Particulate Solid WAC 246-247-030 (21) (a)</p> <p>Pu-241 1.79E-03 Liquid/Particulate Solid WAC 246-247-030 (21) (a)</p> <p>Rh-106 5.51E-04 Liquid/Particulate Solid WAC 246-247-030 (21) (a)</p>	<p>Continuous</p>	<p>CDM: Storage on the ISA has not increased or decreased for 2007, therefore the APQ has not changed.</p>

Requirement	Compliance Status	Compliance Determination Method																																			
<p>Ru-106 5.51E-04 Liquid/Particulate Solid WAC 246-247-030 (21) (a) Sb-125 1.21E-04 Liquid/Particulate Solid WAC 246-247-030 (21) (a) Sm-151 5.15E-05 Liquid/Particulate Solid WAC 246-247-030 (21) (a) Sr-90 4.55E-04 Liquid/Particulate Solid WAC 246-247-030 (21) (a) Tc-99 1.83E-07 Liquid/Particulate Solid WAC 246-247-030 (21) (a) Te-125 m 2.95E-05 Liquid/Particulate Solid WAC 246-247-030 (21) (a) U-235 9.70E-12 Liquid/Particulate Solid WAC 246-247-030 (21) (a) U-238 1.01E-09 Liquid/Particulate Solid WAC 246-247-030 (21) (a) Y-90 4.55E-04 Liquid/Particulate Solid WAC 246-247-030 (21) (a)</p> <p>The radioactive isotopes identified for this emission unit are (no quantity specified):</p> <table border="0"> <tr> <td>Am-241</td> <td>Am-242</td> <td>Am-242 m</td> <td>Ba-137 m</td> <td>C-14</td> </tr> <tr> <td>Ce-144</td> <td>Cm-242</td> <td>Co-60</td> <td>Cs-134</td> <td>Cs-137</td> </tr> <tr> <td>Eu-154</td> <td>Eu-155</td> <td>Fe-55</td> <td>H-3</td> <td>I-129</td> </tr> <tr> <td>Kr-85</td> <td>Mn-54</td> <td>Ni-63</td> <td>Np-237</td> <td>Pm-147</td> </tr> <tr> <td>Pr-144</td> <td>Pu-238</td> <td>Pu-239</td> <td>Pu-240</td> <td>Pu-241</td> </tr> <tr> <td>Rh-106</td> <td>Ru-106</td> <td>Sb-125</td> <td>Sm-151</td> <td>Sr-90</td> </tr> <tr> <td>Tc-99</td> <td>Te-125 m</td> <td>U-235</td> <td>U-238</td> <td>Y-90</td> </tr> </table> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEL, or greater than 25% of the TEDE to the MEL after controls. (WAC 246-247-110(9)). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the AIR Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>	Am-241	Am-242	Am-242 m	Ba-137 m	C-14	Ce-144	Cm-242	Co-60	Cs-134	Cs-137	Eu-154	Eu-155	Fe-55	H-3	I-129	Kr-85	Mn-54	Ni-63	Np-237	Pm-147	Pr-144	Pu-238	Pu-239	Pu-240	Pu-241	Rh-106	Ru-106	Sb-125	Sm-151	Sr-90	Tc-99	Te-125 m	U-235	U-238	Y-90		
Am-241	Am-242	Am-242 m	Ba-137 m	C-14																																	
Ce-144	Cm-242	Co-60	Cs-134	Cs-137																																	
Eu-154	Eu-155	Fe-55	H-3	I-129																																	
Kr-85	Mn-54	Ni-63	Np-237	Pm-147																																	
Pr-144	Pu-238	Pu-239	Pu-240	Pu-241																																	
Rh-106	Ru-106	Sb-125	Sm-151	Sr-90																																	
Tc-99	Te-125 m	U-235	U-238	Y-90																																	
<p>Any detectable contamination above 2200 dpm/100 cm<sup>2</sup> Beta-Gamma or 220 dpm/100 cm<sup>2</sup> Alpha as a result of the ISA specific monitoring shall be reported to the department.</p>	Continuous	<p><b>CDM:</b> Radiological Survey Report CB-70245. <b>Comment:</b> All smears were less than background levels.</p>																																			
<p>Periodic confirmatory monitoring shall consist of annual smears or swipes of the outer surfaces of the containers using hand held survey instruments capable of detecting contamination above 2200 dpm/100 cm<sup>2</sup> Beta-Gamma or 220 dpm/100 cm<sup>2</sup> Alpha.</p>	Continuous	<p><b>CDM:</b> Process Standard 331-PS-418, 200 East Area Interim Storage Area.</p>																																			
<p>The emission limit for this emission unit is no smearable contamination above 2200 dpm/100 cm<sup>2</sup> Beta-Gamma or 220 dpm/100 cm<sup>2</sup> Alpha using standard portable instruments used, and survey methods followed at Hanford (WAC 246-247-040(5)).</p>	Continuous	<p><b>CDM:</b> Process Standard 331-PS-418, 200 East Area Interim Storage Area.</p>																																			

**Sitewide HEPA Vacuums - Roof Replacement**

WDOH Emission Unit ID : 455

Page in AOP : EU0455-001

EMISSION UNIT DID NOT OPERATE DURING CY 2007 SEE TABLE 2

<p>Permit: AIR 06-1030 - B <b>Issue Date:</b>10-05-06 <b>Effective Date:</b>10-05-06  <b>NOC:</b> Roof Replacement Activities Involving Radioactive Contamination at Facilities on the Central Plateau  <b>WDOH NOC ID:</b> 670 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0455-004  NOC NOT UTILIZED DURING CY 2007 SEE <u>TABLE 3</u></p>
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**Sitewide HEPA Vacuums - Tank Farms**

WDOH Emission Unit ID : 455

Page in AOP : EU0455-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
No active Abatement Controls in the AOP for this certification period.		
<b>Required Sampling:</b> None	Not Applicable	<b>CDM:</b> None
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3)	Continuous	<b>CDM:</b> Near Field Monitoring Program.

Permit: AIR 06-1024 **Issue Date:**10-05-06 **Effective Date:**10-05-06  
**NOC:** HEPA Filtered Vacuum Radioactive Air Emission Units (HVU)  
**WDOH NOC ID:** 663 **Date In AOP:** 01-01-07 **Page in AOP:** EU0455-001

Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 2.50E-05 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).	Continuous	<b>CDM:</b> Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The use of specified HVUs located and operated on the Hanford Site, and represents establishment of unregistered, portable and temporary, insignificant emission units.</p> <p>For the purposes of estimating (modeling) offsite exposures for this application, all applicable HVU emissions at an individual facility (e.g., B Plant Complex, C Tank Farm, SX Tank Farm, T Plant Complex, 100-K East Basin, 100-K West Basin, 324 Building, 340</p>	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.

Requirement	Compliance Status	Compliance Determination Method
<p>Complex, etc.) or activity (e.g., D&amp;D of a building) will be considered as a single emission point for that facility.</p> <p>HVUs are portable cleaners with exhaust flow rates ranging from 50 to 300 cubic feet per minute. The units control radionuclide emissions by providing filtered vacuuming for surfaces that radioactively are contaminated.</p> <p>HVUs fall into two categories of use, those used for the reduction of smearable contamination and those used to reduce fixed contamination. For smearable contamination, the use of HVUs is limited to reduction of contamination on hard surfaces (e.g., concrete, permanently installed metal equipment such as risers, ventilation system components, piping, etc.). Soil matrices are excluded from this NOC. Smearable contamination on these hard surfaces will not exceed limits established in DOE/RL-96-109. These limits, if exceeded, require the affected area to be posted as a high contamination area. The limits are 2,000 disintegrations per minute per 100 square centimeters (dpm/100 cm<sup>2</sup>) alpha contamination and 100,000 dpm/100 cm<sup>2</sup> beta/gamma contamination.</p> <p>An exception to these limits is restricted to spot surface contamination areas found during outdoor radiological field surveys, and to clean up localized, radiologically contaminated material (e.g., dust, dirt, bird droppings, animal feces, insects, spider webs, tumbleweed fragments, etc.). These types of materials could have beta/gamma contamination levels exceeding 1 million dpm/100 cm<sup>2</sup>, but are very localized (i.e., a few square meters, rather than hundreds of square meters) and could occur in contamination areas, buffer zones, and clean zones. This exception does not apply to areas normally posted as high contamination areas.</p> <p>The second category of use is for reduction of fixed contamination, involving the removal and/or penetration of contaminated surfaces. This category of use includes using HVUs and associated shrouded tools for sanding, stripping, spalling, drilling, and cutting operations. Limits in areas of fixed contamination to ensure compliance will be established before these tools are used.</p>		
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 4.97E-02 mrem/year.</p> <p>Approved are the associated potential release rates (Curies/year) of:</p> <p>Alpha-0   3.09E-03   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Alpha release rate for 100 Areas, emission calculations will assume Pu-239/240</p> <p>Alpha-0   2.29E-04   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Alpha release rate for 300 Area, emission calculation will assume Pu-239/240.</p> <p>Alpha-0   3.44E-03   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Alpha release rate for 400 East Area, emission calculation will assume Pu-239/240</p> <p>Alpha-0   4.57E-03   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Alpha release rate for 200 East Area, emission calculation will assume Pu-239/240</p> <p>Alpha-0   7.70E-03   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Alpha release rate for 200 West Area, emission calculation will assume Pu-239/240</p> <p>B/G-0   3.88E-01   Liquid/Particulate Solid   WAC 246-247-</p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents/procedures, near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site and/or database.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>030(21)(a) B/G release rate for 200 West Area, emission calculations will assume Sr-90. B/G-0   1.16E-02   Liquid/Particulate Solid   WAC 246-247-030(21)(a) B/G release rate for 300 Area, emission calculations will assume Sr-90. B/G-0   1.74E-01   Liquid/Particulate Solid   WAC 246-247-030(21)(a) B/G release rate for 400 Area, emission calculations will assume Sr-90. B/G-0   1.56E-01   Liquid/Particulate Solid   WAC 246-247-030(21)(a) B/G release rate for 100 Areas, emission calculations will assume Sr-90. B/G-0   2.30E-01   Liquid/Particulate Solid   WAC 246-247-030(21)(a) B/G release rate for 200 East Area, emission calculations will assume Sr-90.</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <p>Pu-239/240   Sr-90</p> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. WAC 246-247-110(9). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>		
<p>All HEPA vacuum logs shall be submitted to the department on a quarterly basis (beginning with the first quarter of 2002). This submittal shall be to the department 30 days after the end of each quarter.</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents/procedures, and/or database.</p>
<p>Monitoring requirements are as follows: In the event that the exhauster is used on different emission units, the Department of Health reserves the right to request a nondestructive analysis/assay (NDA) after each exhaust job assignment (WAC 246-247-075(3)). The monitoring includes: emission estimates to include the methodology, all monitoring measurement results taken during the operation, copy of all logs kept on site and the summary submitted to the department on June 30th.</p> <p>Log sheets will include the following information: Results of smears on the exhaust ports; Maximum contamination level encountered or analysis</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>

Requirement	Compliance Status	Compliance Determination Method
results, area cleaned, and air emission source constituents if other than plutonium 239 and strontium 90 potential radionuclide releases.		
The approved process is as follows: The HVU's fall into two categories. The first category is the use if the HVU's for the reduction of smearable contamination and the other is to reduce fixed contamination. Soil matrices are excluded from this NOC.	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.
The required controls are described as follows: The HVU's must be field tested annually requiring an aerosol test/efficiency test or equivalent pass/fail criteria of 95.95% using an aerosol defined in ASME N510 or approved equivalent. In addition, the HVU's filtration systems are to be tested whenever the configuration is modified and/or the filtration system is opened. A smear of the exhaust port shall be conducted before and after each use of HVU's. If the exhaust port smear is positive, the unit shall be tagged and removed from service.	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.
This NOC shall be revised no later than September 1, 2002. Revision 2 was received in September, 2002. The NOC application was determined to be incomplete; a new NOC application shall be submitted.	Not Applicable	<b>CDM:</b> N/A <b>Comment:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are a historical summary or fact, that pertain to actions to be completed in the future, or that pertain to actions required of the agency.

**Sitewide HEPA Vacuums - ETF<sup>F</sup>**

WDOH Emission Unit ID : 455

Page in AOP : EU0455-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
No active Abatement Controls in the AOP for this certification period.		
<b>Required Sampling:</b> None	Not Applicable	<b>CDM:</b> No sampling required.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3)	Continuous	<b>CDM:</b> NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528).

Requirement	Compliance Status	Compliance Determination Method
<p align="center">Permit: AIR 06-1024 <b>Issue Date:</b>10-05-06 <b>Effective Date:</b>10-05-06  <b>NOC:</b> HEPA Filtered Vacuum Radioactive Air Emission Units (HVU)  <b>WDOH NOC ID:</b> 663 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0455-001</p>		
<p>The total abated emission limit for this Notice of Construction is limited to 2.50E-05 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).</p>	<p align="center">Continuous</p>	<p><b>CDM:</b> The Annual Radioactive Air Emissions Report for the Hanford Site, Calendar Year 2007.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The use of specified HVUs located and operated on the Hanford Site, and represents establishment of unregistered, portable and temporary, insignificant emission units.</p> <p>For the purposes of estimating (modeling) offsite exposures for this application, all applicable HVU emissions at an individual facility (e.g., B Plant Complex, C Tank Farm, SX Tank Farm, T Plant Complex, 100-K East Basin, 100-K West Basin, 324 Building, 340 Complex, etc.) or activity (e.g., D&amp;D of a building) will be considered as a single emission point for that facility.</p> <p>HVUs are portable cleaners with exhaust flow rates ranging from 50 to 300 cubic feet per minute. The units control radionuclide emissions by providing filtered vacuuming for surfaces that radioactively are contaminated.</p> <p>HVUs fall into two categories of use, those used for the reduction of smearable contamination and those used to reduce fixed contamination. For smearable contamination, the use of HVUs is limited to reduction of contamination on hard surfaces (e.g., concrete, permanently installed metal equipment such as risers, ventilation system components, piping, etc.). Soil matrices are excluded from this NOC. Smearable contamination on these hard surfaces will not exceed limits established in DOE/RL-96-109. These limits, if exceeded, require the affected are to be posted as a high contamination area. The limits are 2,000 disintegrations per minute per 100 square centimeters (dpm/100 cm<sup>2</sup>) alpha contamination and 100,000 dpm/100 cm<sup>2</sup> beta/gamma contamination.</p> <p>An exception to these limits is restricted to spot surface contamination areas found during outdoor radiological field surveys, and to clean up localized, radiologically contaminated material (e.g., dust, dirt, bird droppings, animal feces, insects, spider webs, tumbleweed fragments, etc.). These types of materials could have beta/gamma contamination levels exceeding 1 million dpm/100 cm<sup>2</sup>, but are very localized (i.e., a few square meters, rather than hundreds of square meters) and could occur in contamination areas, buffer zones, and clean zones. This exception does not apply to areas normally posted as high contamination areas.</p> <p>The second category of use is for reduction of fixed contamination, involving the removal and/or penetration of contaminated surfaces. This category of use includes using HVUs and associated shrouded tools for sanding, stripping, spalling, drilling, and cutting operations. Limits in areas of fixed contamination to ensure compliance will be established before these tools are used.</p>	<p align="center">Continuous</p>	<p><b>CDM:</b> The Annual Portable/Temporary Radioactive Air Emissions Unit and HEPA Filtered Emissions Unit Annual Report for Calendar Year 2007. Work planning, work controls, working documents, and procedures.</p> <p><b>Comment:</b> The exhaust flow rates of HVUs are in the annual report. Work documents check contamination levels before work begins.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 4.97E-02 mrem/year.</p> <p>Approved are the associated potential release rates (Curies/year) of:</p> <p>Alpha-0   3.09E-03   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Alpha release rate for 100 Areas, emission calculations will assume Pu-239/240</p> <p>Alpha-0   2.29E-04   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Alpha release rate for 300 Area, emission calculation will assume Pu-239/240.</p> <p>Alpha-0   3.44E-03   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Alpha release rate for 400 East Area, emission calculation will assume Pu-239/240</p> <p>Alpha-0   4.57E-03   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Alpha release rate for 200 East Area, emission calculation will assume Pu-239/240</p> <p>Alpha-0   7.70E-03   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Alpha release rate for 200 West Area, emission calculation will assume Pu-239/240</p> <p>B/G-0   3.88E-01   Liquid/Particulate Solid   WAC 246-247-030(21)(a) B/G release rate for 200 West Area, emission calculations will assume Sr-90.</p> <p>B/G-0   1.16E-02   Liquid/Particulate Solid   WAC 246-247-030(21)(a) B/G release rate for 300 Area, emission calculations will assume Sr-90.</p> <p>B/G-0   1.74E-01   Liquid/Particulate Solid   WAC 246-247-030(21)(a) B/G release rate for 400 Area, emission calculations will assume Sr-90.</p> <p>B/G-0   1.56E-01   Liquid/Particulate Solid   WAC 246-247-030(21)(a) B/G release rate for 100 Areas, emission calculations will assume Sr-90.</p> <p>B/G-0   2.30E-01   Liquid/Particulate Solid   WAC 246-247-030(21)(a) B/G release rate for 200 East Area, emission calculations will assume Sr-90.</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <p>Pu-239/240   Sr-90</p> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. WAC 246-247-110(9). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of</p>	<p>Continuous</p>	<p>CDM: Pre-job calculations as recorded on log sheets.</p>

Requirement	Compliance Status	Compliance Determination Method
notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.		
All HEPA vacuum logs shall be submitted to the department on a quarterly basis (beginning with the first quarter of 2002). This submittal shall be to the department 30 days after the end of each quarter.	Continuous	<b>CDM:</b> HEPA vacuum logs submitted to WDOH.
<p>Monitoring requirements are as follows: In the event that the exhauster is used on different emission units, the Department of Health reserves the right to request a nondestructive analysis/assay (NDA) after each exhaust job assignment (WAC 246-247-075(3)). The monitoring includes: emission estimates to include the methodology, all monitoring measurement results taken during the operation, copy of all logs kept on site and the summary submitted to the department on June 30th.</p> <p>Log sheets will include the following information: Results of smears on the exhaust ports; Maximum contamination level encountered or analysis results, area cleaned, and air emission source constituents if other than plutonium 239 and strontium 90 potential radionuclide releases.</p>	Continuous	<b>CDM:</b> No NDA requested. Quarterly submittal of HEPA VAC logs.
The approved process is as follows: The HVU's fall into two categories. The first category is the use if the HVU's for the reduction of smearable contamination and the other is to reduce fixed contamination. Soil matrices are excluded from this NOC.	Continuous	<b>CDM:</b> Facility specific procedures, work control, and work planning documents.
The required controls are described as follows: The HVU's must be field tested annually requiring an aerosol test/efficiency test or equivalent pass/fail criteria of 95.95% using an aerosol defined in ASME N510 or approved equivalent. In addition, the HVU's filtration systems are to be tested whenever the configuration is modified and/or the filtration system is opened. A smear of the exhaust port shall be conducted before and after each use of HVU's. If the exhaust port smear is positive, the unit shall be tagged and removed from service.	Continuous	<p><b>CDM:</b> Filter test results on file with facility. Work planning, work controls, and work procedures.</p> <p><b>Comment:</b> Smear of exhaust ports are recorded in work procedures.</p>
This NOC shall be revised no later than September 1, 2002. Revision 2 was received in September, 2002. The NOC application was determined to be incomplete; a new NOC application shall be submitted.	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are a historical summary or fact, that pertain to actions to be completed in the future, or that pertain to actions required of the agency.

**Sitewide HEPA Vacuums - TRU Retrieval**

WDOH Emission Unit ID : 455

Page in AOP : EU0455-001

EMISSION UNIT DID NOT OPERATE DURING CY 2007 SEE TABLE 2

<p>Permit: AIR 06-1054 - A <b>Issue Date:</b>10-05-06 <b>Effective Date:</b>10-05-06 <b>Obsolete Date:</b> 03-15-07  <b>NOC:</b> Operation of the Transuranic Waste Retrieval Project  <b>WDOH NOC ID:</b> 700 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0455-006  <b>NOC NOT UTILIZED DURING CY 2007 SEE <u>TABLE 3</u></b></p>
<p>Permit: AIR 07-307 - A <b>Issue Date:</b>03-23-07 <b>Effective Date:</b>03-15-07 <b>Obsolete Date:</b> 10-19-07  <b>NOC:</b> Operation of the Transuranic Waste Retrieval Project  <b>WDOH NOC ID:</b> 719 <b>Date In AOP:</b> 05-03-07 <b>Page in AOP:</b> EU0455-006  <b>NOC NOT UTILIZED DURING CY 2007 SEE <u>TABLE 3</u></b></p>
<p>Permit: AIR 07-1012 - A <b>Issue Date:</b>10-22-07 <b>Effective Date:</b>10-19-07  <b>NOC:</b> Operation of the Transuranic Waste Retrieval Project  <b>WDOH NOC ID:</b> 719 <b>Date In AOP:</b> 12-05-07 <b>Page in AOP:</b> EU0455-006  <b>NOC NOT UTILIZED DURING CY 2007 SEE <u>TABLE 3</u></b></p>

**Sitewide HEPA Vacuums - Central Waste Complex**

WDOH Emission Unit ID : 455

Page in AOP : EU0455-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
No active Abatement Controls in the AOP for this certification period.		
<b>Required Sampling:</b> None	Not Applicable	<b>CDM:</b> No sampling required.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3)	Continuous	<b>CDM:</b> NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528) specifies the hardware and methods used to sample and the analytical methods used in the laboratory.

Requirement	Compliance Status	Compliance Determination Method
<p>Permit: AIR 06-1024 <b>Issue Date:</b>10-05-06 <b>Effective Date:</b>10-05-06  <b>NOC:</b> HEPA Filtered Vacuum Radioactive Air Emission Units (HVU)  <b>WDOH NOC ID:</b> 663 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0455-001</p>		
<p>The total abated emission limit for this Notice of Construction is limited to 2.50E-05 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).</p>	<p>Continuous</p>	<p><b>CDM:</b> Procedure SW-020-030, Operate HEPA Vacuum.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The use of specified HVUs located and operated on the Hanford Site, and represents establishment of unregistered, portable and temporary, insignificant emission units.</p> <p>For the purposes of estimating (modeling) offsite exposures for this application, all applicable HVU emissions at an individual facility (e.g., B Plant Complex, C Tank Farm, SX Tank Farm, T Plant Complex, 100-K East Basin, 100-K West Basin, 324 Building, 340 Complex, etc.) or activity (e.g., D&amp;D of a building) will be considered as a single emission point for that facility.</p> <p>HVUs are portable cleaners with exhaust flow rates ranging from 50 to 300 cubic feet per minute. The units control radionuclide emissions by providing filtered vacuuming for surfaces that radioactively are contaminated.</p> <p>HVUs fall into two categories of use, those used for the reduction of smearable contamination and those used to reduce fixed contamination. For smearable contamination, the use of HVUs is limited to reduction of contamination on hard surfaces (e.g., concrete, permanently installed metal equipment such as risers, ventilation system components, piping, etc.). Soil matrices are excluded from this NOC. Smearable contamination on these hard surfaces will not exceed limits established in DOE/RL-96-109. These limits, if exceeded, require the affected are to be posted as a high contamination area. The limits are 2,000 disintegrations per minute per 100 square centimeters (dpm/100 cm<sup>2</sup>) alpha contamination and 100,000 dpm/100 cm<sup>2</sup> beta/gamma contamination.</p> <p>An exception to these limits is restricted to spot surface contamination areas found during outdoor radiological field surveys, and to clean up localized, radiologically contaminated material (e.g., dust, dirt, bird droppings, animal feces, insects, spider webs, tumbleweed fragments, etc.). These types of materials could have beta/gamma contamination levels exceeding 1 million dpm/100 cm<sup>2</sup>, but are very localized (i.e., a few square meters, rather than hundreds of square meters) and could occur in contamination areas, buffer zones, and clean zones. This exception does not apply to areas normally posted as high contamination areas.</p> <p>The second category of use is for reduction of fixed contamination, involving the removal and/or penetration of contaminated surfaces. This category of use includes using HVUs and associated shrouded tools for sanding, stripping, spalling, drilling, and cutting operations. Limits in areas of fixed contamination to ensure compliance will be established before these tools are used.</p>	<p>Continuous</p>	<p><b>CDM:</b> SW-020-030, Operate HEPA Vacuum.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 4.97E-02 mrem/year.</p> <p>Approved are the associated potential release rates (Curies/year) of:</p> <p>Alpha-0   3.09E-03   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Alpha release rate for 100 Areas, emission calculations will assume Pu-239/240</p> <p>Alpha-0   2.29E-04   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Alpha release rate for 300 Area, emission calculation will assume Pu-239/240.</p> <p>Alpha-0   3.44E-03   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Alpha release rate for 400 East Area, emission calculation will assume Pu-239/240</p> <p>Alpha-0   4.57E-03   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Alpha release rate for 200 East Area, emission calculation will assume Pu-239/240</p> <p>Alpha-0   7.70E-03   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Alpha release rate for 200 West Area, emission calculation will assume Pu-239/240</p> <p>B/G-0   3.88E-01   Liquid/Particulate Solid   WAC 246-247-030(21)(a) B/G release rate for 200 West Area, emission calculations will assume Sr-90.</p> <p>B/G-0   1.16E-02   Liquid/Particulate Solid   WAC 246-247-030(21)(a) B/G release rate for 300 Area, emission calculations will assume Sr-90.</p> <p>B/G-0   1.74E-01   Liquid/Particulate Solid   WAC 246-247-030(21)(a) B/G release rate for 400 Area, emission calculations will assume Sr-90.</p> <p>B/G-0   1.56E-01   Liquid/Particulate Solid   WAC 246-247-030(21)(a) B/G release rate for 100 Areas, emission calculations will assume Sr-90.</p> <p>B/G-0   2.30E-01   Liquid/Particulate Solid   WAC 246-247-030(21)(a) B/G release rate for 200 East Area, emission calculations will assume Sr-90.</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <p>Pu-239/240   Sr-90</p> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. WAC 246-247-110(9). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of</p>	<p>Continuous</p>	<p>CDM: SW-020-030, Operate HEPA Vacuum.</p>

Requirement	Compliance Status	Compliance Determination Method
notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.		
All HEPA vacuum logs shall be submitted to the department on a quarterly basis (beginning with the first quarter of 2002). This submittal shall be to the department 30 days after the end of each quarter.	Continuous	<b>CDM:</b> SW-020-030, Operate HEPA Vacuum.
<p>Monitoring requirements are as follows: In the event that the exhauster is used on different emission units, the Department of Health reserves the right to request a nondestructive analysis/assay (NDA) after each exhaust job assignment (WAC 246-247-075(3)). The monitoring includes: emission estimates to include the methodology, all monitoring measurement results taken during the operation, copy of all logs kept on site and the summary submitted to the department on June 30th.</p> <p>Log sheets will include the following information: Results of smears on the exhaust ports; Maximum contamination level encountered or analysis results, area cleaned, and air emission source constituents if other than plutonium 239 and strontium 90 potential radionuclide releases.</p>	Continuous	<b>CDM:</b> SW-020-030, Operate HEPA Vacuum.
The approved process is as follows: The HVU's fall into two categories. The first category is the use if the HVU's for the reduction of smearable contamination and the other is to reduce fixed contamination. Soil matrices are excluded from this NOC.	Continuous	<b>CDM:</b> SW-020-030, Operate HEPA Vacuum.
The required controls are described as follows: The HVU's must be field tested annually requiring an aerosol test/efficiency test or equivalent pass/fail criteria of 95.95% using an aerosol defined in ASME N510 or approved equivalent. In addition, the HVU's filtration systems are to be tested whenever the configuration is modified and/or the filtration system is opened. A smear of the exhaust port shall be conducted before and after each use of HVU's. If the exhaust port smear is positive, the unit shall be tagged and removed from service.	Continuous	<b>CDM:</b> SW-020-030, Operate HEPA Vacuum.
This NOC shall be revised no later than September 1, 2002. Revision 2 was received in September, 2002. The NOC application was determined to be incomplete, a new NOC application shall be submitted.	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are a historical summary or fact, that pertain to actions to be completed in the future, or that pertain to actions required of the agency.

**W-PORTEX 011**

WDOH Emission Unit ID : 461  
Page in AOP : EU0461-001

EMISSION UNIT DID NOT OPERATE DURING CY 2007 SEE TABLE 2

<p>Permit: AIR 06-1019 - B Issue Date:10-05-06 Effective Date:10-05-06                  NOC: Central Waste Complex (CWC) Operations                  WDOH NOC ID: 654 Date In AOP: 01-01-07 Page in AOP: EU0461-001                  NOC NOT UTILIZED DURING CY 2007 SEE <u>TABLE 3</u></p>
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**J-NONPOINT 012**

WDOH Emission Unit ID : 465  
Page in AOP : EU0465-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
No active Abatement Controls in the AOP for this certification period.		
<p><b>Required Sampling:</b> Near Field Environmental sampling  <b>Sampling Frequency:</b> Air- every 2 weeks continuous/deposition annually  <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA</p>	Continuous	CDM: Review of the data in ABCASH collected from the required near-facility monitoring.
<p><b>Federal and State Regulatory Requirement:</b> WAC 246-247-075(3)  <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114(3)</p>	Continuous	CDM: QA requirements documented in NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528, latest Revision)
<p>Permit: AIR 06-1004 Issue Date:10-05-06 Effective Date:10-05-06                  NOC: Purgewater Modutanks                  WDOH NOC ID: 636 Date In AOP: 01-01-07 Page in AOP: EU0465-001</p>		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 1.50E-04 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).	Continuous	CDM: Radionuclide Air Emissions Report for the Hanford Site Calendar Year 2007.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>Solar evaporation of Hanford Site purgewater. Purgewater is excess</p>	Continuous	CDM: Only the "described" activities are conducted at the 600 Area PSTF based on field walk downs and reasonable inquiry of PSTF environmental compliance officer and

Requirement	Compliance Status	Compliance Determination Method																														
<p>groundwater and other liquids such as drilling fluids and groundwater slurries associated with groundwater activities. It includes liquids generated during groundwater related activities, including but not limited to the following: well drilling, well development, aquifer testing, groundwater sampling and monitoring, well maintenance and decommissioning, decontamination of well drilling and sampling equipment, and groundwater treatability studies.</p> <p>The RL will collect purgewater that contains radionuclides (and/or chemical constituents) in concentrations above established collection criteria and will discharge to the soil any purgewater containing constituents in concentrations lower than the collection criteria. At this time, collected purgewater is stored in the 600 Area Purgewater Storage and Treatment Facility (600 PSTF).</p> <p>Waste Inventory</p> <p>There are presently two 1,000,000-gallon purgewater containment units in the 600 PSTF. Up to four additional units of comparable size may be added to the 600 PSTF, although there are currently no plans for construction of the additional units. If the contained purgewater is allowed to undergo solar evaporation, up to 850,000 gallons of purgewater could evaporate annually from each storage unit.</p> <p>Purgewater samples are analyzed on a regular basis for chemical and radionuclide contamination. Using a sample history since January 1, 1989 from wells, maximum values were assigned for radionuclide content and concentration in purgewater stored in the 600 PSTF. From these waste inventory values, a radionuclide source term was developed for purgewater that will be evaporated from the 600 PSTF.</p> <p>Controls will be implemented to minimize wind suspension of any potentially radioactively contaminated solids that may settle to the bottom of the storage units, thus minimizing the dose potential of particulates. Several options include the use of aerodynamic covers and/or the maintenance of a minimum required liquid level in each unit that has stored purgewater.</p>		<p>operations personnel.</p>																														
<p>The PTE for this project as determined under WAC 246-247-032(21)(a-e) [as specified in the application] is 1.50E-04 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Alpha-0   2.83E-07   Liquid/Particulate Solid   WAC 246-247-032(21)(a)</p> <p>B/G-0   7.39E-01   Liquid/Particulate Solid   WAC 246-247-032(21)(a)</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <table border="0"> <tr> <td>Am-241</td> <td>Be-7</td> <td>C-14</td> <td>Co-58</td> <td>Co-60</td> </tr> <tr> <td>Cs-134</td> <td>Cs-137</td> <td>Eu-152</td> <td>Eu-154</td> <td>Eu-155</td> </tr> <tr> <td>Fe-59</td> <td>H-3</td> <td>I-129</td> <td>K-40</td> <td>Ni-63</td> </tr> <tr> <td>Pu-238</td> <td>Pu-239/240</td> <td>Ra-226</td> <td>Ru-106</td> <td>Sb-125</td> </tr> <tr> <td>Sn-125</td> <td>Sr-89/90</td> <td>Sr-90</td> <td>Tc-99</td> <td>U-234</td> </tr> <tr> <td>U-235</td> <td>U-238</td> <td></td> <td></td> <td></td> </tr> </table> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than</p>	Am-241	Be-7	C-14	Co-58	Co-60	Cs-134	Cs-137	Eu-152	Eu-154	Eu-155	Fe-59	H-3	I-129	K-40	Ni-63	Pu-238	Pu-239/240	Ra-226	Ru-106	Sb-125	Sn-125	Sr-89/90	Sr-90	Tc-99	U-234	U-235	U-238				<p>Continuous</p>	<p>CDM: Reviewed the basis for the PTE to ensure it did not increase.</p>
Am-241	Be-7	C-14	Co-58	Co-60																												
Cs-134	Cs-137	Eu-152	Eu-154	Eu-155																												
Fe-59	H-3	I-129	K-40	Ni-63																												
Pu-238	Pu-239/240	Ra-226	Ru-106	Sb-125																												
Sn-125	Sr-89/90	Sr-90	Tc-99	U-234																												
U-235	U-238																															

Requirement	Compliance Status	Compliance Determination Method
10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. WAC 246-247-110(9). DOE must notify the Department of any changes to potential release rates as required by state of federal regulations including changes that would constitute a significant modification to the AIR Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.		
Controls will be implemented to minimize wind suspension of any potentially radioactively contaminated solids that may settle to the bottom of the storage units.	Continuous	CDM: Field walk downs and reasonable inquiry of PSTF environmental compliance officer and operations personnel.
Purgewater tank controls will be implemented to minimize wind suspension of radioactive solids that may settle to the bottom of the storage tank. They include the use of aerodynamic covers and/or maintenance of a minimum liquid level in each unit. Solids that have settled to the bottom will be wetted to minimize wind suspension. This meets the minimum liquid level requirement.	Continuous	CDM: Field walk downs and reasonable inquiry of PSTF environmental compliance officer and operations personnel.
The maximum impact for the six evaporation units shall be 1.5E-04 millirem per year.	Continuous	CDM: Radionuclide Air Emissions Report for the Hanford Site Calendar Year 2007.

**P-Trench31 001**

WDOH Emission Unit ID : 472

Page in AOP : EU0472-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
No active Abatement Controls in the AOP for this certification period.		
<b>Required Sampling:</b> Smear sample of overflow pipe. <b>Sampling Frequency:</b> Before and after emptying the tank. When the tank is not empty, take a monthly smear (after commencement of bulk waste disposal).	Continuous	CDM: Facility operating and radiological control procedures.
<b>Federal and State Regulatory Requirement:</b> WAC 246-247-075(3)	Continuous	CDM: NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528) specifies the hardware and methods used to sample and the analytical methods used in the laboratory.

Requirement	Compliance Status	Compliance Determination Method
<p align="center">Permit: AIR 06-1023 - A <b>Issue Date:</b>10-05-06 <b>Effective Date:</b>10-05-06  <b>NOC:</b> Trench 31 and 34: Leachate Collection and Storage Tank (LLBG Mixed Waste Disposal)  <b>WDOH NOC ID:</b> 662 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0472-001</p>		
<p>The total abated emission limit for this Notice of Construction is limited to 3.03E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).</p>	Continuous	CDM: Annual Radionuclide Air Emission Report for the Hanford Site, Calendar Year 2007.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>Trenches 31 and 34 shall be used for the disposal of low-level waste, low-level mixed waste, and radioactive waste containing Toxic Substances Control Act regulated polychlorinated biphenyls resulting from current operations across the Hanford Site, cleanup activities across the Hanford Site and from other offsite facilities. Each trench shall provide disposal capacity for approximately 22,000 m<sup>3</sup> (28,000 yd<sup>3</sup>) of waste. Waste to be disposed of in the trenches can consist of contaminated soil and debris (bulk waste), sealed containers, vented containers, and any other type of waste meeting Low Level Burial Grounds (LLBG) waste acceptance criteria.</p> <p>The leachate collection systems for Trenches 31 and 34 share a common design. That design encompasses primary and secondary leachate collection systems. The primary and secondary leachate collection systems are comprised of alternating layers of soils, geomembrane liners, collection pipes, collection sumps, sump pumps, and a single collection tank for each trench. Liquid accumulates under the disposed material in the bottom of each trench in the primary liner of each trench (not exposed directly to atmosphere). When approximately one foot of precipitation of liquid is accumulated in the collection sumps, the pumps are activated to transfer the liquid to the tanks.</p> <p>The leachate collection tanks at Trench 31 and 34 are both above ground. Each tank has a capacity of approximately 10,000 gallons. Both tanks are cylindrical and approximately 8 feet (2.5 meters) in diameter and 24 feet (7.2 meters) long. Both tanks are passively vented via a liquid overflow pipe.</p> <p>For disposal, the liquid will be transferred from the tanks to a tanker truck. Based on past operational experience, it is anticipated that up to approximately 415,000 gallons, per tank, per year could be transferred to the tanker trucks. More than one truck may be used at the same time. The tanker truck(s) shall be fitted with a three-quarter inch vent that will be opened during filling and emptying operations.</p>	Continuous	CDM: Facility operation and radiological control procedures.
<p>The PTE for this project as determined under WAC 246-247-030(21a-e) [as specified in the application] is 6.10E-03 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Pu-239/240   9.74E-05   Liquid/Particulate Solid   WAC 246-247-030(21)(e)</p> <p>U-0   7.00E-04   Liquid/Particulate Solid   WAC 246-247-030(21)(e)</p> <p>Isotopes of U-233/234/235/238.</p>	Continuous	CDM: Accomplished by tracking.

Requirement	Compliance Status	Compliance Determination Method																				
<p>The radioactive isotopes identified for this emission unit are (no quantity specified):</p> <table border="0"> <tr> <td>Am-241</td> <td>C-14</td> <td>Co-60</td> <td>Cs-137</td> <td>Eu-152</td> </tr> <tr> <td>Eu-154</td> <td>Eu-155</td> <td>Na-22</td> <td>Pu-238</td> <td>Pu-239/240</td> </tr> <tr> <td>Ra-226</td> <td>Sr-90</td> <td>Tc-99</td> <td>Th-230</td> <td>Th-232</td> </tr> <tr> <td>U-0</td> <td></td> <td></td> <td></td> <td></td> </tr> </table> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the AIR Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>	Am-241	C-14	Co-60	Cs-137	Eu-152	Eu-154	Eu-155	Na-22	Pu-238	Pu-239/240	Ra-226	Sr-90	Tc-99	Th-230	Th-232	U-0						
Am-241	C-14	Co-60	Cs-137	Eu-152																		
Eu-154	Eu-155	Na-22	Pu-238	Pu-239/240																		
Ra-226	Sr-90	Tc-99	Th-230	Th-232																		
U-0																						
<p>Upon commencement of placing non-containerized radioactively contaminated waste in Trench 31 and/or Trench 34, a periodic confirmatory measurement (PCM) activity shall be implemented. This PCM activity shall consist of smearing the orifice(s) of the liquid overflow pipe(s) before and after emptying the tank(s). During those months when the tank(s) is/are not emptied, a smear shall be taken monthly. After the accumulation of one year's worth of smear data.</p>	Continuous	CDM: Facility operation and radiological control procedures.																				
<p>The radioactive isotopes identified for this emission unit represent all of the significant radionuclides historically present for the leachate collection tank 31, including some that are not significant. Any radionuclide on the chart of nuclides could be present or received at leachate collection tank 31 in the future.</p>	Not Applicable	CDM: This is a statement of fact. There is no action to be taken by the Permittee.																				

**P-Trench34 001**

WDOH Emission Unit ID : 473

Page in AOP : EU0473-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
No active Abatement Controls in the AOP for this certification period.		
<b>Required Sampling:</b> Smear sample of overflow pipe. <b>Sampling Frequency:</b> Before and after emptying the	Continuous	CDM: Facility operation and radiological control procedures.

Requirement	Compliance Status	Compliance Determination Method
tank. When the tank is not empty, take a monthly smear (after commencement of bulk waste disposal).		
<b>Federal and State Regulatory Requirement: WAC 246-247-075(3)</b>	Continuous	<b>CDM:</b> NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528) specifies the hardware and methods used to sample and the analytical methods used in the laboratory.
<p align="center"> <b>Permit: AIR 06-1023 - B Issue Date:10-05-06 Effective Date:10-05-06</b>  <b>NOC: Trench 31 and 34: Leachate Collection and Storage Tank (LLBG Mixed Waste Disposal)</b>  <b>WDOH NOC ID: 662 Date In AOP: 01-01-07 Page in AOP: EU0473-001</b> </p>		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 3.03E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).	Continuous	<b>CDM:</b> Annual Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>Trenches 31 and 34 shall be used for the disposal of low-level waste, low-level mixed waste, and radioactive waste containing Toxic Substances Control Act regulated polychlorinated biphenyls resulting from current operations across the Hanford Site, cleanup activities across the Hanford Site and from other offsite facilities. Each trench shall provide disposal capacity for approximately 22,000 m<sup>3</sup> (28,000 yd<sup>3</sup>) of waste. Waste to be disposed of in the trenches can consist of contaminated soil and debris (bulk waste), sealed containers, vented containers, and any other type of waste meeting Low Level Burial Grounds (LLBG) waste acceptance criteria.</p> <p>The leachate collection systems for Trenches 31 and 34 share a common design. That design encompasses primary and secondary leachate collection systems. The primary and secondary leachate collection systems are comprised of alternating layers of soils, geomembrane liners, collection pipes, collection sumps, sump pumps, and a single collection tank for each trench. Liquid accumulates under the disposed material in the bottom of each trench in the primary liner of each trench (not exposed directly to atmosphere). When approximately one foot of precipitation of liquid is accumulated in the collection sumps, the pumps are activated to transfer the liquid to the tanks.</p> <p>The leachate collection tanks at Trench 31 and 34 are both above ground. Each tank has a capacity of approximately 10,000 gallons. Both tanks are cylindrical and approximately 8 feet (2.5 meters) in diameter and 24 feet (7.2 meters) long. Both tanks are passively vented via a liquid overflow pipe.</p> <p>For disposal, the liquid will be transferred from the tanks to a tanker truck. Based on past operational experience, it is anticipated that up to approximately 415,000 gallons, per tank, per year could be transferred to the tanker trucks. More than one truck may be used at the same time.</p>	Continuous	<b>CDM:</b> Facility operation and radiological control procedures.

Requirement	Compliance Status	Compliance Determination Method																				
<p>The tanker truck(s) shall be fitted with a three-quarter inch vent that will be opened during filling and emptying operations.</p>																						
<p>The PTE for this project as determined under WAC 246-247-030(21a-e) [as specified in the application] is 6.10E-03 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Pu-239/240   9.74E-05   Liquid/Particulate Solid   WAC 246-247-030(21)(e)</p> <p>U-0   7.00E-04   Liquid/Particulate Solid   WAC 246-247-030(21)(e)</p> <p>Isotopes of U-233/234/235/238.</p> <p>The radioactive isotopes identified for this emission unit are (no quantity specified):</p> <table border="0"> <tr> <td>Am-241</td> <td>C-14</td> <td>Co-60</td> <td>Cs-137</td> <td>Eu-152</td> </tr> <tr> <td>Eu-154</td> <td>Eu-155</td> <td>Na-22</td> <td>Pu-238</td> <td>Pu-239/240</td> </tr> <tr> <td>Ra-226</td> <td>Sr-90</td> <td>Tc-99</td> <td>Th-230</td> <td>Th-232</td> </tr> <tr> <td>U-0</td> <td></td> <td></td> <td></td> <td></td> </tr> </table> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the AIR Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>	Am-241	C-14	Co-60	Cs-137	Eu-152	Eu-154	Eu-155	Na-22	Pu-238	Pu-239/240	Ra-226	Sr-90	Tc-99	Th-230	Th-232	U-0					<p>Continuous</p>	<p>CDM: Accomplished by tracking.</p>
Am-241	C-14	Co-60	Cs-137	Eu-152																		
Eu-154	Eu-155	Na-22	Pu-238	Pu-239/240																		
Ra-226	Sr-90	Tc-99	Th-230	Th-232																		
U-0																						
<p>Upon commencement of placing non-containerized radioactively contaminated waste in Trench 31 and/or Trench 34, a periodic confirmatory measurement (PCM) activity shall be implemented. This PCM activity shall consist of smearing the orifice(s) of the liquid overflow pipe(s) before and after emptying the tank(s). During those months when the tank(s) is/are not emptied, a smear shall be taken monthly. After the accumulation of one year's worth of smear data.</p>	<p>Continuous</p>	<p>CDM: Facility operation and radiological control procedures.</p>																				
<p>The radioactive isotopes identified for this emission unit represent all of the significant radionuclides historically present for the leachate collection tank 34, including some that are not significant. Any radionuclide on the chart of nuclides could be present or received at leachate collection tank 34 in the future.</p>	<p>Not Applicable</p>	<p>CDM: This is a statement of fact. There is no action to be taken by the Permittee.</p>																				

**Sitewide Guzzler - Tank Farms**

WDOH Emission Unit ID : 476

Page in AOP : EU0476-001

EMISSION UNIT DID NOT OPERATE DURING CY 2007 SEE TABLE 2

Permit: AIR 06-1040 - A **Issue Date:**10-05-06 **Effective Date:**10-05-06

**NOC:** 244-CR Vault Isolation and Interim Stabilization

**WDOH NOC ID:** 685 **Date In AOP:** 01-01-07 **Page in AOP:** EU0476-009

NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3

Permit: AIR 06-1044 - B **Issue Date:**10-05-06 **Effective Date:**10-05-06

**NOC:** Tank Farm Restoration and Safe Storage

**WDOH NOC ID:** 689 **Date In AOP:** 01-01-07 **Page in AOP:** EU0476-017

NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3

Permit: AIR 06-1056 - A **Issue Date:**10-05-06 **Effective Date:**10-05-06

**NOC:** Categorical Tank Farm Facility Waste Retrieval and Closure: Phase 1- Site Preparation and System Installation

**WDOH NOC ID:** 702 **Date In AOP:** 01-01-07 **Page in AOP:** EU0476-019

NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3

Permit: AIR 06-1064 - B **Issue Date:**10-05-06 **Effective Date:**10-05-06

**NOC:** Installation and Operation of Waste Retrieval Systems in Tanks 241-AZ-101, 241-AZ-102, 241-AY-101, and 241-AY-102

**WDOH NOC ID:** 714 **Date In AOP:** 01-01-07 **Page in AOP:** EU0476-022

NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3

Permit: AIR 06-1012 **Issue Date:**10-05-06 **Effective Date:**10-05-06

**NOC:** Guzzler Excavation and Backfilling Activities in Support of 200 East Area A Farm Complex

**WDOH NOC ID:** 647 **Date In AOP:** 01-01-07 **Page in AOP:** EU0476-001

NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3

**Sitewide Guzzler - Roof Replacement**

WDOH Emission Unit ID : 476

Page in AOP : EU0476-001

EMISSION UNIT DID NOT OPERATE DURING CY 2007 SEE TABLE 2

Permit: AIR 06-1030 - C **Issue Date:**10-05-06 **Effective Date:**10-05-06

**NOC:** Roof Replacement Activities Involving Radioactive Contamination at Facilities on the Central Plateau

**WDOH NOC ID:** 670 **Date In AOP:** 01-01-07 **Page in AOP:** EU0476-006

NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3

**Sitewide Guzzler - WTP**

WDOH Emission Unit ID : 476

Page in AOP : EU0476-001

EMISSION UNIT DID NOT OPERATE DURING CY 2007 SEE TABLE 2

Permit: AIR 06-1032 - A Issue Date:10-05-06 Effective Date:10-05-06  
 NOC: Excavation Activities for the Building of the RPP Waste Treatment Plant  
 WDOH NOC ID: 672 Date In AOP: 01-01-07 Page in AOP: EU0476-008  
 NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3

**Sitewide Guzzler**

WDOH Emission Unit ID : 476

Page in AOP : EU0476-001

EMISSION UNIT DID NOT OPERATE DURING CY 2007 SEE TABLE 2

Permit: AIR 06-1021 Issue Date:10-05-06 Effective Date:10-05-06 Obsolete Date: 04-30-08  
 NOC: Use of the Guzzler Vacuum Excavation System for Radiologically Limited Activities on the Hanford Site  
 WDOH NOC ID: 658 Date In AOP: 01-01-07 Page in AOP: EU0476-003  
 NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3

**200 Area Diffuse/Fugitive - Tank Farms**

WDOH Emission Unit ID : 486

Page in AOP : EU0486-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
No active Abatement Controls in the AOP for this certification period.		
<b>Required Sampling:</b> Per the sitewide ambient monitoring program samples will be collected from the existing near-facility monitoring stations. <b>Sampling Frequency:</b> Per the sitewide ambient monitoring program <b>Radionuclide Requiring Measurement:</b> Each radionuclide that could contribute greater than 10 percent of the potential-to-emit TEDE	Continuous	CDM: Field interviews, Hanford Site near-facility/field monitoring program.
<b>Federal and State Regulatory Requirement:</b> WAC 246-247-075[2]  <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114	Continuous	CDM: CH2M HILL NESHAP quality assurance program.

Requirement	Compliance Status	Compliance Determination Method
<p align="center">Permit: AIR 06-1003 - A Issue Date:10-05-06 Effective Date:10-05-06            NOC: Tank Waste Remediation System Vadose Zone Characterization            WDOH NOC ID: 635 Date In AOP: 01-01-07 Page in AOP: EU0486-001</p>		
<p>The total abated emission limit for this Notice of Construction is limited to 7.03E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice of Construction is limited to 7.03E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).</p>	<p align="center">Continuous</p>	<p><b>CDM:</b> Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The following methods of sampling and drilling techniques, including air rotary drilling, sonic drilling, closed-end probe, cable tool drilling, cone penetrometer, air rotary split spoon, and others. This approval applies only to the following tank farms: 241-A, 241-AX, 241-B, 241-BX, 241-BY, 241-C, 241-S, 241-SX, 241-T, 241-TX, 241-TY and 241-U.</p> <p>Up to ten equivalent boreholes may be drilled or re-entered per year (consecutive 12-month period) by the methods described. An equivalent borehole shall have a nominal top diameter of no larger than ten inches for the first 50 feet, and a nominal bottom diameter of no larger than eight inches for the remaining 200 feet of pipe (average depth is 250 feet). Additionally, an equivalent borehole shall contain a contaminated layer no more than 20 feet long in the ten inch portion of the equivalent borehole. Individual methods shall be selected based on the likely level (concentration) of contaminants to be encountered. The most conservative drilling approach (lowest potential-to-emit) shall be applied first. Borehole logging shall be used to determine when it is appropriate to apply drilling techniques that may have a higher potential-to-emit. Zones not sampled during advancement of the borehole due to having a high potential to exceed exposure guidelines may be sampled by side-wall sampling techniques as the boreholes are decommissioned.</p> <p>Samples from air rotary type drilling shall be obtained from the sampling sock located on the side of the cyclone and/or from the drums underneath the cyclone and torit. The material in the drums will be sampled by pulling a mini-core from the drum. Sampling and change-out of the drums shall be performed inside the containment structure with continuous health physics technician (HPT) coverage.</p> <p>Borehole drilling techniques that may be used are limited to those described below:            Sonic drilling            Closed-end probe            Traditional cable tool drilling from top to bottom            Cone Penetrometer            Geo Probe            Auger drilling</p> <p>Soil sampling techniques will include one or a combination of the following techniques:            Air Rotary Split Spoon            Cable Tool            Cable Tool and Auger with a Split Spoon Core Barrel</p>	<p align="center">Continuous</p>	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>

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<p>Sonic Core Barrel and Split Spoon Rotary Coring Sidewall Sampling Drive Split-Spoon Sampler</p> <p>Sidewall samples being brought to the surface will be bagged or sleeved-into plastic or other suitable container (e.g. shielded container) after retrieval if decontamination or application of fixatives cannot reduce smearable contamination to less than 100,000 disintegrations per minute (dpm) per 100 cm<sup>2</sup> for beta/gamma or 2,000 dpm/100 cm<sup>2</sup> for alpha. The sampler will then be packaged in a container suitable for shipment to the laboratory for analysis. Other sidewall sampling techniques may involve a lever-action sampler (the sampler is driven into the formation through a cantilever action) or a rotating formation "shaving" device with the sample captured in an under-slung basket.</p> <p>The brush, used to clean casings, shall be placed in plastic sleeving if decontamination or application of fixatives cannot reduce smearable contamination to less than 100,000 dpm/100 cm<sup>2</sup> for beta/gamma or 2,000 dpm/100 cm<sup>2</sup> for alpha when it is removed from the borehole. Pull the casing into plastic sleeving during removal if decontamination or application of fixatives cannot reduce smearable contamination to less than 100,000 dpm/100 cm<sup>2</sup> for beta/gamma or 2,000 dpm/100 cm<sup>2</sup> for alpha. Unthread the casing if possible, or cut using a wheel cutter, or disconnected from other segments into a nominal length of ten feet. A high-speed blade wheel cutter is not allowed. When necessary, either to accomplish casing removal for borehole decommissioning or to enable pull-back for sidewall sampling, the casing will be cut at depth using a Bowen casing cutter (or equivalent). If decontamination or application of fixatives cannot reduce smearable contamination to less than 100,000 dpm/100 cm<sup>2</sup> for beta/gamma or 2,000 dpm/100 cm<sup>2</sup> for alpha and the casing is sleeved in plastic, no more than one feet of casing shall be exposed to air during the cutting process. Capture cuttings in draped plastic. If decontamination or application of fixatives cannot reduce smearable contamination to less than 100,000 dpm/100 cm<sup>2</sup> for beta/gamma or 2,000 dpm/100 cm<sup>2</sup> for alpha, cap the pieces, cut with plastic or horsetail the sleeving and place sections in a burial box. The hole will be backfilled with clean (nonradioactive) materials (e.g., granular bentonite and/or grout). Casing removal activities are allowed to be performed outside of the containment structure. The closure of the equivalent boreholes may also be performed by backfilling the borehole using a tremie without pulling the casing.</p> <p>Collect any perched water in the drum at the bottom of the cyclone. Approximately 1,000 gallons of purgewater is allowed to be removed from each equivalent borehole prior to inserting a screen below the water table. After installation of the screen, groundwater samples will be taken. An average of 2,000 gallons of water (which includes perched water, purgewater and groundwater sampling) is allowed to be removed from each equivalent borehole. Perched water and purgewater will be collected in passively ventilated open-top containers. Water shall be transferred from the passively ventilated containers into a tanker truck for treatment at the 200 Area Effluent Treatment Facility or other permitted storage/treatment facility. Water may be transferred directly from the borehole to the tanker truck, bypassing the intermediate containers.</p> <p>Approximately 3,500 ft<sup>3</sup> of soil may be excavated per year. Perform excavation using manual methods, backhoe, and/or the Guzzler.</p>		
<p>The Annual Possession Quantity is limited to-the following radionuclides (Curies/year):</p>	<p>Continuous</p>	<p>CDM: Field interviews, CH2M HILL work planning/controls/documents/</p>

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<p>Ac-227 4.55E-04   Am-241 3.48E+01   Am-243 7.75E-04            C-14 2.13E-01   Cm-242 2.72E-01   Cm-245 9.47E-03            Cm-244 8.83E-02   Co-60 9.66E-01   Cs-134 1.48E-02            Cs-137 1.85E+03   Eu-152 4.13E-01   Eu-154 8.67E+00            Eu-155 2.61E+01   H-3 7.68E-01   I-129 1.72E-02            Ni-59 5.13E-01   Ni-63 4.99E+01   Np-237 3.55E-03            Pa-231 4.72E-04   Pu-238 2.20E+00   Pu-239 2.00E+02            Pu-240 2.11E+01   Pu-241 1.25E+02   Pu-242 5.98E-04            Ra-226 3.69E-05   Ra-228 1.92E-03   Ru-106 1.71E-03            Sb-125 7.25E-01   Sm-151 1.86E+02   Sn-126 7.97E-02            Sr-90 2.07E+04   Tc-99 3.55E+00   Th-229 7.76E-05            Th-232 7.60E-05   U-232 5.87E-05   U-233 2.25E-02            U-234 4.45E-0   U-235 1.97E-02   U-236 4.55E-03            U-23 4.48E-01   Y-90 2.07E+04   Zr-93 2.41E-01</p>		<p>procedures, and/or database.</p>
<p>Approval is given as an alternative to transfer the perched water directly from borehole to the tanker.</p>	<p>Not Applicable</p>	<p><b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are a historical summary or fact, that pertain to actions to be completed in the future, or that pertain to actions required of the agency.</p>
<p>Casing size reduction may also be by unthreading.</p>	<p>Not Applicable</p>	<p><b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are a historical summary or fact, that pertain to actions to be completed in the future, or that pertain to actions required of the agency.</p>
<p>Drive Split Spoon Sampler will be included as a soil sampling technique.</p>	<p>Not Applicable</p>	<p><b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are a historical summary or fact, that pertain to actions to be completed in the future, or that pertain to actions required of the agency.</p>
<p>Emission controls to be used during sonic drilling, cable tool drilling, during use of the cone penetrometer, use of the closed-end probe, and casing removal will be decontamination by nonaggressive manual methods such as wiping, sleeving into plastic or having fixatives applied to prevent the spread of contamination if the smearable contamination levels are greater than 100,000 dpm/100 cm<sup>2</sup> for beta/gamma or 2000 dpm/100 cm<sup>2</sup> for alpha. As the core barrel is removed from the ground during cable tool drilling, a smear survey will be taken of the core barrel. Decontamination activities will be performed as needed to reduce smearable contamination.</p> <p>a. At selected depths, samples will be taken and these samples will be removed from the core barrel prior to striking the exterior of the core barrel with a hammer or hard object to dislodge soil into a plastic lined drum. There will be minimal potential for emissions from</p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>striking the core barrel to dislodge the soil into the drum.</p> <p>b. When the smearable contamination level is greater than 100,000 dpm/100 cm<sup>2</sup> for beta/gamma or 2,000 dpm/ 100 cm<sup>2</sup> for alpha, the core barrel will be sleeved in plastic. The core barrel will be removed from the drill string and placed in a suitable closed container for shipment to the laboratory or placed in a plastic-lined drum. Additionally, other sample containers may be wrapped in plastic after retrieval and the casing may be sleeved into plastic during the removal process to prevent the spread of contamination.</p>		
<p>Emissions for these activities shall be tracked via a log approved by the department. This log shall track the hours of operation and location of use for each type of equipment, estimated and calculated curies encountered, and calculated emissions. Air samples used for periodic confirmatory measurement shall be collected no closer than three feet above ground level. These samples shall be composited for each three individual sites (total of three samples) and analyzed at the completion of the borehole or re-entry activity and casing removal. All periodic confirmatory samples will be collected and analyzed following EPA Method 114.</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents/procedures, near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site and/or database.</p>
<p>Excavations using the Guzzler shall follow the Conditions and Limitations for approval for the Categorical NOC for use of the Guzzler on the Hanford Site. All source term work performed under this activity shall be tracked against this APQ.</p>	Continuous	<p><b>CDM:</b> Field interviews. The Guzzler was not used by CH2M HILL in 2007.</p>
<p>For various characterization options covered under this NOC, the maximum TEDE to the hypothetical off site MEI shall not exceed 7.03 E-02 mrem/year. The maximum TEDE to the MEI shall not exceed 5.7 E-02 mrem/year at the Energy Northwest location as determined by CAP88PC, Version 2 supplied as supporting documentation.</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents/procedures, near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site and/or database.</p>
<p>No more than 3,500 cubic feet of soil may be excavated per year using manual methods, backhoe, and/or the guzzler. This shall be documented on an approved log.</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents/procedures, and/or database.</p>
<p>No more than an average of 2,000 gallons of water (includes perched water, purge water and groundwater sampling) will be removed from each equivalent bore hole. Not to exceed 20,000 gal/year of water. Perched water and purge water will be collected in passively ventilated open top containers. When a sufficient volume of water has been collected or at the end of groundwater sampling activities, the water shall be transferred from the passively ventilated containers into</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents/procedures, and/or database.</p>

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a tanker truck for treatment at the 200 Area ETF or other permitted storage/treatment facility.		
The APQ associated with perch water, purgewater and groundwater sampling shall not exceed 7.57 E-03 curies. The APQ associated with excavation shall not exceed 74.9 curies. These shall be tracked and documented on an approved log.	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents/ procedures, and/or database.
The facility must maintain a log in an approved format for this activity or emission unit (WAC 246-247-080(7)).	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents/ procedures, and/or database.
The following additional drilling techniques are approved for use: geoprobe and auger drilling. For casing removal or to enable pull back for sidewall sampling, the casing may be cut at depth using a Bowen Casing Cutter (or equivalent with prior DOH approval).	Not Applicable	<b>CDM:</b> Ecology and WDOH have determined that licensee need not certify compliance with conditions that convey a right, are a historical summary or fact, that pertain to actions to be completed in the future, or that pertain to actions required of the agency.
The following controls shall be mandatory when handling perched water, ground water and ground water sampling. All contaminated liquids shall be contained; all exterior surfaces of liquid holding devices shall be maintained at the current radiological free release limit; vented drums shall be maintained non-smearable; storage and handling of the vented drums shall be as described in the Site Wide Vented Drum Notice of Construction.	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.
<p>U.S. DOE shall monitor this project or emission unit as follows: fugitive emissions result from cable tool and sonic drilling, use of the closed end probe and the cone penetrometer, the plastic containment structure during air rotary drilling, and during dismantlement/assembly or relocating the ventilation equipment, plastic containment structure, or process equipment. To confirm low emissions, periodic confirmatory monitoring will be accomplished by operating three fixed head, samplers around the location of where the drilling and sampling operations are occurring. The fixed head samplers will be located within 100 feet of where the drilling and sampling work activities are occurring and will be operated whenever the work activities have the potential-to-emit radionuclides. These samples shall be composited for each three individual sites (total of three samples) and analyzed at the end of each borehole. Packaging of equipment and samples for shipment, shall have surveys (swipes for removable contamination) performed in accordance with TWRS as low as reasonably achievable control technology (ALARACT) demonstration number 12 and subsequent revisions, TWRS ALARACT Demonstration for Packaging and Transportation of Equipment &amp; Vehicles.</p> <p>Fugitive emissions may also result from removing casing from the ground. To confirm low emissions, periodic confirmatory monitoring will be accomplished by operating three fixed head samplers around the location of the work activities. The fixed head samplers shall also be located with 100 feet of where the casing removal activities are occurring and shall be operated when the work activities have the</p>	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.

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<p>potential-to-emit radionuclides. These samples shall be composited for each three individual sites (total of three samples) and analyzed at the end of each casing removal (WAC 246-247-075(8)).</p>		
<p>U.S. DOE shall provide additional monitoring as follows: Fugitive emissions result from excavations using hand tools shall be described as described in TWRS ALARCT 5. Fugitive emissions that result from excavations using backhoe shall consist of the following:            a) HPT coverage will be performed as specified in the radiological permit.            b) A beta-gamma survey of the ground surface is required prior to excavation in Contamination Areas (CA's), High Contamination Areas (HCA's), Soil Contamination Areas (SCA's), and Underground Radioactive Materials Areas (URMA's). An alpha survey may be required prior to excavation per the "Justification for Dual Survey Exemption in Tank Farm Facilities" HNF-3391.            c) For excavations in CA's, HCA's, SCA's, and URMA's, if beta-gamma activity greater than 1000 dpm/probe area (5000 dpm/100 cm<sup>2</sup>) is identified, alpha surveys will also be performed.            d) Suppressants such as water, fixatives, covers, or windscreens will be used as necessary, including at the end of each shift or when sustained or predicted winds are &gt;20 mph. Excavations are not allowed when sustained or predicted winds will be &gt;20 mph.            e) If the net alpha for the general area is greater than 140 dpm/probe area, OR if the net beta-gamma activity for the general area is greater than 500,000 dpm/probe area, work will be suspended and worker safety evaluated by radiological control. Direct contact will also be made to WDOH. After it is determined that there is no threat to worker safety, WDOH has been contacted, and the proper controls (e.g., water fixatives, covers, windscreens) have been put in place, excavation may continue. A contact of WDOH will not be needed if the contamination consists of a hot speck. If hot specks are detected during the radiological surveys, the speck will be removed and contained before the activity is allowed to continue unless located in the bottom of the trench after excavation has been completed. Specks found in the bottom of the completed trench may be covered with clean fill. A hot speck will be defined as a very small amount (i.e., less than or equal to 100 cm<sup>2</sup>) of contamination reading greater than or equal to 1,000,000 dpm/probe size beta-gamma and/or greater than or equal to 490 dpm/probe size alpha.</p>	<p>Continuous</p>	<p>CDM: Field interviews, CH2M HILL work planning/controls/documents, radiological surveys, and procedures.</p>
<p>Permit: AIR 06-1038 - A <b>Issue Date:</b>10-05-06 <b>Effective Date:</b>10-05-06  <b>NOC:</b> Liquid Pumping and Enhanced Sluicing on Tank 241-C-106  <b>WDOH NOC ID:</b> 683 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0486-030            NOC NOT UTILIZED DURING CY 2007 SEE <u>TABLE 3</u></p>		
<p>Permit: AIR 06-1043 - A <b>Issue Date:</b>10-05-06 <b>Effective Date:</b>10-05-06  <b>NOC:</b> E-525 Double-Shell Tank (DST) Transfer System Modifications Project  <b>WDOH NOC ID:</b> 688 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0486-044            NOC NOT UTILIZED DURING CY 2007 SEE <u>TABLE 3</u></p>		

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Permit: AIR 06-1046 <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>NOC:</b> 241-AN Tank Farm Installation and Operation of a New Ventilation System <b>WDOH NOC ID:</b> 692 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0486-05 NOC NOT UTILIZED DURING CY 2007 SEE <u>TABLE 3</u>		
Permit: AIR 06-1048 - D <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>Obsolete Date:</b> 05-18-07 <b>NOC:</b> 241-S-102 Installation and Operation of Waste Retrieval Systems <b>WDOH NOC ID:</b> 694 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0486-056		
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The total abated emission limit for this Notice of Construction is limited to 1.80E-01 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice of Construction is limited to 8.40E+01 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).	Continuous	<b>CDM:</b> Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.
The Annual Possession Quantity is limited to the following radionuclides (Curies/year):  Am-241      2.53E-02      Sr-90      2.51E-01	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures perform work under ALARACT controls per WDOH approval dated March 05, 2007.
ALARACTs 1, 4, 5, 6, 11, 12, 13, 14, 15, and 16 shall be used. [WAC 246-247-040(5)].	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.
Containments shall be used in removing the hydrogen probe, the motor controlled spray devices, and the automatic spray indexing devices from the tank [WAC 246-247-040(5)].	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.
Radiological monitoring of all pit openings and pit work shall be performed and documented to ensure that maximum pit surface/pit contents contamination levels remain on average below those assumed in NOC release estimates for these activities:  1.0 E+05 dpm/100 sq. cm. Beta/Gamma 20 spm/100 sq. cm. Alpha  No more than 10 pit openings shall occur. These shall be tracked and documented. The total surface area of pits opened plus the surface area of pit contents shall not exceed 5,000 square feet [WAC 246-247-040(5)].	Continuous	<b>CDM:</b> Field interviews, radiological surveys, RSRs, CH2M HILL work planning/controls/documents, and procedures.
Radiological monitoring of all soil excavation work shall be performed and documented to ensure releases	Continuous	<b>CDM:</b> Field interviews, radiological surveys, RSRs, CH2M HILL work

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<p>remain within releases estimated in the NOC. Soil volume excavated shall be tracked and documented and shall not exceed 1,000 cubic feet. Soil shall be monitored per ALARACT 5. Contamination levels for excavation shall remain on average equal to or less than:</p> <p>8.0 E-04 dpm/100 sq.cm. Beta 2.0 E+02 dpm/100 sq. cm. Alpha [WAC 246-247-040(5)].</p>		<p>planning/controls/documents, and procedures.</p>
<p>The total diffuse and fugitive abated emission limit for this Notice of Construction is limited to 4.32E-04 mrem/year to the Maximally Exposed Individual. The total unabated diffuse and fugitive emission limit for this Notice of Construction is limited to 4.32E-04 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).</p>	<p>Continuous</p>	<p>CDM: Field interviews, CH2M HILL work planning/controls/documents/procedures, near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site and/or database.</p>
<p>Permit: AIR 06-1049 Issue Date:10-05-06 Effective Date:10-05-06 NOC: Tank Farm Decontamination Trailers WDOH NOC ID: 695 Date In AOP: 01-01-07 Page in AOP: EU0486-060</p>		
Requirement	Compliance Status	Compliance Determination Method
<p>The total abated emission limit for this Notice of Construction is limited to 1.66E-05 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice of Construction is limited to 1.66E-05 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).</p>	<p>Continuous</p>	<p>CDM: Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <ol style="list-style-type: none"> <li>1. Upon identification of the need of additional decontamination activities in the individuals would be escorted to the nearest decontamination trailer.</li> <li>2. As appropriate, contaminated clothing, coverings, and/or articles would be removed and packaged for laboratory analysis and/or disposition, in accordance with As Low As Reasonably Achievable Control Technology (ALARACT) 4 and 12, Tank Farm ALARACT Demonstration for Packaging and Transportation of Waste and Tank Farm ALARACT Demonstration for Packaging and Transportation of Equipment and Vehicles, RPP HNF-4327.</li> </ol>	<p>Continuous</p>	<p>CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>

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<p>3. Personnel decontamination processes might include various methods or a combination of cleaning agents and/or chemicals. For example: soap and water, pre-moistened towelettes, removal of hair, abrasive soaps for toughened skin surfaces (e.g., hands and feet), and chelating agents.</p> <p>4. Spent decontamination solutions would be transferred from the holding tanks and/or bladder and containerized (e.g., packaged in absorbents in drums or placed in drums or carboys) and transported to existing facilities on the Hanford Site for disposal.</p> <p>5. Periodic maintenance inspection of the decontamination trailers will be performed without the use of containment or portable exhausters.</p>		
<p>The Annual Possession Quantity is limited to the following radionuclides (Curies/year):</p> <p>Pu-239      1.40E-01      Sr-90      1.40E-01</p>	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.
<p>The proposed PCM for the diffuse and fugitive emissions shall consist of the radiological surveys during and at the completion of personnel decontamination operations (e.g., smears and direct readings on the interior of the decontamination trailers). The methods of PCM are not a direct measurement of effluent emissions. The methods are intended to demonstrate compliance by showing that the levels on the interior of the trailers, during a personnel decontamination operation, are controlled; and the levels on the interior of the trailers after a decontamination operation shall keep the trailers from being posted a radiological buffer area (RBA) for contamination control and/or a contamination area (CA). This shall make the actual emissions below the estimated emissions, which shall be based and calculated from the same contamination levels.</p>	Continuous	<p><b>CDM:</b> Field interviews and radiological survey reports.</p> <p><b>Comment:</b> The 200 West Area decontamination trailer was used in 2007, while the 200 East Area decontamination trailer was not used in 2007.</p>
<p>When Portable Temporary Radioactive Air Emission Units are used they shall follow all the requirements of the latest revision of the Radioactive Air Emissions Notice of Construction for Portable Temporary Radioactive Air Emission Units (DOE/RL-96-75).</p>	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.

Requirement	Compliance Status	Compliance Determination Method
<p align="center">Permit: AIR 06-1056 - B Issue Date:10-05-06 Effective Date:10-05-06  <b>NOC: Categorical Tank Farm Facility Waste Retrieval and Closure: Phase 1- Site Preparation and System Installation</b>  <b>WDOH NOC ID: 702 Date In AOP: 01-01-07 Page in AOP: EU0486-070</b></p>		
<p>The total abated emission limit for this Notice of Construction is limited to 3.32E+00 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice of Construction is limited to 3.32E+00 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).</p>	<p align="center">Continuous</p>	<p><b>CDM:</b> Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>Site preparation for the retrieval of the waste from single-shell tanks. This covers the following activities as described below.</p> <p>Installation of the following in-tank equipment</p> <ul style="list-style-type: none"> <li>-Waste distribution devices</li> <li>-Transfer pumps</li> <li>-Enraf-Nonius Series 854 (ENRAF) stilling wells</li> <li>-Video cameras</li> <li>-Instrument manifolds</li> <li>-Central fury device</li> <li>-Drain lines back to tank</li> <li>-AMS ( Articulated Mast System)</li> <li>-Sluicing nozzles</li> <li>-Ventilation inlet filter assemblies</li> <li>-Connection of hose-in-hose transfer lines (HIHTL)</li> <li>-New pit cover-plates</li> <li>-Electrical poser and instrument cables and other utility tie-ins and/or upgrades</li> <li>-New above ground pits</li> <li>-Jumpers</li> <li>-Off riser sampling system</li> </ul> <p>Removal, Decontamination and Disposal of Existing Equipment</p> <ul style="list-style-type: none"> <li>-Remove/Replacement of Breather filters</li> <li>-Removal of Sludge weights</li> <li>-Removal of Liquid observation wells (LOW)</li> <li>-Removal of Standard Hydrogen Monitoring System (SHMS) probe</li> <li>-Removal of Thermocouple probes</li> <li>-Removal of Sluicing nozzles</li> <li>-Removal of Video cameras</li> <li>-Removal of Liquid level reel</li> <li>-Removal of Jumpers from pits</li> <li>-Removal of Saltwell pumps</li> <li>-Removal of Sluice pumps</li> <li>-Removal of Corrosion probes</li> <li>-Removal of Shield plugs</li> <li>-Removal of Slurry distributors</li> <li>-Removal of Air lift circulators</li> <li>-Removal of Riser adapter cover plates</li> <li>-Removal of Saltwell screens</li> <li>-Removal of Dip tubes</li> <li>-Removal of Protective foam coating on pits</li> </ul>	<p align="center">Continuous</p>	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>Other similar equipment may be installed or removed provided all conditions and limitations outlined in this approval are met.</p> <p><b>Pit Work</b> Pits will be accessed for installation of instrument manifolds, transfer pump installation, jumper removal, replacement of existing HIHTLs with new HIHTLs, connection of high efficiency particulate air (HEPA) filters, exhaust trunk for the portable exhausters, and removal of various jumpers, isolation of transfer lines, water lines, and drain lines.</p> <p><b>Removal of In-Tank Equipment</b> Various in-tank equipment, such as those listed above, will be removed from the tanks to make room for the waste retrieval equipment, or to be replaced with equivalent equipment built to withstand the forces of waste retrieval.</p> <p><b>In-Tank Equipment Installation</b> Motor controlled spray devices and sluicers will be inserted into risers on some tanks near the outside perimeter of the tank and an automatic indexing spray device also will be installed on a centrally located riser. In-tank closed circuit television cameras will be installed into risers and connected to a master camera control system skid. This equipment will be in the riser for the duration of the project and will not contact the waste. Each spray assembly is equipped with a spray washer to provide a decontamination rinse during removal. The spray devices and cameras will be sleeved out of the risers at completion of the project.</p> <p>An AMS will be installed through risers of some tanks for use during retrieval. The AMS may be removed and reused. Pumps and In Tank Vehicles (ITVs) will be waste contacting and may be abandoned in place following the conclusion of retrieval operations.</p> <p>Ventilation inlet filter assemblies (breather filters) will be installed on those tanks whose breather filters have been removed to accommodate portable exhausters and other retrieval equipment.</p> <p><b>Installation of the Off-Riser Sample Collection System (ORSS).</b> The ORSS consists of a sample collector sub-system and its deployment sub-system. The sample collector is capable of sampling the various types of waste expected in a post-retrieval single shell tank environment. The waste may be liquid in an extreme range of viscosities, or solids in various states of friability. The sample collector crawler will return the sample to sample containers staged below the riser, where it will be retrieved into the glove bag mounted on the sampling riser. Monitoring of the sample collector will be accomplished visually using the in-tank cameras. All activities associated with the ORSS will be accomplished thru a sealed glove bag. The riser used for sampling will be open to the atmosphere for a very short period of time (typically less than one minute) while installing and removing the glove bag.</p> <p><b>Installation of new risers</b> ranging in diameter from four inches to 42 inches. Riser will be installed by first removing soil down to the concrete tank dome surface using hand digging and/or using the guzzler. A steel caisson will be inserted into the hole for wall support. A small layer of grout will be added to the bottom of the hole to provide a level surface. A hole will be partially drilled into the concrete. After a cable is attached to the core, the drilling will be completed through the dome into the tank headspace. The new prefabricated riser will be lowered into the caisson until support brackets on the side are seated on the grout top.</p> <p><b>Tank Preparation for Closure</b></p>		

Requirement	Compliance Status	Compliance Determination Method																																																																																																																																
<p>Tank preparation for closure will include installation of equipment for introducing fill material, fill placement monitoring, and ventilation. In general, equipment residing in risers (e.g., pump, thermocouple tree, vacuum retrieval mast, etc. ) will not be removed from the tank unless it obstructs a riser that is required to gain access for placing the fill material. Equipment obstructing a riser needed for access will be either removed, or cut and lowered into the tank. Equipment lowered into the tank during tank preparation will be completely covered when the fill material is added to the tank.</p> <p>Soil Excavation Soil will be excavated inside and outside the farms for various reasons such as tie in of instrumentation and power systems for monitoring transfer progress. Intermittent trenches will be excavated for this purpose.</p> <p>The volume of soil removed during excavation activities are volumes of disturbed soil that will not leave the respective farms. Clean soil piles may be moved from one place to another within the tank farm with heavy equipment (i.e. backhoe, front loader). The soil will be used to fill the trenches after the hose and the conduits are installed.</p>																																																																																																																																		
<p>The Annual Possession Quantity is limited to the following radionuclides (Curies/year):</p> <table border="0"> <tr> <td>Ac-227</td><td>m</td><td>2.15E-02</td><td>Am-241</td><td>6.96E+00</td><td>Am-243</td><td>2.13E-04</td><td> </td> </tr> <tr> <td>Ba-137</td><td>m</td><td>3.69E+02</td><td>C-14</td><td>1.55E-02</td><td>Cd-133</td><td>1.03E+00</td><td> </td> </tr> <tr> <td>Cm-242</td><td></td><td>6.88E-03</td><td>Cm-243</td><td>4.11E-04</td><td>Cm-244</td><td>1.15E-02</td><td> </td> </tr> <tr> <td>Co-60</td><td></td><td>9.80E-01</td><td>Cs-134</td><td>5.25E-02</td><td>Cs-137</td><td>3.90E+02</td><td> </td> </tr> <tr> <td>Eu-152</td><td></td><td>8.00E-02</td><td>Eu-154</td><td>8.19E+00</td><td>Eu-155</td><td>5.80E+00</td><td> </td> </tr> <tr> <td>H-3</td><td></td><td>5.63E-02</td><td>I-129</td><td>3.40E-04</td><td>Nb-93</td><td>2.76E-01</td><td> </td> </tr> <tr> <td>Ni-59</td><td></td><td>7.68E-02</td><td>Ni-63</td><td>7.31E+00</td><td>Np-237</td><td>8.68E-04</td><td> </td> </tr> <tr> <td>Pa-231</td><td></td><td>4.72E-02</td><td>Pu-238</td><td>3.62E-01</td><td>Pu-239</td><td>7.53E+00</td><td> </td> </tr> <tr> <td>Pu-240</td><td></td><td>1.15E+00</td><td>Pu-241</td><td>6.14E+00</td><td>Pu-242</td><td>3.28E-05</td><td> </td> </tr> <tr> <td>Ra-226</td><td></td><td>7.62E-01</td><td>Ra-228</td><td>4.47E-03</td><td>Ru-106</td><td>2.59E-05</td><td> </td> </tr> <tr> <td>Sb-125</td><td></td><td>1.40E+00</td><td>Se-79</td><td>3.70E-03</td><td>Sm-151</td><td>2.57E+02</td><td> </td> </tr> <tr> <td>Sn-126</td><td></td><td>4.55E-02</td><td>Sr-90</td><td>1.62E+04</td><td>Tc-99</td><td>6.85E-01</td><td> </td> </tr> <tr> <td>Th-229</td><td></td><td>7.52E-02</td><td>Th-232</td><td>1.10E-03</td><td>U-232</td><td>3.81E-03</td><td> </td> </tr> <tr> <td>U-233</td><td></td><td>8.16E-02</td><td>U-234</td><td>1.17E-02</td><td>U-235</td><td>5.01E-04</td><td> </td> </tr> <tr> <td>U-236</td><td></td><td>2.03E-04</td><td>U-238</td><td>1.20E-02</td><td>Y-90</td><td>1.62E+04</td><td> </td> </tr> <tr> <td>Zr-93</td><td></td><td>3.34E-01</td><td></td><td></td><td></td><td></td><td> </td> </tr> </table>	Ac-227	m	2.15E-02	Am-241	6.96E+00	Am-243	2.13E-04		Ba-137	m	3.69E+02	C-14	1.55E-02	Cd-133	1.03E+00		Cm-242		6.88E-03	Cm-243	4.11E-04	Cm-244	1.15E-02		Co-60		9.80E-01	Cs-134	5.25E-02	Cs-137	3.90E+02		Eu-152		8.00E-02	Eu-154	8.19E+00	Eu-155	5.80E+00		H-3		5.63E-02	I-129	3.40E-04	Nb-93	2.76E-01		Ni-59		7.68E-02	Ni-63	7.31E+00	Np-237	8.68E-04		Pa-231		4.72E-02	Pu-238	3.62E-01	Pu-239	7.53E+00		Pu-240		1.15E+00	Pu-241	6.14E+00	Pu-242	3.28E-05		Ra-226		7.62E-01	Ra-228	4.47E-03	Ru-106	2.59E-05		Sb-125		1.40E+00	Se-79	3.70E-03	Sm-151	2.57E+02		Sn-126		4.55E-02	Sr-90	1.62E+04	Tc-99	6.85E-01		Th-229		7.52E-02	Th-232	1.10E-03	U-232	3.81E-03		U-233		8.16E-02	U-234	1.17E-02	U-235	5.01E-04		U-236		2.03E-04	U-238	1.20E-02	Y-90	1.62E+04		Zr-93		3.34E-01						Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures perform work under ALARACT controls per WDOH approval dated March 05, 2007.
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<p>During penetration of the tank dome, core drilling activities will take place within plastic sleeving. When the cylinder core is removed it shall remain contained within the plastic sleeving, and plastic sleeving shall remain over the existing hole in the tank dome until the new riser is installed.</p>	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.																																																																																																																																
<p>Riser installation activities shall cease when sustained winds exceed 25 miles per hour. A local wind speed measurement device may be utilized in lieu of Hanford Meteorological Station readings, provided the reading is taken in an unobstructed location that is representative of the work area. Use of a local device and the measured wind speed reading taken from it must be documented in the JCS Work Records.</p>	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.																																																																																																																																
<p>Soil excavation activities shall be performed in accordance with the requirements of TWRS ALARACT Demonstration 5" Demonstration for soil excavation (using hand tools)".</p>	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.																																																																																																																																
<p>The Annual Possession Quantity for pit entries,</p>	Continuous	CDM: Field interviews, CH2M HILL																																																																																																																																

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equipment removal activities, soil excavation, and Guzzler operation shall be tracked on a WDOH approved log.		work planning/controls/documents, and procedures perform work under ALARACT controls per WDOH approval dated March 05, 2007.
Work involved with pits and in-tank equipment installation and removal shall follow the requirements of TWRS ALARACT Demonstrations 1, 3, 4, 6, 7, 10,11, 12, 13, 14, 15, and 16.	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.
The Department shall be notified, within 7 days, of when an existing breather filter is replaced by a Flanders 40 cfm radial filter.	Continuous	<b>CDM:</b> Field interviews.
Permit: AIR 06-1059 - A <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>NOC:</b> Supplemental Treatment Test and Demonstration Facility <b>WDOH NOC ID:</b> 705 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0486-076 NOC NOT UTILIZED DURING CY 2007 SEE <u>TABLE 3</u>		
Permit: AIR 06-1064 - C <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>NOC:</b> Installation and Operation of Waste Retrieval Systems in Tanks 241-AZ-101, 241-AZ-102, 241-AY-101, and 241-AY-102 <b>WDOH NOC ID:</b> 714 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0486-088 NOC NOT UTILIZED DURING CY 2007 SEE <u>TABLE 3</u>		
Permit: AIR 06-1066 - B <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>Obsolete Date:</b> 10-30-07 <b>NOC:</b> Removal of Liquid from Catch Tank 241-ER-311 <b>WDOH NOC ID:</b> 718 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0486-093		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 1.47E-05 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice of Construction is limited to 1.47E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).	Continuous	<b>CDM:</b> Field interviews, A3CASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The action will include the operation of a 500 cfm portable exhaustor connected to a riser in conjunction with a inlet HEPA filter to remove evaporate liquid in the 241-ER-311 Catch Tank. A small volume of the liquid may be pumped out during this activity. There may also be an insertion of a sleeve inside the existing risers to direct air flow closer to the liquid surface.</p>	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.

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<p>During riser preparation controls will be established using as low as reasonable achievable control technology (ALARACT 1) "Demonstration for riser preparation. opening", ALARACT 4 "Demonstration for packaging and transportation of waste", ALARACT 6 "Demonstration for pit access", ALARACT 13 "Demonstration for installation, operation, and removal of tank equipment", ALARACT 14 "Demonstration for pit work", ALARACT 15, "Demonstration for size reduction of waste equipment for disposal.", and ALARACT 16 "Demonstration for work on potentially contaminated ventilation system components".</p> <p>A portable, 500 cfm ventilation system will be installed on a riser on the 241-ER-311 Catch Tank. The portable exhauster consists of a skid mounted air clean-up train, which includes a heater, a pre-filter, two HEPA filters in series, and a fan, prior to the stack. During exhauster operation air from the tank will be heated before passing through the pre-filter and two HEPA filters to ensure that condensation of air stream moisture is minimized through this section. Drains in each of the filter and heater housings allow entry condensed liquid to flow away from the components and to be collected in a seal pot for removal.</p> <p>Ductwork will be used to connect the exhauster inlet to the tank riser. Ductwork will essentially be fabricated in conformance with ASME B31.3 Process Piping, and it will meet the requirements of ASME AG-1, Section SA, with the exceptions noted in RPP-1923, "General WAC 246-247 Technology Standards Exemption Justification for Waste Tank Ventilation Systems".</p> <p>A 500 cfm inlet HEPA filter in an ASME AG-1 compliant housing will be installed on a second riser on the 241-ER-311 to accommodate the inlet air stream created by the use of the portable exhauster. When the exhauster is not running, the inlet HEPA filter will serve as a tank barometric breather filter to provide abatement of particulate emissions from the tank.</p>										
<p>The Annual Possession Quantity is limited to the following radionuclides (Curies/year):</p> <table border="0"> <tr> <td>Am-241</td> <td>4.79E-04</td> <td>Cs-137</td> <td>9.36E+00</td> </tr> <tr> <td>Pu-239/240</td> <td>3.36E-04</td> <td>Sr-89/90</td> <td>2.88E+00</td> </tr> </table>	Am-241	4.79E-04	Cs-137	9.36E+00	Pu-239/240	3.36E-04	Sr-89/90	2.88E+00	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents/procedures, and/or database.
Am-241	4.79E-04	Cs-137	9.36E+00							
Pu-239/240	3.36E-04	Sr-89/90	2.88E+00							
<p>The following ALARACTs shall be followed during retrieval activities, ALARACT 1 "Demonstration for riser preparation/opening", ALARACT 4 "Demonstration for packaging and transportation of waste", ALARACT 6 "Demonstration for Pit Access", ALARACT 13 "Demonstration for installation, operation, and removal of tank equipment", ALARACT 14 "Tank Farm ALARACT Demonstration for Pit Work", ALARACT 15 "Demonstration for size reduction of waste equipment for disposal", ALARACT 16 "Demonstration for work on potentially contaminated ventilation system components".</p>	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.								

Requirement	Compliance Status	Compliance Determination Method
<p>Permit: AIR 06-1033 - B Issue Date:10-05-06 Effective Date:10-05-06            NOC: Categorical Tank Farm Facility Entry and Surveillance            WDOH NOC ID: 673 Date In AOP: 01-01-07 Page in AOP: EU0486-025</p>		
<p>The total abated emission limit for this Notice of Construction is limited to 4.90E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice of Construction is limited to 4.90E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).</p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>Categorical approval for facility entry and surveillance. The facilities covered under this NOC will be entered through a door or other existing access location to perform the activities as described below:</p> <p><b>Accessing Facilities:</b>          Accessing facilities shall be performed in accordance using the controls determined by the containment matrix from RPP Administration, HNF-IP-0842, Volume VII, Section 3.1, "Radiological Control".</p> <p><b>Inspection Surveillance:</b>          - Visual Inspections will be conducted to evaluate facilities integrity for future decommissioning work, to assure that utilities leave been shut off, and/or identification of any environmental, radiological, or safety concerns.</p> <p><b>Photographing/Videotaping:</b>          - Photographing and videotaping are performed to assist personnel in recording a facility contents and to obtain knowledge of a facility and its contents. Photography/videotaping also assists personnel in planning future decommissioning work.</p> <p><b>Sampling/Surveys:</b>          - Swipes, smears, air sampling, and other surveys may be performed to characterize contamination levels present in a facility. These activities may be performed on containers, other equipment and interior surfaces associated with a facility.          - Removal of access port shield plugs may be performed to allow installation of video equipment and/or to perform radiological surveys.          - Electrical equipment inspections may be performed to assure that power has been shut off from facilities or to assure that equipment is in safe operation.</p> <p><b>Housekeeping:</b>          - Housekeeping will be performed to assure that a facility is in a safe condition that would not threaten workers safety or the environment. Housekeeping may include collecting containers, or miscellaneous debris for proper disposal.</p> <p><b>Fixative Application</b>          - Application of fixative materials serves to reduce the spread of contamination. The process of applying fixative materials varies depending on the type of material being applied. Fixative application may include using a glycerin-based substance followed by a</p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>

Requirement	Compliance Status	Compliance Determination Method
permanent polymer urea based material or the glycerin-based substance alone, or other such process, which do not cause resuspension of smearable contamination.		
<p>The Annual Possession Quantity is limited to the following radionuclides (Curies/year):</p> <p>Alpha-0 2.80E-04   Beta-0 4.00 E-01   Gamma-0 4.50 E-02  </p>	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents/procedures, and/or database.
Activities to this NOC are limited to no more than 2,160 hours/calendar year. This shall be documented on an approved log.	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents/procedures, and/or database.
During facility entries when diffuse/fugitive emissions may occur, surveys/smears and air samples must be conducted and recorded on log sheets or survey reports. These reports and/or survey records must be readily retrievable.	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents/procedures, and/or database.
If sample results after entry show that the APQ have been exceeded, WDOH is to be notified within 24 hours of receipt of the sample results.	Continuous	CDM: Field interviews and CH2M HILL notification procedure.
The annual possession quantity must be tracked for each entry.	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents/procedures, and/or database.
The facility will maintain a log of all work packages which are used for building access under this NOC (AIR 00-604).	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents/procedures, and/or database.
The following radionuclides are allowed under this NOC: 3H, 14C, 59Ni, 60Co, 63Ni, 79Sc, 90Sr, 90Y, 93Zr, 93mNb, 99Tc, 106Ru, 113mCd, 125Sb, 126Sn, 129I, 134Cs, 137Cs, 137mBa, 151Sm, 152Eu, 154Eu, 155Eu, 227Ac, 228Ra, 229Th, 231Pa, 232Th, 232U, 233U, 234U, 235U, 236U, 237Np, 238Pu, 238U, 239Pu, 240Pu, 241Am, 241Pu, 242Cm, 243Cm, and 244Cm.	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents/procedures, and/or database.
The radiological control technology for all entries conducted under this NOC must follow the containment matrix HNF-IP-0842, Volume VII, Radiological Control.	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.
This NOC does not allow any decontaminating and decommissioning work to commence.	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents/procedures, and/or database.
This NOC is only applicable to tank farm facilities.	Continuous	CDM: Field interviews.

Requirement	Compliance Status	Compliance Determination Method
<p align="center">Permit: AIR 06-1034 <b>Issue Date:</b>10-05-06 <b>Effective Date:</b>10-05-06  <b>NOC:</b> Vapor sampling of Miscellaneous Underground Units  <b>WDOH NOC ID:</b> 674 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0486-027</p>		
<p>The total abated emission limit for this Notice of Construction is limited to 5.10E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice of Construction is limited to 5.10E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).</p>	<p align="center">Continuous</p>	<p><b>CDM:</b> Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>Performing vapor sampling of miscellaneous underground units with no known path of ventilation. Miscellaneous underground units may include active and inactive underground tanks, wells, and other units with no known path of ventilation.</p> <p>In addition to vapor sampling activities, this approval allows the possibility of installing temporary or permanent passive HEPA type filtration on any unit if vapor sampling results show combustible gas levels exceeding 25 percent of the lower Flammability Limit (LFL).</p> <p><b>Active and Inactive Tanks</b> Tanks were designed to collect leaks, spills, condensation, and drainage that occurred during operation of tank farm diversion boxes, valve pits, and pipeline encasements. Tanks were also used for settling solids before disposal, neutralizing process wastes, receiving and processing of tank waste, and waste handling and process experimentation. Volumes of waste and constituent concentrations in each tank vary depending on the location in respect to surrounding single and double shell tank farm operations. Most of the tanks are expected to contain low levels of radioactivity.</p> <p>The tanks are constructed of various materials, which include stainless steel, carbon steel, concrete, and concrete vaults with carbon steel liners. The tank volumes vary in maximum capacity between 50 gallons to 50,000 gallons.</p> <p><b>Wells</b> Wells include structures that were used for the subsurface disposal of waste fluids. Wells that are connected to valve pits or floor drains in contaminated facilities may have received contaminated liquids. Volumes of liquid discharged to these structures and constituent concentrations are unknown.</p> <p>Combustible gas concentrations in the headspace of miscellaneous units will be field-measured to determine if there are safety concerns associated with combustible gas concentrations. The radiological controls, monitoring, and documentation identified in Sections 2, 3, and 4 of ALARACT 1 shall be implemented for access to each unit. Vapor sampling shall be performed in accordance with ALARACT 8, with the exception of bulleted item 5 in Section 2 of the ALARACT. Bulleted item 5 will not be performed because the units are assumed to not be ventilated.</p> <p>If vapor-sampling results show a combustible gas level measurement exceeding 25 percent of the LFL, a temporary passive HEPA type</p>	<p align="center">Continuous</p>	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures</p>

Requirement	Compliance Status	Compliance Determination Method																																																																																																
<p>breather filter may be installed. One of two types of temporary HEPA type filters shall be used. This first type of filter would be mounted onto a plastic bag that could be secured to an access ort or riser using tape or some other technique such as banding. The second type of filter would be connected directly to an access port or, in cases where access is through a riser, mounted on a flange that could be bolted onto the riser. These methods allow flammable gases to escape to the atmosphere only through the filter.</p>																																																																																																		
<p>The Annual Possession Quantity is limited to the following radionuclides (Curies/year):</p> <table border="0"> <tr> <td>Ac-227</td><td>1.06E-02</td><td>Am-241</td><td>6.92E+02</td><td>Am-243</td><td>3.46E-02</td></tr> <tr> <td>Ba-137</td><td>1.61E+05</td><td>C-14</td><td>1.04E+01</td><td>Cd-113</td><td>1.55E+02</td></tr> <tr> <td>Cm-242</td><td>6.08E-01</td><td>Cm-243</td><td>5.28E-02</td><td>Cm-244</td><td>1.98E+00</td></tr> <tr> <td>Co-60</td><td>8.66E+02</td><td>Cs-134</td><td>3.08E+01</td><td>Cs-137</td><td>1.70E+05</td></tr> <tr> <td>Eu-152</td><td>1.69E+01</td><td>Eu-154</td><td>7.23E+03</td><td>Eu-155</td><td>1.04E+03</td></tr> <tr> <td>H-3</td><td>6.46E+01</td><td>I-129</td><td>5.16E-01</td><td>Nb-93</td><td>6.32E+01</td></tr> <tr> <td>Ni-59</td><td>3.06E+01</td><td>Ni-63</td><td>3.01E+03</td><td>Np-237</td><td>1.62E+00</td></tr> <tr> <td>Pa-231</td><td>1.61E-02</td><td>Pu-238</td><td>2.43E+01</td><td>Pu-239</td><td>1.29E+03</td></tr> <tr> <td>Pu-240</td><td>2.04E+02</td><td>Pu-241</td><td>1.78E+03</td><td>Pu-242</td><td>9.94E-03</td></tr> <tr> <td>Ra-226</td><td>2.04E-03</td><td>Ra-228</td><td>9.82E-02</td><td>Ru-106</td><td>1.17E-01</td></tr> <tr> <td>Sb-125</td><td>8.63E+02</td><td>Se-79</td><td>1.70E+01</td><td>Sm-151</td><td>6.36E+04</td></tr> <tr> <td>Sn-126</td><td>2.73E+01</td><td>Sr-90</td><td>5.23E+06</td><td>Tc-99</td><td>5.20E+01</td></tr> <tr> <td>Th-229</td><td>2.27E-03</td><td>Th-232</td><td>1.11E-02</td><td>U-232</td><td>4.38E+00</td></tr> <tr> <td>U-233</td><td>1.68E+01</td><td>U-234</td><td>2.67E+00</td><td>U-235</td><td>1.06E-01</td></tr> <tr> <td>U-236</td><td>8.66E-02</td><td>U-238</td><td>2.38E+00</td><td>Y-90</td><td>5.23E+06</td></tr> <tr> <td>Zr-93</td><td>7.36E+01</td><td></td><td></td><td></td><td></td></tr> </table>	Ac-227	1.06E-02	Am-241	6.92E+02	Am-243	3.46E-02	Ba-137	1.61E+05	C-14	1.04E+01	Cd-113	1.55E+02	Cm-242	6.08E-01	Cm-243	5.28E-02	Cm-244	1.98E+00	Co-60	8.66E+02	Cs-134	3.08E+01	Cs-137	1.70E+05	Eu-152	1.69E+01	Eu-154	7.23E+03	Eu-155	1.04E+03	H-3	6.46E+01	I-129	5.16E-01	Nb-93	6.32E+01	Ni-59	3.06E+01	Ni-63	3.01E+03	Np-237	1.62E+00	Pa-231	1.61E-02	Pu-238	2.43E+01	Pu-239	1.29E+03	Pu-240	2.04E+02	Pu-241	1.78E+03	Pu-242	9.94E-03	Ra-226	2.04E-03	Ra-228	9.82E-02	Ru-106	1.17E-01	Sb-125	8.63E+02	Se-79	1.70E+01	Sm-151	6.36E+04	Sn-126	2.73E+01	Sr-90	5.23E+06	Tc-99	5.20E+01	Th-229	2.27E-03	Th-232	1.11E-02	U-232	4.38E+00	U-233	1.68E+01	U-234	2.67E+00	U-235	1.06E-01	U-236	8.66E-02	U-238	2.38E+00	Y-90	5.23E+06	Zr-93	7.36E+01					Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents/ procedures, and/or database.
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<p>Approved activities included in the process are the following: Sampling of miscellaneous underground units with no known path of ventilation. Miscellaneous underground units may include active and inactive underground tanks, wells, and other units with no known path of ventilation. Installation of temporary or permanent passive HEPA type filtration on any unit if vapor sampling results show combustible gas levels exceeding 25 percent of the lower flammability limit is approved.</p>	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.																																																																																																
<p>The following controls must be adhered to: * ALARACT 8 with the exception of bulleted Items 5 of Section 2.</p>	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.																																																																																																
<p>The total unabated dose TEDE to the hypothetical MEI cannot exceed 1.04E-05 mrem/year per tank.</p>	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents/ procedures, near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site and/or database.																																																																																																
<p>The total unabated emissions are limited to 2.02E-02 mrem/year per tank.</p>	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents/ procedures, near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site and/or database.																																																																																																
<p>Vapor space sampling will follow the controls identified in ALARACT 8, with the exception of bulleted items 4</p>	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and																																																																																																

Requirement	Compliance Status	Compliance Determination Method
<p>and 5 in Section 2 of the ALARACT. Bulleted item 4 will not be performed unless field evaluation determines that a riser adapter is necessary to minimize potential exposure to the environment. Installation of an adapter is normally not necessary due to the riser configuration and the short duration required for vapor sampling miscellaneous units. Bulleted item 5 will not be performed because the miscellaneous units are not ventilated.</p>		<p>procedures.</p>
<p>Permit: AIR 06-1040 - B <b>Issue Date:</b>10-05-06 <b>Effective Date:</b>10-05-06  <b>NOC:</b> 244-CR Vault Isolation and Interim Stabilization  <b>WDOH NOC ID:</b> 685 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0486-033  <b>NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3</b></p>		
<p>Permit: AIR 06-1044 - C <b>Issue Date:</b>10-05-06 <b>Effective Date:</b>10-05-06  <b>NOC:</b> Tank Farm Restoration and Safe Storage  <b>WDOH NOC ID:</b> 689 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0486-047  <b>NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3</b></p>		
<p>Permit: AIR 06-1052 - A <b>Issue Date:</b>10-05-06 <b>Effective Date:</b>10-05-06  <b>NOC:</b> 241-C-200 Series Tanks Retrieval  <b>WDOH NOC ID:</b> 698 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0486-063</p>		
Requirement	Compliance Status	Compliance Determination Method
<p>The total abated emission limit for this Notice of Construction is limited to 1.72E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice of Construction is limited to 2.18E+00 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).</p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The activities listed below are approved for the C-200 Series Waste Retrieval effort:</p> <p>Retrieval Activities (Stack):</p> <ol style="list-style-type: none"> <li>i. Operation of the new portable exhauster and ventilation system.</li> <li>ii. Retrieve wastes from C-201, C-202, C-203, and C-204 using the AMS to vacuum wastes to the central vessel skid.</li> <li>iii. Pump waste from central vessel skid to the double shell tank system using OGT lines</li> </ol> <p>Diffuse and Fugitive:</p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>a. Proposed Actions for Tanks C-201 through C-204:</p> <ul style="list-style-type: none"> <li>i. Remove the thermocouple trees from the top of the pump pit (no pit access is necessary) using ALARACTs 13, 14, and 15.</li> <li>ii. Access pump pit to remove pump in C-204 (no removal of sluice eductors will be performed)(using ALARACTs 1, 4, 6, 13, 14 and 15) and general access may be needed for the other pump pits and have been calculated in a pit access potential-to-emit.</li> <li>iii. Remove the breather filters and reinstall with an inlet filter on each tank.</li> <li>iv. Lift the ventilation hatchway cover (condenser pit hatchway) which is 1/4-inch steel thickness and may be potentially attached to an old fiberglass filter assembly (using ALARACTs 1, 4, 6, 13, 14 and 15 as guidance for contamination level and controls) which will be withdrawn in a large sleeve (fully enclosed) from the pit, lifted, pig-tailed, and sealed. The filter will not be exposed to the environment while lifting. The filter will then be placed in a mixed waste disposal box and will not be left out in the environment. Smearable contamination levels on the outside of the bag will not exceed 50,000 dpm beta/gamma and 20 dpm alpha.</li> <li>v. Remove condenser pit filter assembly and replace tank breather filter with a Y-duct assembly (ALARACTs 1, 4, 12, 15, and 16) vi. Remove liquid level reels and thermocouple trees, 1 each per tank (ALARACTs 1, 4, 6, 12, 13, 14, and 15)</li> <li>vii. Remove sluice eductor pump from Tank C-204, if necessary (ALARACTs 1, 4, 6, 12, 13, 14, and 15)</li> </ul> <p>b. Tank Equipment Installations:</p> <ul style="list-style-type: none"> <li>i. AMS with connected hydraulic power pack, one per tank (ALARACTs 1, 4, 6, 12, 13, and 14)</li> <li>ii. Install ventilation inlet filter assembly to existing inlet filter on each tank. (using ALARACTs 13 and 16).</li> <li>iii. Remove the ventilation hatchway (condenser pit) cover with the presumed attached fiberglass filter using a crane and lifting hook and placed immediately into a mixed waste disposal box. ALARACT 13 controls will be used for contamination guidance and controls (less than 50,000 dpm beta/gamma and 20 dpm alpha).</li> <li>iv. The asbestos gasket for the ventilation hatchway (condenser pit) if present will be removed using fixative while a bag is in place over the ventilation hatchway (condenser pit). The plastic will be slowly removed to minimize hatchway access while concurrently a new ventilation hatchway cover (condenser pit) will be slid onto the pit access next to the plastic and rebolted to the pit. ALARACT 13 controls will be used for contamination guidance and controls (less than 50,000 dpm beta/gamma and 20 dpm alpha). The ventilation hatchway will have a connection so that the 296-P-48 exhauster will be connected when active retrieval occurs.</li> <li>v. A single set of return and suction lines shall be placed at each tank to the central skid vacuum vessel during retrieval. After each tank is retrieved a small amount of water will be flushed through the line and checked for smearable contamination and dose readings by a Health Physics Technician to ensure minimal contamination is in place in the line. A valve will be closed at the tank surface manifold box, the end of each hose wrapped in plastic, and then moved to the next tank for retrieval. Contamination remaining in the lines when moved has been accounted for by including all of the current tank contents in the total retrieval potential-to-emit calculations.</li> <li>vi. Ventilation exhaust ducting, one per tank (ALARACTs 1, 4, 12, and 16)</li> <li>vi. Closed circuit TV s, one per tank (ALARACT 1, 4, 12,13, and 16)</li> <li>vii. Master camera control system skid, and connects to in-tank cameras (ALARACT 6, 13, and 16)</li> <li>viii. Central vessel skid, connect to individual AMS units, connect to the double shell tank via OGT lines (using hand digging or Guzzler, latest approved revision) (ALARACT 1, 4, 5, 6, 13, and 14)</li> <li>ix. Pump skid with connected hydraulic power pack, and OGT lines</li> </ul>		

Requirement	Compliance Status	Compliance Determination Method																																																																																																
<p>(ALARACT 1, 4, 6, 12, 13, and 14)            x. Vacuum skid with connected hydraulic power pack (ALARACT 1, 4, 6, 12, 13, and 14)            xi. Portable exhauster skid, connect via HVAC ducting to individual tank ventilation exhaust ducts (ALARACTs 1,4,6, 12, 13, and 14)            xii. Electrical cable and electric supply to hydraulic power packs, vessel skid, pump skid, vacuum skid, portable exhauster skid, inlet filter, in-tank cameras, and generator, control instrumentation (ALARACT 5)            xiii. Air compressor and associated air supply lines to AMS, vessel skid, vacuum skid (ALARACT 5)            xiv. Instrumentation control room, water distribution sled, instrument electrical skid, diesel generator            c. Remove tank equipment installed under this NOC for maintenance, repair, disposal, or re-use for future tank retrievals. (ALARACTs 1, 4, 6, 12, 13, 14, 15 and 16)</p>																																																																																																		
<p>The Annual Possession Quantity is limited to the following radionuclides (Curies/year):</p> <table border="0"> <tr> <td>Ac-227</td><td>4.84E-06</td><td>Am-241</td><td>4.17E-01</td><td>Am-243</td><td>4.67E-06</td></tr> <tr> <td>Ba-137 m</td><td>1.41E+00</td><td>C-14</td><td>3.80E-05</td><td>Cd-113 m</td><td>1.36E-03</td></tr> <tr> <td>Cm-242</td><td>3.05E-04</td><td>Cm-243</td><td>1.45E-05</td><td>Cm-244</td><td>6.39E-06</td></tr> <tr> <td>Co-60</td><td>1.59E-05</td><td>Cs-134</td><td>1.41E-08</td><td>Cs-137</td><td>1.49E+00</td></tr> <tr> <td>Eu-152</td><td>7.67E-03</td><td>Eu-154</td><td>3.62E-03</td><td>Eu-155</td><td>2.69E-01</td></tr> <tr> <td>H-3</td><td>1.86E-05</td><td>I-129</td><td>5.19E-07</td><td>Nb-93 m</td><td>6.53E-04</td></tr> <tr> <td>Ni-59</td><td>1.42E-02</td><td>Ni-63</td><td>1.33E+00</td><td>Np-237</td><td>8.11E-07</td></tr> <tr> <td>Pa-231</td><td>1.64E-07</td><td>Pu-238</td><td>1.29E-02</td><td>Pu-239</td><td>5.76E-01</td></tr> <tr> <td>Pu-240</td><td>9.49E-02</td><td>Pu-241</td><td>7.03E-01</td><td>Pu-242</td><td>4.85E-06</td></tr> <tr> <td>Ra-226</td><td>1.23E-06</td><td>Ra-228</td><td>3.37E-12</td><td>Ru-106</td><td>2.58E-09</td></tr> <tr> <td>Sb-125</td><td>2.67E-05</td><td>Se-79</td><td>1.67E-05</td><td>Sm-151</td><td>5.91E-01</td></tr> <tr> <td>Sn-126</td><td>1.06E-04</td><td>Sr-90</td><td>3.50E+01</td><td>Tc-99</td><td>2.67E-04</td></tr> <tr> <td>Th-229</td><td>1.26E-09</td><td>Th-232</td><td>9.06E-15</td><td>U-232</td><td>1.98E-10</td></tr> <tr> <td>U-233</td><td>7.54E-12</td><td>U-234</td><td>7.15E-06</td><td>U-235</td><td>3.15E-07</td></tr> <tr> <td>U-236</td><td>8.27E-09</td><td>U-238</td><td>7.20E-06</td><td>Y-90</td><td>7.83E+00</td></tr> <tr> <td>Zr-93</td><td>7.35E-04</td><td></td><td></td><td></td><td></td></tr> </table>	Ac-227	4.84E-06	Am-241	4.17E-01	Am-243	4.67E-06	Ba-137 m	1.41E+00	C-14	3.80E-05	Cd-113 m	1.36E-03	Cm-242	3.05E-04	Cm-243	1.45E-05	Cm-244	6.39E-06	Co-60	1.59E-05	Cs-134	1.41E-08	Cs-137	1.49E+00	Eu-152	7.67E-03	Eu-154	3.62E-03	Eu-155	2.69E-01	H-3	1.86E-05	I-129	5.19E-07	Nb-93 m	6.53E-04	Ni-59	1.42E-02	Ni-63	1.33E+00	Np-237	8.11E-07	Pa-231	1.64E-07	Pu-238	1.29E-02	Pu-239	5.76E-01	Pu-240	9.49E-02	Pu-241	7.03E-01	Pu-242	4.85E-06	Ra-226	1.23E-06	Ra-228	3.37E-12	Ru-106	2.58E-09	Sb-125	2.67E-05	Se-79	1.67E-05	Sm-151	5.91E-01	Sn-126	1.06E-04	Sr-90	3.50E+01	Tc-99	2.67E-04	Th-229	1.26E-09	Th-232	9.06E-15	U-232	1.98E-10	U-233	7.54E-12	U-234	7.15E-06	U-235	3.15E-07	U-236	8.27E-09	U-238	7.20E-06	Y-90	7.83E+00	Zr-93	7.35E-04					Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures perform work under ALARACT controls per WDOH approval dated March 05, 2007.
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Ba-137 m	1.41E+00	C-14	3.80E-05	Cd-113 m	1.36E-03																																																																																													
Cm-242	3.05E-04	Cm-243	1.45E-05	Cm-244	6.39E-06																																																																																													
Co-60	1.59E-05	Cs-134	1.41E-08	Cs-137	1.49E+00																																																																																													
Eu-152	7.67E-03	Eu-154	3.62E-03	Eu-155	2.69E-01																																																																																													
H-3	1.86E-05	I-129	5.19E-07	Nb-93 m	6.53E-04																																																																																													
Ni-59	1.42E-02	Ni-63	1.33E+00	Np-237	8.11E-07																																																																																													
Pa-231	1.64E-07	Pu-238	1.29E-02	Pu-239	5.76E-01																																																																																													
Pu-240	9.49E-02	Pu-241	7.03E-01	Pu-242	4.85E-06																																																																																													
Ra-226	1.23E-06	Ra-228	3.37E-12	Ru-106	2.58E-09																																																																																													
Sb-125	2.67E-05	Se-79	1.67E-05	Sm-151	5.91E-01																																																																																													
Sn-126	1.06E-04	Sr-90	3.50E+01	Tc-99	2.67E-04																																																																																													
Th-229	1.26E-09	Th-232	9.06E-15	U-232	1.98E-10																																																																																													
U-233	7.54E-12	U-234	7.15E-06	U-235	3.15E-07																																																																																													
U-236	8.27E-09	U-238	7.20E-06	Y-90	7.83E+00																																																																																													
Zr-93	7.35E-04																																																																																																	
<p>A health physics technician shall be present during all condenser pit filter removal activities. Any contamination levels or dose rate readings exceeding the radiation work permit limits shall be notified to WDOH.</p>	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, radiation work permit, and procedures.																																																																																																
<p>A work place air sampler shall be in operation during all condenser pit filter removal activities. The air sampler shall be placed in the downwind direction.</p>	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.																																																																																																
<p>ALARACTs 1, 4, 5, 6, 12, 13, 14, 15, and 16 shall be used as detailed in Condition 3 above [WAC 246-247-040(5)].</p>	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.																																																																																																
<p>One liquid level reel per tank, one thermocouple assembly per tank, two sluice eductors per tank, and a sluice pump in 241-C-204, may be removed. If the total adherent waste volume basis used in the supporting calculations for equipment removal is not exceeded, other equipment removals may be performed as noted in Condition 3, Item c. [WAC 246-247-040(5)].</p>	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents/procedures, and/or database.																																																																																																
<p>Prior to moving the HIHTL the lines shall be flushed and checked by a health physics technician to ensure minimal contamination. The valve on the tank manifold box shall be closed and the end of the line shall be wrapped in plastic, then removed from the manifold.</p>	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, radiation work permit, and procedures.																																																																																																

Requirement	Compliance Status	Compliance Determination Method
The HIHTL will then be hooked up to the next tank.		
<p>Radiological monitoring of all pit openings and pit work shall be performed and documented to ensure that maximum pit surface/pit contents contamination levels remain on average below those assumed in NOC release estimates for these activities:</p> <p>(a) 241-C-200 Series Tanks: 1 E+06 dpm Beta/Gamma, 1400 dpm alpha (b) Tank 241-AY-101: 8.5 E+05 dpm Beta/Gamma, 20 dpm alpha</p> <p>No more than 16 C-200 series pit openings shall occur, and no more than four AY-101 pit openings shall occur. These shall be tracked and documented. The total surface area of C-200 Series pits opened plus the surface area of pit contents shall not exceed that used in the NOC support calculations. The total surface area of double-shell tank pits opened plus the surface area of pit contents shall not exceed that used in the NOC support calculations [WAC 246-247-040(5)].</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>
<p>Radiological monitoring of all soil excavation work shall be performed and documented to ensure releases remain within releases estimated in the NOC. Soil volume excavated shall be tracked and documented and shall not exceed 8,500 cubic feet. Soil shall be monitored per ALARACT 5. Contamination levels for excavation shall remain on average equal to or less than 1 E+06 dpm beta and 20 dpm alpha [WAC 246-247-040(5)].</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>
<p>Soil excavation performed using the Guzzler shall conform to approval conditions and limitations of the latest approved revision to the Guzzler NOC [WAC 246-247-040(5)].</p>	Continuous	<p><b>CDM:</b> Field interviews. The Guzzler was not used by CH2M HILL in 2007.</p>
<p>The Annual Possession Quantity shall be tracked on a WDOH approved log.</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures perform work under ALARACT controls per WDOH approval dated March 05, 2007.</p>
<p>The condenser pit filter shall be withdrawn into a fully enclosed plastic sleeving. Once removed, the sleeve enclosing the filter shall be pigtailed, sealed, and disposed of within a mixed waste disposal box. The filter shall not be exposed to the environment. The condenser pit filter removal activities shall use ALARACTS 1, 4, 6, 13, 14, and 15 as guidance for contamination levels and controls.</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>The total diffuse and fugitive abated emission limit for this Notice of Construction is limited to 1.61E-02 mrem/year to the Maximally Exposed Individual, comprised of 6.76E-03 mrem/year offsite and 9.37E-03 mrem/year onsite. The total unabated diffuse and fugitive emission limit for this Notice of Construction is limited to 1.61E-02 mrem/yr to the Maximally Exposed Individual, comprised of 6.76E-03 mrem/year offsite and 9.37E-03 mrem/year onsite (WAC 246-247-040(5)).</p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents/procedures, near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site and/or database.</p>
<p align="center"> <b>Permit:</b> AIR 06-1051 - A    <b>Issue Date:</b>10-05-06    <b>Effective Date:</b>10-05-06  <b>NOC:</b> Isolation and Closure of Exhaust Stacks 296-A-25, 296-B-28, 296-S-22, and 296-T-18  <b>WDOH NOC ID:</b> 697    <b>Date In AOP:</b> 01-01-07    <b>Page in AOP:</b> EU0486-61  <b>NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3</b> </p>		
<p align="center"> <b>Permit:</b> AIR 06-1057 - D    <b>Issue Date:</b>10-05-06    <b>Effective Date:</b>10-05-06    <b>Obsolete Date:</b> 03-23-07  <b>NOC:</b> Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations  <b>WDOH NOC ID:</b> 703    <b>Date In AOP:</b> 01-01-07    <b>Page in AOP:</b> EU0486-076 </p>		
Requirement	Compliance Status	Compliance Determination Method
<p>The total abated emission limit for this Notice of Construction is limited to 1.31E+00 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice of Construction is limited to 1.61E+03 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).</p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in (WAC 246-247-030(16)), may be conducted.</p> <p>The operation of the waste retrieval system(s) for the removal of radioactive wastes from all 149 Single Shell Tanks (SST) at the Hanford Site.</p> <p><b>SALTCAKE DISSOLUTION WASTE RETRIEVAL SYSTEM</b>  The saltcake dissolution waste retrieval system may be used to retrieve soluble saltcake waste. This method retrieves the soluble portion of the waste only, resulting in very few of the solids being pumped from the tank. The saltcake dissolution waste retrieval system deployed in the SSTs is for water, chemical agent, or catalyst liquid to be added to the tank using a variety of spray nozzles or "sprinklers". The approach is to sprinkle the waste surface with water, chemical agent, or catalyst liquid. The added water, chemical agent, or catalyst liquid must stay in contact with the saltcake for a long enough period of time for the brine to become saturated. Once the brine is saturated, it is pumped from the SST to a receiver tank, staging tank, storage DST or other staging/storage vessel associated with the supplemental treatment, packaging or disposal. Salt solution will be removed using</p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>the existing saltwell pump or other pump placed into the tank.</p> <p>A tank not equipped with a saltwell pump, a transfer pump (progressive cavity, vertical turbine) can be installed and operated.</p> <p>Remotely directable water distribution devices will be located in risers spaced far apart as practical. A combination of spraying waster, chemical agent, or catalyst liquid to dissolve the saltcake can be used in conjunction with directing a flow of water or recirculating water at the waste to move it to the pump suction to allow the pumping of waste from the tank. Recirculated waste from the pump may be sent back to the tank as an alternative to using water to direct dissolution waste to the pump suction.</p> <p><b>MODIFIED SLUCING WASTE RETRIEVAL SYSTEM</b> Modified sluicing can be used for some SST waste retrieval. Modified sluicing is the introduction of liquid at low to moderate pressures, not to exceed 1200 psi, and volumes into the waste. The liquid dissolves and breaks apart solid materials and suspends them in the waste slurry. A transfer pump installed in the tank provides the motive force to transfer the liquid slurry to a receiver tank.</p> <p>Modified sluicing introduces sluice liquid in a controlled fashion using multiple sluicing nozzles at varying pressures and flows, then pumps out the resultant waste slurry. This maintains minimal liquid inventories within the tank at all times. The liquids that could be used in modified sluicing include water, recirculated supernatant/water from the receiving Double Shell Tank, recirculated supernatant/water, chemical agent or catalyst liquid.</p> <p><b>VACUUM WASTE RETRIEVAL SYSTEM</b> A vacuum waste retrieval system can be used for waste retrieval activities in the (SSTs). The vacuum waste retrieval system is introduced into the SSTs by means of an articulating mast system (AMS). The AMS has a horizontal reach and rotational capabilities of 360 degrees. The AMS has a retracted position and can be extended vertically. Air is mixed at the suction end of the AMS enabling the required vertical lift for the waste to a topside receiver tank, batch vessel or a staging SST, storage DST, or other staging/storage vessels associated with supplemental treatment, packaging or disposal.</p> <p>The AMS will be deployed through and attached to standard riser flanges that are available on the SSTs. Cameras can also be installed in other risers for in-tank viewing and control of the AMS.</p> <p>For the 200-series tanks in the 241-C, 241-U, 241-B and 241-T Tank Farms a vacuum retrieval process tank, staging tank, staging SST, storage DST or other staging/storage vessel will be deployed. The receiver tank will receive waste in batches from whichever tank is connected into the vacuum retrieval system. The vacuum pressure used to draw up the waste from the tank to the receiver tank is relieved back into the SST being retrieved.</p> <p><b>MOBILE RETRIEVAL SYSTEM</b> A Mobile Retrieval System (MRS) can be used to retrieve waste from some SSTs. The MRS consists of two in-tank systems. The first is a robotic crawler inserted through one riser the second is an AMS inserted through a second riser. The AMS retrieves the sludge from the tank using a vacuum with assisting pneumatic conveyance. The AMS vacuum tube has a horizontal reach and can be extended to the bottom of the tank. The arm rotates 360 degrees. The vacuum will be directed through the AMS in the tank to the end effector, which is in contact with the waste. The pneumatic conveyance-assisted vacuum retrieval system will draw the waste up through the vacuum to the waste vessel in the vessel skid in batches. The AMS is then valved out</p>		

Requirement	Compliance Status	Compliance Determination Method																																																																																																
<p>while the waste vessel is emptied and pumped out through the over ground transfer lines to a DST, a staging SST or other treatment/disposal options. When the waste vessel is nearly empty, the transfer line will be valved out and the AMS will be valved back in and another batch of waste will be removed from the tank. This process will be repeated until waste near the center of the tank is removed. The robotic crawler will be remotely controlled to move and/or wash waste toward the center of the tank.</p> <p>The robotic crawler is equipped with a plow blade at the front for pushing/pulling wastes, a screw pump to jet wastes through a small nozzle towards the center of the tank, the ability to direct hot or cold water through the same nozzle to wash wastes off of in-tank equipment, dissolve waste agglomerations in the tank, and wash waste toward the center of the tank for removal.</p> <p>Any new retrieval methods or changes to processes will need to be provided to WDOH in a revised NOC prior to implementation.</p>																																																																																																		
<p>The Annual Possession Quantity is limited to the following radionuclides (Curies/year):</p> <table border="0"> <tr><td>Ac-227</td><td>5.99E+00</td><td>Am-241</td><td>8.68E+03</td><td>Am-243</td><td>3.39E-01</td></tr> <tr><td>Ba-137m</td><td>4.62E+07</td><td>C-14</td><td>6.25E+02</td><td>Cd-113m</td><td>4.95E+03</td></tr> <tr><td>Cm-242</td><td>1.97E+01</td><td>Cm-243</td><td>1.80E+00</td><td>Cm-244</td><td>1.90E+01</td></tr> <tr><td>Co-60</td><td>2.52E+03</td><td>Cs-134</td><td>3.44E+04</td><td>Cs-137</td><td>4.89E+07</td></tr> <tr><td>Eu-152</td><td>8.49E+02</td><td>Eu-154</td><td>1.45E+04</td><td>Eu-155</td><td>9.54E+03</td></tr> <tr><td>H-3</td><td>5.95E+03</td><td>I-129</td><td>2.95E+01</td><td>Nb-93m</td><td>1.01E+03</td></tr> <tr><td>Ni-59</td><td>1.05E+02</td><td>Ni-63</td><td>9.30E+03</td><td>Np-237</td><td>9.50E+01</td></tr> <tr><td>Pa-231</td><td>1.25E+01</td><td>Pu-238</td><td>1.65E+02</td><td>Pu-239</td><td>3.17E+03</td></tr> <tr><td>Pu-240</td><td>5.36E+02</td><td>Pu-241</td><td>4.80E+03</td><td>Pu-242</td><td>3.34E-02</td></tr> <tr><td>Ra-226</td><td>1.27E-02</td><td>Ra-228</td><td>1.15E+01</td><td>Ru-106</td><td>1.22E-02</td></tr> <tr><td>Sb-125</td><td>1.73E+04</td><td>Se-79</td><td>6.36E+01</td><td>Sm-151</td><td>8.93E+05</td></tr> <tr><td>Sn-126</td><td>2.59E+02</td><td>Sr-90</td><td>2.91E+06</td><td>Tc-99</td><td>2.24E+04</td></tr> <tr><td>Th-229</td><td>4.20E-01</td><td>Th-232</td><td>1.26E+00</td><td>U-232</td><td>3.66E+00</td></tr> <tr><td>U-233</td><td>3.02E+01</td><td>U-234</td><td>1.07E+01</td><td>U-235</td><td>4.44E-00</td></tr> <tr><td>U-236</td><td>2.73E-01</td><td>U-238</td><td>9.86E+00</td><td>Y-90</td><td>2.91E+06</td></tr> <tr><td>Zr-93</td><td>1.25E+03</td><td></td><td></td><td></td><td></td></tr> </table>	Ac-227	5.99E+00	Am-241	8.68E+03	Am-243	3.39E-01	Ba-137m	4.62E+07	C-14	6.25E+02	Cd-113m	4.95E+03	Cm-242	1.97E+01	Cm-243	1.80E+00	Cm-244	1.90E+01	Co-60	2.52E+03	Cs-134	3.44E+04	Cs-137	4.89E+07	Eu-152	8.49E+02	Eu-154	1.45E+04	Eu-155	9.54E+03	H-3	5.95E+03	I-129	2.95E+01	Nb-93m	1.01E+03	Ni-59	1.05E+02	Ni-63	9.30E+03	Np-237	9.50E+01	Pa-231	1.25E+01	Pu-238	1.65E+02	Pu-239	3.17E+03	Pu-240	5.36E+02	Pu-241	4.80E+03	Pu-242	3.34E-02	Ra-226	1.27E-02	Ra-228	1.15E+01	Ru-106	1.22E-02	Sb-125	1.73E+04	Se-79	6.36E+01	Sm-151	8.93E+05	Sn-126	2.59E+02	Sr-90	2.91E+06	Tc-99	2.24E+04	Th-229	4.20E-01	Th-232	1.26E+00	U-232	3.66E+00	U-233	3.02E+01	U-234	1.07E+01	U-235	4.44E-00	U-236	2.73E-01	U-238	9.86E+00	Y-90	2.91E+06	Zr-93	1.25E+03					Continuous	<p>CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures perform work under ALARACT controls per WDOH approval dated March 05, 2007.</p>
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<p>Controls for retrieval activities in the 241-A, AX, B, BX, BY, C, S, SX, T, TX, TY, U single shell tank forms shall consist of at least a single breather filter. The breather filter shall be of an "Open Face" style housing or a "G-1" style housing. The filter shall be tested in place at least annually following the guidance of ASME AG-1 Section TA, and shall have a minimum efficiency of 99.95%.</p>	Continuous	<p>CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>																																																																																																
<p>During waste retrieval operations liquid shall be introduced through sluicing and saltcake dissolution nozzles at a pressure not to exceed 1200 psig, and the nozzle shall be at least five inches from the waste surface.</p>	Continuous	<p>CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>																																																																																																
<p>Monitoring of breather filters during retrieval activities shall consist of weekly smear surveys on the inside surface of the ducting and downstream of the HEPA filter or on the outside of the screen covering the outlet of the vent.</p> <p>Levels above 10,000 dpm/100cm<sup>2</sup> beta/gamma and 200 dpm/100cm<sup>2</sup> alpha shall be reported to WDOH.</p>	Continuous	<p>CDM: Annual Radiological Surveillance Task, Radiological Survey Reports, and field interviews.</p>																																																																																																

Requirement	Compliance Status	Compliance Determination Method
<p>Retrieval activities shall occur under passive ventilation only when an exhauster can not longer be operated on a single shell tank due to structural concerns. The justification for structural concerns with the single shell tank shall be documented and provided to WDOH upon request.</p>	<p>Continuous</p>	<p>CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>
<p>The following ALARACTs shall be followed during retrieval activities, ALARACT 1 "Demonstration for riser preparation/opening", ALARACT 4 "Demonstration for packaging and transportation of waste", ALARACT 6 "Demonstration for Pit Access", ALARACT 11 "Demonstration for Waste Transfers", ALARACT 12 "Demonstration for Packaging and Transportation of Equipment and Vehicles", ALARACT 13 "Demonstration for installation, operation, and removal of tank equipment", ALARACT 14 "Tank Farm ALARACT Demonstration for Pit Work", ALARACT 15" Demonstration for size reduction of waste equipment for disposal", ALARACT 16 "Demonstration for work on potentially contaminated ventilation system components", ALARACT 5 "Demonstration for Soil Excavation:", ALARACT 7 "Demonstration for Tank Waste Grab Sampling", and ALARACT 10 "Demonstration for Water Lancing".</p>	<p>Continuous</p>	<p>CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>
<p>Permit: AIR 06-1041 - C Issue Date:10-05-06 Effective Date:10-05-06            NOC: Installation and Operation of Waste Retrieval Systems in Single-Shell Tank (SST) 241-S-112            WDOH NOC ID: 686 Date In AOP: 01-01-07 Page in AOP: EU0486-041</p>		
Requirement	Compliance Status	Compliance Determination Method
<p>The total abated emission limit for this Notice of Construction is limited to 3.90E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice of Construction is limited to 7.51E+01 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).</p>	<p>Continuous</p>	<p>CDM: Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The Salt Cake Dissolution Retrieval Demonstration Project in SST 241-S-112 uses water that is introduced in a controlled fashion to dissolve and mobilize solids in the tank. The resulting solution is then pumped and transferred to the Double-Shell Tank (DST) system. A portable exhauster will provide active ventilation for some dissolution activities and all waste transfer activities until structural safety</p>	<p>Continuous</p>	<p>CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>considerations force shutdown, at which time passive ventilation shall be used. The following activities will be performed:</p> <p><b>Pit</b> a. Opening the 241-S-112 Condenser Pit to remove the old cover plate and install a new cover plate to allow for the connection of a HEPA filter to the exhaust trunk for a portable exhauster. b. Enter 241-S-C Valve Pit to disconnect the existing 241-S-112 HIHTL. c. Enter the 241-S-109 Valve Pit to remove the existing HIHTL that is no longer needed. d. Accessing the 241-S-112A Central Pump Pit to: - Install an instrument manifold, - Install a transfer pump, and - Replacement of the existing HIHTL that is not needed for this project with a new HIHTL. e. Enter the 241-S-A Valve Pit to: - Connect the hose-in-hose transfer line (HIHTL) from the 241-S-112 Tank to the DST receiver tank, and - Install the leak detection hardware. Pit work shall be performed in accordance with ALARACT 6 "TWRS ALARACT Demonstration for Pit Access" and ALARACT 14 "TWRS ALARACT Demonstration for Pit Work".</p> <p><b>Soil Excavation</b> a. Excavation of soil inside the tank farm for the installation of an electrical and instrumentation conduit to monitor transfer progress. b. Excavation of soil outside the tank farm for conduit and transformer installation. c. Excavation of soil inside the tank farm for installation of a new raw water header installed between the 241-SY Tank Farm and the 241-S Tank Farm to the 241-S-112 Tank. d. Installation of a HIHTL to convey waste from Tank 241-S-112 to the DST transfer system. Soil excavation shall be performed in accordance with ALARACT 5 "TWRS ALARACT Demonstration for Soil Excavation (using hand tools)".</p> <p><b>In-Tank Equipment</b> a: Installation of various motor controlled spray devices into (3) risers near the outside perimeter of the tank and an automatic indexing spray device will be installed on a centrally located riser. b. Remove Liquid Observation Well (LOW). c. Installation of Stilwell (Level Monitoring Device protection). Work shall be performed in accordance with ALARACT 1 "TWRS ALARACT Demonstration for Riser Preparation/Opening" and ALARACT 13 "TWRS ALARACT Demonstration for Installation, Operation and Removal of Tank Equipment".</p> <p><b>Water Addition/Dilution</b> - Installation of a new heat traced and insulated raw water line installed between the 241-S Tank Farm and the 241-SY Tank Farm to the water distribution skid on top of Tank 241-S-112. Water addition and dilution for salt-cake dissolution shall use portable exhausters for active ventilation when water addition flow rate is above 80 gallons per minute, at less than 80 gallons per minute salt cake dissolution shall use either a breather HEPA filter for passive ventilation, or active ventilation.</p> <p><b>Waste Transfer</b> - Installation of a progressive cavity pump and supporting equipment</p>		

Requirement	Compliance Status	Compliance Determination Method									
<p>to recover and transport waste from Tank 241-S-112 to the DST System.</p> <p>Waste transfer activities shall use portable exhausters for active ventilation until structural safety considerations force shutdown, at which time passive ventilation shall be used.</p> <p>The major components of the exhauster are; stack, glycol heaters, 1 pre-filter, 2 HEPA filters, 1 exhaust fan, sampling system and a demister which is determined to be optional.</p> <p>Other - Removal of the Standard Hydrogen Monitoring Probe.</p> <p>The completion of tank retrieval may also be aided by a Remote Water Lance (RWL) that is a high pressure water device, or hydrolaser. The system will consist of both ex-tank and in-tank components. The ex-tank components will be comprised of; high pressure water skid, operating controls, cables and hoses. The in-tank components will be comprised of umbilical, in-tank vehicle, high pressure nozzle(s).</p> <p>The high pressure water skid will provide the water at the desired pressure, not to exceed 37,000 psig. A conditioning system will be used to filter the raw water entering the skid to ensure that no abrasive materials are entrained in the water. The water volumetric flow rate will be on the order of 6 to 15 gpm. The operating controls will be located in a control trailer outside of the farm fence. The cables and hoses will connect the hydraulically powered in-tank vehicle with the ex-tank controls and water skid via the umbilical. The in-tank vehicle will house one to four high pressure water nozzles. The RWL will be operated with the nozzle end submerged to avoid aerosols in the tank. A rupture disc will be used to prevent reaching pressures above 37,000 psig.</p> <p>The in-tank vehicle, with umbilical, will be deployed through a 12 inch riser in tank 241-S-112 and will weigh on the order of 1,000 pounds plus the weight of the umbilical. A crane will be used to lower the vehicle and the full length of umbilical down into the tank. After the in-tank vehicle and umbilical are in the tank, a cover, with gasket, will be bolted to the riser flange to seal the riser opening. The equipment will be operated outside the tank farm fence.</p>											
<p>The Annual Possession Quantity is limited to the following radionuclides (Curies/year):</p> <table border="0"> <tr> <td>Alpha-0</td> <td>2.68E-02</td> <td> </td> </tr> <tr> <td>Beta-0</td> <td>2.60E-01</td> <td> </td> </tr> <tr> <td>Cs-139</td> <td>1.45E-05</td> <td> </td> </tr> </table>	Alpha-0	2.68E-02		Beta-0	2.60E-01		Cs-139	1.45E-05		Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures perform work under ALARACT controls per WDOH approval dated March 05, 2007.</p>
Alpha-0	2.68E-02										
Beta-0	2.60E-01										
Cs-139	1.45E-05										
<p>Equipment removal and monitoring (pre and post-job surveys) shall be performed in accordance with ALARACT 13; equipment disposition shall be performed in accordance with ALARACT 4 and 15.</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>									
<p>Pit work and monitoring (pre and post-job surveys) shall be performed in accordance with ALARACT 6 and 14; packaging and transportation of waste shall be performed in accordance with ALARACT 14.</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>									
<p>Soil excavation activities and monitoring (pre and post-job surveys) shall be performed in accordance with ALARACT 5. Not more than 2000 cubic feet of soil</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>									

Requirement	Compliance Status	Compliance Determination Method
shall be removed. The disturbed soil shall not leave the 241-S Tank Farm area.		
The Annual Possession Quantity and potential-to-emit to the MEI shall be tracked on a WDOH approved log.	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures perform work under ALARACT controls per WDOH approval dated March 05, 2007.
Permit: AIR 06-1047 <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>NOC:</b> 241-AW Tank Farm Installation and Operation of a New Ventilation System <b>WDOH NOC ID:</b> 693 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0486-055 NOC NOT UTILIZED DURING CY 2007 SEE <u>TABLE 3</u>		
Permit: AIR 07-505 - D <b>Issue Date:</b> 05-18-07 <b>Effective Date:</b> 05-18-07 <b>NOC:</b> 241-S-102 Installation and Operation of Waste Retrieval Systems <b>WDOH NOC ID:</b> 694 <b>Date In AOP:</b> 07-26-07 <b>Page in AOP:</b> EU0486-057		
Requirement	Compliance Status	Compliance Determination Method
<p>The total abated emission limit for this Notice of Construction is limited to 1.80E-01 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice of Construction is limited to 8.40E+01 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents/ procedures, near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site and/or database, CH2M HILL notification procedure and notification logbook.</p> <p><b>Comment:</b> On July 27, 2007 a spill of liquid from the S-102 retrieval system to the environment was discovered and reported per the CH2M HILL notification procedure.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The salt cake dissolution activity associated with 241-S-102 shall include the following: pit work, soil excavation, in-tank equipment installation/removal, water dilution, and waste transfers.</p> <p>Pit Work (Diffuse and Fugitive):</p> <ul style="list-style-type: none"> <li>- Open the 241-S-102B Distributor pit and cut flange in riser with hold saw or plasma cutter, to install instrumentation manifold and new progressive cavity transfer pump (ALARACT 1, 6, 12, 13, 14);</li> <li>- Open the two 241-S-102 Condenser pits to replace two existing cover plates with new cover plates. Connect the passive breather filter assembly and connect the trunk of the portable exhauster (ALARACT 4, 6, 14);</li> <li>- Open the 241-S-A Valve pit, and connect the HIHTL from the 241-</li> </ul>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>S-102 tank to the DST system (ALARACT 6, 14).</p> <p>Soil Excavation (Diffuse and Fugitive):</p> <ul style="list-style-type: none"> <li>- Excavate trenches for tie-in of instrumentation and power systems (ALARACT 5);</li> <li>- Excavate for HIHTL placement from 241-S-102 to 241-S-A Valve pit (ALARACT 5).</li> </ul> <p>Other Equipment Installation/Removal (Diffuse and Fugitive):</p> <ul style="list-style-type: none"> <li>- Install motor controlled spray devices in three risers near the outside perimeter of tank 241-S-102 (ALARACT 1, 13);</li> <li>- Install automatic spray indexing device in a central riser (ALARACT 1, 13),</li> <li>- Remove motor controlled and automatic spray indexing devices if necessary (ALARACT 1, 13),</li> <li>- Place water distribution skid and connect to the raw water header between 241-SY and 241-S tank farms. Connect water distribution skid to spray devices.</li> <li>- Remove standard hydrogen monitoring system vapor probe (ALARACT 4, 15, 13);</li> <li>- Place and hook up exhauster and exhauster system;</li> <li>- Remove unused flammable gas cabinet (per Tank Farm Radcon Control Manual, HNF 5183);</li> <li>- Place Field Instrument Electrical Skid and connect associated cabling;</li> <li>- Install stilling well for Enraf Liquid Indicating Transmitter (ALARACT 1, 13);</li> <li>- Install camera monitoring system (ALARACT 1, 13);</li> <li>- Remove Liquid Observation Well if necessary (ALARACT 1, 13).</li> </ul> <p>Water Dilution and Waste Transfer:</p> <ul style="list-style-type: none"> <li>- Water shall be sprayed onto the surface of the in-tank salt cake to dissolve the cake;</li> <li>- A Remote Water Lance (RWL) may be used at pressures not to exceed 37,000 psig at a flow rate of 6 to 15 gallons per minute. The RWL will be operated with the nozzle submerged.</li> <li>- A High Pressure Mixer (HPW) may be used at pressures not to exceed 37,000 psig at at flow rate of 4 to 18 gallons per minute.</li> <li>- The new progressive cavity pump and HIHTL shall be used to transfer waste from tank 241-S-102 to the DST (ALARACT 11);</li> <li>- Operation and maintenance of the portable exhauster(s).</li> </ul> <p>Waste Transfer (S102):</p> <ul style="list-style-type: none"> <li>- The new progressive cavity pump and HIHTL shall be used to transfer waste from tank 241-S-102 to the DST (ALARACT 11).</li> </ul> <p>The completion of tank retrieval may also be aided by a Remote Water Lance (RWL) that is a high pressure water device, or hydro laser. Alternatively, a High Pressure Mixer (HPM) may be used in the same capacity. The systems will consist of both ex-tank and in-tank components. The ex-tank components will be comprised of; high pressure water systems, operating controls, cables and hoses. The in-tank components will be comprised of; umbilical, in-tank vehicle; high pressure nozzle(s), or the high pressure mixer.</p> <p>The high pressure water system will provide the water at the desired pressure, not to exceed 37,000 psig. A conditioning system will be used to filter the raw water entering the skid to ensure that no abrasive materials are entrained in the water. The water volumetric flow rate will be on the order of 4 to 18 gpm for the HPM and the 6 to 15 gpm for the RWL. The operating controls will be located in a control trailer outside of the tank farm fence. The cables and hoses will connect hydraulically powered in-tank vehicles with ex-tank controls and water skid via the umbilical. The HPM consists of an adjustable height pipe with tow pairs of opposed, high pressure, low volume</p>		

Requirement	Compliance Status	Compliance Determination Method						
<p>water orifices located on the bottom of the pipe. The mixer is capable of being rotated 360 degrees and has an adjustable height range of approximately 7 feet. The positioning of the mixer is performed remotely using a hydraulic system. Additionally, the mixer has a single orifice on the bottom of the unit that can be used as an operational or installation aid. The in-tank vehicle will house one to four high pressure water nozzles. The RWL will be operated with the nozzle and submerged to avoid aerosols in the tank. A rupture disc will be used to prevent reaching pressures above 37,000 psig.</p>								
<p>The Annual Possession Quantity is limited to the following radionuclides (Curies/year):</p> <table border="0"> <tr> <td>Am-241</td> <td>2.53E-02</td> <td> </td> </tr> <tr> <td>Sr-90</td> <td>2.51E-01</td> <td> </td> </tr> </table>	Am-241	2.53E-02		Sr-90	2.51E-01		Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures perform work under ALARACT controls per WDOH approval dated March 05, 2007.</p>
Am-241	2.53E-02							
Sr-90	2.51E-01							
<p>ALARACTs 1, 4, 5, 6, 11, 12, 13, 14, 15, and 16 shall be used. [WAC 246-247-040(5), -060(5)].</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>						
<p>Containments shall be used in removing the hydrogen probe, the motor controlled spray devices, and the automatic spray indexing devices from the tank [WAC 246-247-040(5), -060(5)].</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>						
<p>Radiological monitoring of all pit openings and pit work shall be performed and documented to ensure that maximum pit surface/pit contents contamination levels remain on average below those assumed in NOC release estimates for these activities:</p> <p>1.0 E+05 dpm/100 sq. cm. Beta/Gamma 20 spm/100 sq. cm. Alpha</p> <p>No more than 10 pit openings shall occur. These shall be tracked and documented. The total surface area of pits opened plus the surface area of pit contents shall not exceed 5,000 square feet. [WAC 246-247-040(5), -060(5)].</p>	Continuous	<p><b>CDM:</b> Field interviews, radiological surveys, RSRs, CH2M HILL work planning/controls/documents, and procedures.</p>						
<p>Radiological monitoring of all soil excavation work shall be performed and documented to ensure releases remain within releases estimated in the NOC. Soil volume excavated shall be tracked and documented and shall not exceed 1,000 cubic feet. Soil shall be monitored per ALARACT 5. Contamination levels for excavation shall remain on average equal to or less than:</p> <p>8.0 E-04 dpm/100 sq.cm. Beta 2.0 E+02 dpm/100 sq. cm. Alpha [WAC 246-247-040(5), -060(5)].</p>	Continuous	<p><b>CDM:</b> Field interviews, radiological surveys, RSRs, CH2M HILL work planning/controls/documents, and procedures.</p>						

Requirement	Compliance Status	Compliance Determination Method
<p>The total diffuse and fugitive abated emission limit for this Notice of Construction is limited to 4.32E-04 mrem/year to the Maximally Exposed Individual. The total unabated diffuse and fugitive emission limit for this Notice of Construction is limited to 4.32E-04 mrem/year to the Maximally Exposed Individual [WAC 246-247-040(5), -060(5)].</p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents/procedures, near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site and/or database, CH2M HILL notification procedure and notification logbook. <b>Comment:</b> On July 27, 2007 a spill of liquid from the S-102 retrieval system to the environment was discovered and reported per the CH2M HILL notification procedure. It was determined to have not exceeded the diffuse and fugitive abated emission limit for the NOC.</p>
<p style="text-align: center;">Permit: AIR 07-305 - D Issue Date:03-23-07 Effective Date:03-23-07            NOC: Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations            WDOH NOC ID: 703 Date In AOP: 07-26-07 Page in AOP: EU0486-073</p>		
Requirement	Compliance Status	Compliance Determination Method
<p>The total abated emission limit for this Notice of Construction is limited to 1.31E+00 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice of Construction is limited to 1.61E+03 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).</p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in (WAC 246-247-030(16)), may be conducted.</p> <p>The operation of the waste retrieval system(s) for the removal of radioactive wastes from all 149 Single Shell Tanks (SST) at the Hanford Site..</p> <p><b>SALTCAKE DISSOLUTION WASTE RETRIEVAL SYSTEM</b>            The saltcake dissolution waste retrieval system may be used to retrieve soluble saltcake waste. This method retrieves the soluble portion of the waste only, resulting in very few of the solids being pumped from the tank. The saltcake dissolution waste retrieval system deployed in the SSTs is for water, chemical agent, or catalyst liquid to be added to the tank using a variety of spray nozzles or "sprinklers". The approach is to sprinkle the waste surface with water, chemical agent, or catalyst liquid. The added water, chemical agent, or catalyst liquid must stay in contact with the saltcake for a long enough period of time for the brine to become saturated. Once the brine is saturated, it is pumped from the SST to a receiver tank, staging tank, storage DST or other staging/storage vessel associated with the supplemental treatment, packaging or disposal. Salt solution will be removed using the existing saltwell pump or other pump placed into the tank.</p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>A tank not equipped with a saltwell pump, a transfer pump (progressive cavity, vertical turbine) can be installed and operated.</p> <p>Remotely directable water distribution devices will be located in risers spaced far apart as practical. A combination of spraying water, chemical agent, or catalyst liquid to dissolve the saltcake can be used in conjunction with directing a flow of water or recirculating water at the waste to move it to the pump suction to allow the pumping of waste from the tank. Recirculated waste from the pump may be sent back to the tank as an alternative to using water to direct dissolution waste to the pump suction.</p> <p><b>MODIFIED SLUCING WASTE RETRIEVAL SYSTEM</b> Modified sluicing can be used for some SST waste retrieval. Modified sluicing is the introduction of liquid at low to moderate pressures, not to exceed 1200 psi, and volumes into the waste. The liquid dissolves and breaks apart solid materials and suspends them in the waste slurry. A transfer pump installed in the tank provides the motive force to transfer the liquid slurry to a receiver tank.</p> <p>Modified sluicing introduces sluice liquid in a controlled fashion using multiple sluicing nozzles at varying pressures and flows, then pumps out the resultant waste slurry. This maintains minimal liquid inventories within the tank at all times. The liquids that could be used in modified sluicing include water, recirculated supernatant/water from the receiving Double Shell Tank, recirculated supernatant/water, chemical agent or catalyst liquid.</p> <p><b>VACUUM WASTE RETRIEVAL SYSTEM</b> A vacuum waste retrieval system can be used for waste retrieval activities in the (SSTs). The vacuum waste retrieval system is introduced into the SSTs by means of an articulating mast system (AMS). The AMS has a horizontal reach and rotational capabilities of 360 degrees. The AMS has a retracted position and can be extended vertically. Air is mixed at the suction end of the AMS enabling the required vertical lift for the waste to a topside receiver tank, batch vessel or a staging SST, storage DST, or other staging/storage vessels associated with supplemental treatment, packaging or disposal.</p> <p>The AMS will be deployed through and attached to standard riser flanges that are available on the SSTs. Cameras can also be installed in other risers for in-tank viewing and control of the AMS.</p> <p>For the 200-series tanks in the 241-C, 241-U, 241-B and 241-T Tank Farms a vacuum retrieval process tank, staging tank, staging SST, storage DST or other staging/storage vessel will be deployed. The receiver tank will receive waste in batches from whichever tank is connected into the vacuum retrieval system. The vacuum pressure used to draw up the waste from the tank to the receiver tank is relieved back into the SST being retrieved.</p> <p><b>MOBILE RETRIEVAL SYSTEM</b> A Mobile Retrieval System (MRS) can be used to retrieve waste from some SSTs. The MRS consists of two in-tank systems. The first is a robotic crawler inserted through one riser the second is an AMS inserted through a second riser. The AMS retrieves the sludge from the tank using a vacuum with assisting pneumatic conveyance. The AMS vacuum tube has a horizontal reach and can be extended to the bottom of the tank. The arm rotates 360 degrees. The vacuum will be directed through the AMS in the tank to the end effector, which is in contact with the waste. The pneumatic conveyance-assisted vacuum retrieval system will draw the waste up through the vacuum to the waste vessel in the vessel skid in batches. The AMS is then valved out while the waste vessel is emptied and pumped out through the over</p>		

Requirement	Compliance Status	Compliance Determination Method																																																																																																																
<p>ground transfer lines to a DST, a staging SST or other treatment/disposal options. When the waste vessel is nearly empty, the transfer line will be valved out and the AMS will be valved back in and another batch of waste will be removed from the tank. This process will be repeated until waste near the center of the tank is removed. The robotic crawler will be remotely controlled to move and/or wash waste toward the center of the tank.</p> <p>The robotic crawler is equipped with a plow blade at the front for pushing/pulling wastes, a screw pump to jet wastes through a small nozzle towards the center of the tank, the ability to direct hot or cold water through the same nozzle to wash wastes off of in-tank equipment, dissolve waste agglomerations in the tank, and wash waste toward the center of the tank for removal.</p> <p>Any new retrieval methods or changes to processes will need to be provided to WDOH in a revised NOC prior to implementation.</p>																																																																																																																		
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<p>Controls for retrieval activities in the 241-A, AX, B, BX, BY, C, S, SX, T, TX, TY, U single shell tank forms shall consist of at least a single breather filter, or a radial filter. Each "Open Face" or "G-1" style HEPA filter shall be tested in placed at least annually following the guidance of ASME AG-1 Section TA, and shall have a minimum efficiency of 99.95%. Radial filters are not tested in the field, rather they are tested at the manufacturer to 99.97% efficiency and are disposed of within a year of placement and replaced with a new a new radial filter.</p>	Continuous	<p>CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p> <p><b>Comment:</b> Radial filters were installed on tanks C-104, ER311, SX-107, SX-108, SX-110, SX-111, SX-112, SX-114, T-202, U-301B, and UX-302A.</p>																																																																																																																
<p>During waste retrieval operations liquid shall be introduced through sluicing and saltcake dissolution nozzles at a pressure not to exceed 1200 psig, and the nozzle shall be at least five inches from the waste surface.</p>	Continuous	<p>CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>																																																																																																																
<p>Monitoring of breather filters during retrieval activities shall consist of weekly smear surveys on the inside surface of the ducting and downstream of the HEPA filter or on the outside of the screen covering the outlet of the vent.</p>	Continuous	<p>CDM: Annual Radiological Surveillance Task, Radiological Survey Reports, and field interviews.</p>																																																																																																																

Requirement	Compliance Status	Compliance Determination Method
Levels above 10,000 dpm/100cm <sup>2</sup> beta/gamma and 200 dpm/100cm <sup>2</sup> alpha shall be reported to WDOH.		
Retrieval activities shall occur under passive ventilation only when an exhauster can not longer be operated on a single shell tank due to structural concerns. The justification for structural concerns with the single shell tank shall be documented and provided to WDOH upon request.	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.
The following ALARACTs shall be followed during retrieval activities, ALARACT 1 "Demonstration for riser preparation/opening", ALARACT 4 "Demonstration for packaging and transportation of waste", ALARACT 6 "Demonstration for Pit Access", ALARACT 11 "Demonstration for Waste Transfers", ALARACT 12 "Demonstration for Packaging and Transportation of Equipment and Vehicles", ALARACT 13 "Demonstration for installation, operation, and removal of tank equipment", ALARACT 14 "Tank Farm ALARACT Demonstration for Pit Work", ALARACT 15" Demonstration for size reduction of waste equipment for disposal", ALARACT 16 "Demonstration for work on potentially contaminated ventilation system components", ALARACT 5 "Demonstration for Soil Excavation:", ALARACT 7 "Demonstration for Tank Waste Grab Sampling", and ALARACT 10 "Demonstration for Water Lancing".	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.
<p style="text-align: center;">Permit: AIR 07-1020 - B    <b>Issue Date:</b>10-30-07    <b>Effective Date:</b>10-30-07  <b>NOC:</b> Removal of Liquid from Catch Tank 241-ER-311  <b>WDOH NOC ID:</b> 718    <b>Date In AOP:</b> 12-05-07    <b>Page in AOP:</b> EU0486-094</p>		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 1.47E-05 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice of Construction is limited to 1.47E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).	Continuous	<b>CDM:</b> Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.
This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.

Requirement	Compliance Status	Compliance Determination Method
<p>The action will include the operation of a 500 cfm portable exhauster connected to a riser in conjunction with a inlet HEPA filter to remove evaporate liquid in the 241-ER-311 Catch Tank. A small volume of the liquid may be pumped out during this activity. There may also be an insertion of a sleeve inside the existing risers to direct air flow closer to the liquid surface.</p> <p>During riser preparation controls will be established using as low as reasonable achievable control technology (ALARACT 1) "Demonstration for riser preparation/opening", ALARACT 4 "Demonstration for packaging and transportation of waste", ALARACT 6 "Demonstration for pit access", ALARACT 13 "Demonstration for installation, operation, and removal of tank equipment", ALARACT 14 "Demonstration for pit work", ALARACT 15, "Demonstration for size reduction of waste equipment for disposal:, and ALARACT 16 "Demonstration for work on potentially contaminated ventilation system components".</p> <p>A portable, 500 cfm ventilation system will be installed on a riser on the 241-ER-311 Catch Tank. The portable exhauster consists of a skid mounted air clean-up train, which includes a heater, a pre-filter, two HEPA filters in series, and a fan, prior to the stack. During exhauster operation air from the tank will be heated before passing through the pre-filter and two HEPA filters to ensure that condensation of air stream moisture is minimized through this section. Drains in each of the filter and heater housings allow entry condensed liquid to flow away from the components and to be collected in a seal pot for removal.</p> <p>Ductwork will be used to connect the exhauster inlet to the tank riser. Ductwork will essentially be fabricated in conformance with ASME B31.3 Process Piping, and it will meet the requirements of ASME AG-1, Section SA, with the exceptions noted in RPP-1923, "General WAC 246-247 Technology Standards Exemption Justification for Waste Tank Ventilation Systems".</p> <p>A 500 cfm inlet HEPA filter in an ASME AG-1 compliant housing will be installed on a second riser on the 241-ER-311 to accommodate the inlet air stream created by the use of the portable exhauster. When the exhauster is not running, the inlet HEPA filter will serve as a tank barometric breather filter to provide abatement of particulate emissions from the tank.</p>		
<p>The Annual Possession Quantity is limited to the following radionuclides (Curies/year):</p>	<p>Continuous</p>	<p>CDM: Field interviews, CH2M HILL work planning/controls/documents/</p>

Requirement	Compliance Status	Compliance Determination Method
Am-241 4.79E-04   Cs-137 9.36E+00   Pu-239/240 3.36E-04 Sr-89/90 2.88E+00		procedures, and/or database.
The following ALARACTs shall be followed during retrieval activities, ALARACT 1 "Demonstration for riser preparation/opening", ALARACT 4 "Demonstration for packaging and transportation of waste", ALARACT 6 "Demonstration for Pit Access", ALARACT 13 "Demonstration for installation, operation, and removal of tank equipment", ALARACT 14 "Tank Farm ALARACT Demonstration for Pit Work", ALARACT 15 "Demonstration for size reduction of waste equipment for disposal", ALARACT 16 "Demonstration for work on potentially contaminated ventilation system components".	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.

**200 Area Diffuse/Fugitive - PFP**

WDOH Emission Unit ID : 486

Page in AOP : EU0486-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
No active Abatement Controls in the AOP for this certification period.		
<b>Required Sampling:</b> Per the sitewide ambient monitoring program samples will be collected from the existing near-facility monitoring stations. <b>Sampling Frequency:</b> Per the sitewide ambient monitoring program <b>Radionuclide Requiring Measurement:</b> Each radionuclide that could contribute greater than 10 percent of the potential-to-emit TEDE	Continuous	<b>CDM:</b> Sampling is verified by information in ABCASH. The Statement of Work for Services Provided by the Waste Sampling and Characterization Facility for the Environmental Compliance Program during Calendar Year 2007 (HNF-EP-0835-13) defines what analyses are performed and the frequency. DOE/RL-2008-24, Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007 provides the radionuclide measurements.
<b>Federal and State Regulatory Requirement:</b> WAC 246-247-075[2] <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114	Continuous	<b>CDM:</b> NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528)

Requirement	Compliance Status	Compliance Determination Method
<p align="center">Permit: AIR 06-1020 - D Issue Date:10-05-06 Effective Date:10-05-06            NOC: Transition of the Plutonium Finishing Plant            WDOH NOC ID: 655 Date In AOP: 01-01-07 Page in AOP: EU0486-014</p>		
<p>The total abated emission limit for this Notice of Construction is limited to 2.40E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).</p>	<p align="center">Continuous</p>	<p><b>CDM:</b> Annual Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The proposed activities involve transitioning the PFP Complex to a state of low-risk, low-cost, long-term surveillance and maintenance pending final disposition. All work would be performed in accordance with the approved radiological control procedures and as low as reasonably achievable (ALARA) program requirements as implemented by the project radiological control manual, as amended. These requirements would be carried out through the activity work packages and associated radiological work permits.</p> <p>This activity includes deactivation of buildings and also includes deactivation of systems no longer necessary once stabilization and storage activities and planned legacy hold-up removal have been concluded; removal/disposition of equipment/components; contamination characterization and reduction/mitigation; packaging plutonium holdup material meeting waste acceptance criteria; maintaining and operating muffle furnaces, as needed, for removed plutonium holdup material; and demolition of radiologically contaminated, non-process ancillary buildings.</p> <p>This activity also includes deactivation activities or activities to prepare and place a facility in a safe and stable condition to minimize the long-term cost of a surveillance and maintenance program while being protective of personnel, the public, and the environment until demolition of former processing and material storage buildings occurs. Deactivation activities would include those actions foreseeably necessary for implementation of the proposed action, such as associated transportation activities, waste removal and disposal, and award of grants and contracts. Specific actions could include the following work involving the potential for radioactive contamination:</p> <ul style="list-style-type: none"> <li>- Draining and/or de-energizing systems as appropriate.</li> <li>- Stabilizing contaminated areas (e.g., with fixatives, sealants, paint).</li> <li>- Stabilizing or removing gloveboxes, process equipment, tanks, piping, fume hoods, and support equipment.</li> <li>- Removing fencing and paved parking areas adjacent to facilities.</li> <li>- Installing alternate environmental monitoring, surveillance, and safety components (e.g., lighting, fencing) if required.</li> <li>- Removing/packaging radioactive (including equipment calibration sources and laboratory standards) and hazardous materials and waste, including stabilization and/or removal of asbestos, and removal, cleanup, and disposition of polychlorinated biphenyls and other regulated materials and transportation to existing waste management facilities.</li> <li>- Removing equipment and system components.</li> <li>- Size-reducing process equipment for disposal as waste.</li> <li>- Performing physical or chemical treatment processes (e.g., neutralization, solidification, filtering) to render a material less hazardous or to reduce the volume (such processes will not increase the potential release rates).</li> <li>- Decontamination to support the excess of surplus equipment.</li> </ul>	<p align="center">Continuous</p>	<p><b>CDM:</b> FH work Management, and Job Control System.</p>

Requirement	Compliance Status	Compliance Determination Method
<ul style="list-style-type: none"> <li>- Removing excess combustible material.</li> <li>- Disconnecting utilities, piping, and communication service systems (if the systems are not necessary to maintain required environmental monitoring or building safety systems), including associated excavation.</li> <li>- Ensuring adequate freeze and heat protection.</li> <li>- Stabilizing, reducing, combining, or removing waste materials at outdoor locations within the PFP Complex (such processes will not increase the potential release rates provided in this NOC).</li> <li>- Sealing cracks, gratings, and openings to the building exterior, and repairing roofs.</li> <li>- Conducting general housekeeping activities (e.g., vacuuming, sweeping, dusting) in areas where radiological contamination is not anticipated (e.g., radiological buffer area) but could be encountered.</li> <li>- Removing or reducing radioactive or hazardous contamination from facilities and equipment by washing, heating, chemical or electrochemical action, mechanical cleaning, or other similar techniques.</li> <li>- Removing residual plutonium holdup material, which might remain throughout the PFP Complex after stabilization activities described in the PFP EIS have been completed; packaging residual plutonium holdup meeting waste acceptance criteria for shipment to an onsite waste management facility, or thermally stabilizing material in muffle furnace operations and packaging for storage in existing PFP Complex vaults.</li> <li>- Designing and executing changes to utility service systems and/or utility structures necessary to place a facility in surveillance and maintenance, pending demolition.</li> <li>- Conducting final process operations to stabilize or eliminate residual operational materials or effluents, such as final process runs; cleaning of vessels, valve pits and pipe trenches; installation and operation of small evaporators; flushing piping systems; removal or replacement of filters; and other similar closeout actions.</li> <li>- Demolishing non-process ancillary buildings.</li> <li>- Deactivation activities will require actions to provide for continued routine maintenance, repair, and replacement-in-kind of operating portions of PFP.</li> </ul> <p>Other actions include:</p> <ul style="list-style-type: none"> <li>- Remove residual plutonium from gloveboxes, filterboxes, equipment, piping, ductwork, and the building surfaces and package for disposition to onsite or offsite disposal facilities.</li> <li>- Remove internal equipment from gloveboxes and building equipment/system components and package for disposition to onsite or offsite disposal facilities.</li> <li>- Decontaminate gloveboxes, filterboxes, ductwork, and equipment to less than transuranic levels if possible.</li> <li>- Remove gloveboxes, filterboxes, ductwork, and equipment and package for disposition to onsite or offsite disposal facilities.</li> <li>- Decontaminate or fix contamination on building interior and exterior.</li> <li>- Disconnect utilities and services not necessary for monitoring.</li> <li>- Perform radiological and chemical characterization in preparation for dismantlement.</li> </ul> <p>In preparation for the proposed transition activities, housekeeping, assays, preventive maintenance, minor decontamination, and reactivation of glovebox access ports would occur.</p> <p>See additional process description in the following Conditions/Limitations.</p>		
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 8.90E+02 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p>	<p>Continuous</p>	<p><b>CDM:</b> Verified the basis for the PTE calculation in the NOC application unchanged.</p>

Requirement	Compliance Status	Compliance Determination Method															
<p>Am-241   1.74E-03   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Pu-238/239   1.90E-03   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Pu-240   5.20E-04   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            Pu-241   1.50E-02   Liquid/Particulate Solid   WAC 246-247-030(21)(a)</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <table border="0"> <tr> <td>Am-241</td> <td>Co-60</td> <td>Cs-137</td> <td>Np-237</td> <td>Pu-238/239</td> </tr> <tr> <td>Pu-240</td> <td>Pu-241</td> <td>Pu-242</td> <td>Sr-90</td> <td>U-233</td> </tr> <tr> <td>U-234</td> <td>U-235</td> <td>U-236</td> <td>U-237</td> <td>U-238</td> </tr> </table> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)) DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>	Am-241	Co-60	Cs-137	Np-237	Pu-238/239	Pu-240	Pu-241	Pu-242	Sr-90	U-233	U-234	U-235	U-236	U-237	U-238		
Am-241	Co-60	Cs-137	Np-237	Pu-238/239													
Pu-240	Pu-241	Pu-242	Sr-90	U-233													
U-234	U-235	U-236	U-237	U-238													
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in (WAC 246-247-030(16)), may be conducted.</p> <p>The proposed methods for removing residual contamination from equipment/systems and for removing equipment would be similar to methods in use today throughout the industry and the DOE complex. Both direct contact and remote technologies/techniques could be used. General technologies/techniques include heating, crushing, size reducing, and cutting. These could involve laboratory analyses and nondestructive assay; chemical cleaning, brushing, washing, scrubbing, vacuum cleaning, and abrasive jetting; using nibblers, shears, circular saws; potentially a remote-operated laser; and other similar methods. It is expected that should new technology become available, such technology would be evaluated for application in the PFP deactivation activities, and could be used if no increase in the potential-to-emit described in this NOC would result.</p>	Continuous	CDM: FH work Management, and Job Control System.															
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in (WAC</p>	Continuous	CDM: FH work Management, and Job Control System.															

Requirement	Compliance Status	Compliance Determination Method
<p>246-247-030(16)), may be conducted.</p> <p>The PFP deactivation activities include the following:</p> <ul style="list-style-type: none"> <li>- Size reduction of equipment will be by mechanical means and may be accomplished by compaction, disassembling by use of wrenches, nibblers, shears, cutters, grinders, saws, or other similar methods. This equipment may be manually, hydraulically, pneumatically or electrically powered.</li> <li>- Decontamination methods include: Scraping, sweeping, chemical cleaning, brushing, washing, scrubbing, scabbling, grinding, vacuum cleaning, strippable coatings, washing using wet rags, spraying, abrasive jetting, low pressure and high pressure wash using water and/or chemicals cleaners, use of fixatives and/or physical removal of contamination by use of mechanical means such as chipping or cutting. The application of fixatives for contamination control would be accomplished via aerosol fogging, paint brush/roller, hand-held spray bottle, or an electric or pneumatic powered sprayer.</li> <li>- Containment of waste may be accomplished by coating the material with a fixative or placing the material in containers, bags and/or wrapping in plastic sheeting, utilizing adhesive tape, heat sealing or mechanical closure to prevent release of radiological contamination.</li> <li>- Miscellaneous mechanical processes that could be used to support the proposed activity could include threading of piping, use of hot taps on piping, capping and plugging piping using threaded pipe components and expanding/compressive plugs or caps, drilling of holes in metal and concrete, core drilling concrete surfaces, installation of anchor bolts, installation and removal of bolts, installation of hose and tubing connectors, compression fittings, installation and removal of pumps, agitators and process control filters.</li> </ul>		
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in (WAC 246-247-030(16)), may be conducted.</p> <p>Excavation will take place in the PFP Complex to support site stabilization, isolating/blanking utilities, fence removal/installation/relocation, and soil sampling/cleanup. Access to underground piping and cable would be gained by use of a bucket-type excavator. Manual digging methods with shovels, picks, and rakes also could be used. Contaminated soil removed and covered during excavation activities would remain covered until replaced into the excavation or otherwise dispositioned (backfill would consist of the original material removed or 'clean' soil).</p> <p>If needed or chosen for use during these activities, the categorical NOCs for sitewide use of the guzzler, a portable temporary radioactive air emissions unit (PTRAEU) exhauster, or HEPA filtered vacuum radioactive air emission unit could be used.</p> <p>Wastes generated during deactivation would be packaged appropriately. Waste would be generated/packaged throughout the PFP Complex (i.e., in structures with registered stacks, in non-HEPA filtered structures, or outdoors), resulting in filtered releases and/or diffuse and fugitive emissions. Wastes could be placed in various containers such as plastic bags, metal drums, and standard waste boxes. These wastes could be transferred to other locations within the PFP Complex for interim storage and/or repackaging before subsequent transport to approved locations/facilities pending final disposition.</p> <p>If necessary, personnel decontamination activities would be conducted in the decontamination trailer (DOE/RL-2003-42).</p>	<p>Continuous</p>	<p><b>CDM:</b> FH work Management, and Job Control System.</p>
<p>The total abated emission limit for the diffuse/fugitive</p>	<p>Continuous</p>	<p><b>CDM:</b> Total abated emission is reported</p>

Requirement	Compliance Status	Compliance Determination Method
<p>due to general activities is limited to 4.8E-04 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the potential-to-emit for this emission unit is limited to 4.8E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).</p>		<p>in the Annual Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007. Verified that the basis for the PTE calculation in the NOC application did not increase.</p>
<p>The total abated emission limit for the diffuse/fugitive due to the decontamination trailer is limited to 4.5E-06 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-to-Emit for this emission unit is limited to 4.5E-06 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).</p>	Continuous	<p><b>CDM:</b> Total abated emission is reported in the Annual Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007. Verified that the basis for the PTE calculation in the NOC application did not increase.</p> <p><b>Comment:</b> The decontamination trailer was not used during the compliance period.</p>
<p>The total abated emission limit for the diffuse/fugitive due to fuel de-inventory is limited to 7.0E-05 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the potential-to-emit for this emission unit is limited to 7.0E-05 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).</p>	Continuous	<p><b>CDM:</b> Total abated emission is reported in the Annual Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007. Verified that the basis for the PTE calculation in the NOC application did not increase.</p>
<p><b>Decontamination Trailers</b></p> <p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in (WAC 246-247-030(16)), may be conducted.</p> <p>This activity is approved to provide decontamination of personnel who have been contaminated with radioactive material. Initial decontamination activities would take place at the location of discovery. If additional decontamination is warranted, personnel would be transferred to the decontamination trailer.</p> <p>Decontamination activities allowed to be performed at the decontamination trailer include the removal and packaging of contaminated clothing and isolation/removal of skin contamination.</p> <ul style="list-style-type: none"> <li>- Before transport of personnel to the decontamination trailer, appropriate measures shall be taken to contain potentially dispersible contamination. To the extent practicable, contaminated clothing would be removed and disposed. Any remaining contamination would be isolated by bagging, taping, or other appropriate means.</li> <li>- Inside the trailer, any additional contaminated coverings (e.g., coveralls, modesty clothing) would be removed, as appropriate, and packaged (e.g., plastic bags) for disposition. Various means to reduce/remove skin contamination would be used as appropriate. For small areas of contamination, scrubbing with soap and water or chemical cleaner would be used. For gross contamination, shower(s) would be used, followed by scrubbing(s).</li> </ul> <p>All potentially radiological contaminated liquid shall be collected and</p>	Continuous	<p><b>CDM:</b> Review of facility records and personnel interviews. No decontamination activities were conducted under this license during the compliance period.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>contained in a catch tank located beneath the decontamination trailer.</p> <p>The general chemical and physical processes associated with decontamination activities in the decontamination trailer consist of the following:</p> <ul style="list-style-type: none"> <li>- On the identification of the need for additional decontamination of personnel, affected individuals would be escorted to the decontamination trailer.</li> <li>- As appropriate, contaminated clothing, coverings, and/or articles would be removed, packaged, and dispositioned in accordance with the applicable facility waste handling procedures.</li> <li>- Personnel decontamination processes might include various methods or combinations of cleaning agents and/or chemicals. For example: soap and water; premoistened towelettes, shaving cream-type foam decontamination agents for facial areas; removal of hair; and abrasive soaps for toughened skin surfaces (e.g., hands and feet).</li> <li>- Spent decontamination solutions would be transferred from the decontaminated liquid holding tanks and containerized (e.g., packaged in absorbents in drums or placed in drums and carboys) and transported to existing facilities on the Hanford Site for disposal.</li> <li>- Periodic maintenance inspections of the decontamination trailer are allowed to be performed without containment or portable exhausters.</li> </ul> <p>The decontamination trailers vent directly to the atmosphere. As many as two additional decontamination trailers may be installed to support PFP deactivation.</p>		
<p><b>Fuel De-Inventory</b></p> <p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>PFP will repackage fuel assemblies and/or fuel pins into storage and/or transport containers for staging at PFP. These containers would be loaded via crane operations onto trucks for transport either to storage onsite or to appropriate offsite facilities pending final disposition. Fuel assemblies and/or fuel pins could be mechanically handled by transferring directly to containers (emissions would be considered as diffuse and fugitive if work conducted in locale providing potential for unfiltered emissions). Fuel pins could be transferred to glovebox(es) (emissions discharging through the 291-Z-1 or 296-Z-7 stacks) where they would be size reduced (using bolt cutters or equivalent means) and placed into a container. The pins/containers could be subjected to NDA at any point(s) during repackaging activities.</p> <p>Minor alterations (e.g., removing interior walls, installation of temporary scaffolding) to the 234-5Z Building would be necessary to support fuel de-inventory operations.</p>	<p>Continuous</p>	<p><b>CDM:</b> FH work Management, and Job Control System.</p>
<p>Air movers fitted with HEPA-like filters or HEPA Vacs that are used in a manner where the effluent is exhausted</p>	<p>Not Applicable</p>	<p><b>CDM:</b> No action is conveyed to the permittee by this condition.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>to an approved filtered and monitored air space (existing stack or PTRAEU) are not considered as separate emissions units nor as contributing separate release factors so far as estimating PTE for the existing stack or PTRAEU.</p>		
<p>Air movers fitted with HEPA filters (testable) or HEPA Vacs that are used in a manner where the effluent is exhausted to an occupied air space (1) within the same structure comprising a fugitive emission unit, (2) confined by an effectively closed structure, and (3) has air monitored for personnel protection to assure radioactive airborne contamination within the air space is maintained within standard air purifying respirator (APR) mask protection limits (per 8-hour shift), are not considered separate emission units. Work space air monitoring will withdraw samples as near to the workers as possible without interference with workforce.</p>	Continuous	<p><b>CDM:</b> Radiological controls and work procedures.</p>
<p>The assumed PTE is based on a relatively large source term (i.e., assumes one percent of inventory available for diffuse and fugitive emissions). The factor of 100 is addressed for each category of abatement practices or devices as described below.</p> <ul style="list-style-type: none"> <li>- Radiological control practices for highly contaminated items or equipment (e.g. glovebox) would involve either wrapping and/or the application of a fixative (e.g., spraying the internals of the glovebox).</li> <li>- In the case of wrapped items, operational experience with bag-out of highly-contaminated equipment at PFP has demonstrated an abatement factor of well above 100.</li> <li>- In the case of application of fixatives, particulate material at PFP has been demonstrated to become agglomerated; thus reducing the potential to be released. Operational experience at has shown that applying fixatives provides an abatement factor of well above 100.</li> <li>- The application of air movers or vacuum devices not under existing NOCs (i.e., guzzler, PTRAEU, or HEPA filtered vacuum radioactive air emission units) would involve use of high-efficiency or HEPA-type filtration as a minimum. This assures the abatement factor of 100 is conservative for these devices.</li> </ul>	Not Applicable	<p><b>CDM:</b> No action is conveyed to the permittee by this condition. This information forms part of the basis for the PTE calculations.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>STABILIZATION/DEACTIVATION/DEMOLITION ACTIVITIES</p>	Continuous	<p><b>CDM:</b> FH work Management, and Job Control System.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>All work will be performed in accordance with the approved radiological control methods and as low as reasonably achievable (ALARA) program requirements. These requirements shall be carried out through the activity work packages and associated radiological work permits.</p> <p>Roofs and walls of the permanent buildings and structures will be removed to slab with the foundation remaining. Utilities will be isolated where required and will involve a minimal amount of excavation. As appropriate, connex boxes and existing materials in lay down areas will be recycled, reused, or disposed.</p> <p>Demolition methods will be selected based on the structural elements to be demolished, remaining radionuclide contamination, location, and integrity of the structures. Demolition methods could include use of an excavator with a hoe-ram, a hydraulic shear with steel shear jaws, concrete pulverizer/breaker jaws, cutters, or mechanical/power saws. Heavy equipment could be used to demolish permanent structures. Heavy equipment such as a track-mounted excavator with bucket and thumb attachment could be used to demolish the walls and roofs of the structures. As appropriate, dust suppressants shall be used.</p> <p>Once the structure is brought completely to the ground, heavy equipment such as a front-end loader and the excavator can be used to load the debris into disposal transport trucks (e.g., roll on/roll off boxes or dump trucks). Potentially, disturbed areas would be leveled and stabilized.</p> <p>If used during these activities, the sitewide Guzzler(tm), a portable temporary radioactive air emissions unit (PTRAEU) exhauster, or high-efficiency particulate air (HEPA) filtered vacuum radioactive air emission unit would be used in accordance with the latest revisions of the NOCs ["Categorical Notice of Construction for use of the Guzzler Vacuum Excavation System for Radiologically Limited Activities on the Hanford Site" or 'Guzzler NOC', DOE/RL-96-75 and DOE/RL-97-50 respectively].</p> <p>Minor amounts of excavation might take place in the vicinity of the permanent structures to support site stabilization and isolating/blanking utilities. Access to underground piping and cable would be gained by use of an excavator. Manual digging methods with shovels, picks, and rakes also could be used. Contaminated soil removed during excavation activities will be covered until replaced into the hole or otherwise dispositioned.</p> <p>Excavation activities will be monitored and evaluated. The sitewide Guzzler could be used when evidence of low levels of soil contamination is provided. Backfill will be made with the original material removed or brought in 'clean' soil.</p>		
<p>The following controls shall be used during the stabilization/deactivation/demolition activities.</p> <ol style="list-style-type: none"> <li>1. Health physics technician (HPT) coverage would be provided, as necessary, during all deactivation and excavation activities.</li> <li>2. Ventilation systems, for the structures that exhaust through registered stacks with HEPA filtration, would be operational during transition activities as practicable. An exception includes shutting down a ventilation system for a short period of time to allow fogging operations or sampling.</li> <li>3. The existing monitoring systems for the registered stacks would be operational during transition activities.</li> </ol>	<p>Continuous</p>	<p><b>CDM: FH work Management, and Job Control System.</b></p>

Requirement	Compliance Status	Compliance Determination Method
<p>4. Appropriate controls such as water, fixatives, covers, containment tents, or windscreens would be applied, if needed, as determined by the Radiological Control organization. Soil removed and covered during excavation activities would remain covered until replaced into the excavation or otherwise dispositioned.</p> <p>5. After leveling, the soil surface radiological contamination levels would be verified to be acceptable per Radiological Control organization guidelines. If contamination is present above identified levels, the soil would be removed and containerized for disposal or covered or fixed to provide containment of the contamination, consistent with radiological work procedures in effect at the time.</p> <p>6. As appropriate, before starting deactivation activities (such as isolating utilities and piping or dismantling the exhaust system), removable contamination in the affected area(s) would be reduced to ALARA. Measures such as decontamination solutions, expandable foam, fixatives, or glovebags also could be used to help reduce the spread of contamination.</p> <p>7. If a guzzler, PTRAEU, or HEPA filtered vacuum radioactive air emission unit is used, controls as described in the sitewide guzzler NOC, DOE/RL-96-75 or DOE/RL-97-50, as amended and licensed, would be followed.</p> <p>8. Field surveys during excavation would identify localized areas of contamination. If contamination levels over 2,000 dpm alpha/100 cm<sup>2</sup> [i.e., a 'hot spot' (of a few square meters or less) of high alpha surface contamination area] are exceeded, additional surveys would be conducted on the perimeter of the 'hot spot' to verify the localized nature. A separate evaluation of the activity against the assumptions of this NOC would be documented to file prior to the activity being performed to ensure overall approved contamination levels are not exceeded.</p> <p>9. The controls specified in the applicable RWP for the decontamination operations will be considered ALARACT for the decontamination trailer activities.</p>		
<p>The expected frequency of personnel contamination requiring the use of the decontamination trailer is estimated to be less than 10 times per year. DOH shall be notified if that number is exceeded in any calendar year.</p>	<p>Not Applicable</p>	<p><b>CDM:</b> The decontamination trailer was not used under this license so did not exceed the 10 times per year to trigger the notification requirement.</p>
<p>All personnel decontamination operations activities shall be conducted under the auspices of radiological control technicians.</p>	<p>Continuous</p>	<p><b>CDM:</b> Facility radiological control procedures.</p>
<p>Radiological surveys during personnel decontamination operations (e.g., smears and hand-held radiation monitoring measurements on the interior/exterior of the decontamination trailer) are also approved as periodic confirmatory measurement (PCM) for this activity. Survey data shall be maintained as part of the air emissions record and will be available for inspection upon request.</p>	<p>Not Applicable</p>	<p><b>CDM:</b> The decontamination trailer was not used under this license and did not trigger radiological surveys or record keeping requirements.</p>
<p>For purging activities, use of a stand alone vacuum pump fitted with a Nuc-Fil metal HEPA filter is</p>	<p>Not Applicable</p>	<p><b>CDM:</b> Activity was not conducted during the compliance period and did</p>

Requirement	Compliance Status	Compliance Determination Method
<p>allowed, with the control that the filter flow through the system is limited not to exceed the filter rating. Confirmatory measurement of low emissions will be based on radiological technician field survey of either the down stream side of the HEPA filter or at the outlet of the vacuum pump.</p>		<p>not trigger the confirmatory measurements.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in (WAC 246-247-030(16)), may be conducted.</p> <p>Security enhancement program activities include those actions foreseeably necessary for implementation of the proposed action, such as associated transportation activities, waste removal and disposal, and award of grants and contracts. Specific actions include the following work involving the potential for radioactive contamination:</p> <ul style="list-style-type: none"> <li>- Excavations, inside and outside the PFP protected area (PA) to support installation of utilities and security-related devices and structures (e.g., barricades, patrol offices) and relocation of displaced activities. Security enhancement program will require some excavation in areas of potential belowgrade or surface contamination. In addition to excavations for building and structure foundations, it is estimated that approximately 5,000 linear feet of belowgrade ducting will be installed, a portion of the water line will require replacement, and connections to sewer and water lines will be required.</li> <li>- Modifications to existing structures (e.g., moving walls, doors, railing, security monitoring equipment, electrical equipment upgrades) and/or construction of new buildings (non-radioactive).</li> <li>- Continued operations at 2736-Z/ZB Buildings for 3013-container packaging systems monitoring and maintenance.</li> </ul> <p>No modifications to the existing abatement equipment associated with registered stacks are allowed.</p>	<p>Continuous</p>	<p><b>CDM:</b> FH work Management, and Job Control System.</p>
<p>The total abated emission limit for the Diffuse/Fugitive due to security enhancement program excavation activities is limited to 9.6E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the potential-to-emit for this emission unit is limited to 9.6E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).</p>	<p>Continuous</p>	<p><b>CDM:</b> Total abated emission is reported in the Annual Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007. Verified that the basis for the PTE calculation in the NOC application did not increase.</p>

**200 Area Diffuse/Fugitive - WTP**

WDOH Emission Unit ID : 486

Page in AOP : EU0486-001

EMISSION UNIT DID NOT OPERATE DURING CY 2007 SEE TABLE 2

Permit: AIR 06-1032 - B **Issue Date:**10-05-06 **Effective Date:**10-05-06  
**NOC:** Excavation Activities for the Building of the RPP Waste Treatment Plant  
**WDOH NOC ID:** 672 **Date In AOP:** 01-01-07 **Page in AOP:** EU0486-023  
**NOC NOT USED –** TABLE 3

**200 Area Diffuse/Fugitive - Roof Replacement**

WDOH Emission Unit ID : 486

Page in AOP : EU0486-001

EMISSION UNIT DID NOT OPERATE DURING CY 2007 SEE TABLE 2

Permit: AIR 06-1030 - D **Issue Date:**10-05-06 **Effective Date:**10-05-06  
**NOC:** Roof Replacement Activities Involving Radioactive Contamination at Facilities on the Central Plateau  
**WDOH NOC ID:** 670 **Date In AOP:** 01-01-07 **Page in AOP:** EU0486-021  
**NOC NOT USED –** TABLE 3

**200 Area Diffuse/Fugitive - CS&I**

WDOH Emission Unit ID : 486

Page in AOP : EU0486-001

EMISSION UNIT DID NOT OPERATE DURING CY 2007 SEE TABLE 2

Permit: AIR 06-1065 **Issue Date:**10-05-06 **Effective Date:**10-05-06  
**NOC:** Cleaning Radiologically Contaminated Vehicles  
**WDOH NOC ID:** 715 **Date In AOP:** 01-01-07 **Page in AOP:** EU0486-092  
**NOC NOT USED –** TABLE 3

**200 Area Diffuse/Fugitive - Central Plateau**

WDOH Emission Unit ID : 486

Page in AOP : EU0486-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
No active Abatement Controls in the AOP for this certification period.		
<b>Required Sampling:</b> Per the sitewide ambient monitoring program samples will be collected from the existing near-facility monitoring stations. <b>Sampling Frequency:</b> Per the sitewide ambient monitoring program <b>Radionuclide Requiring Measurement:</b> Each	Continuous	CDM: Review data in ABCASH

Requirement	Compliance Status	Compliance Determination Method
radionuclide that could contribute greater than 10 percent of the potential-to-emit TEDE		
<b>Federal and State Regulatory Requirement:</b> WAC 246-247-075[2] <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114	Continuous	<b>CDM:</b> NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528)
Permit: AIR 06-1053 <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>NOC:</b> Characterization and Stabilization Activities Involving Radioactive Contamination at Facilities on the Central Plateau <b>WDOH NOC ID:</b> 699 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0486-066		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 5.00E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).	Continuous	<b>CDM:</b> The Annual Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in (WAC 246-247-030(16)), may be conducted. The approved activities are limited to:</p> <p>The characterization and stabilization (as defined in other conditions) of emission units within 200 West and 200 East areas, and 212 N, 212 P, and 212 R. (WAC 246-247-040(5))</p>	Continuous	<b>CDM:</b> Field interviews and record review.
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 5.00E-02 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Alpha-0   3.50E-03   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            License PTE limit bounds 3.5 Ci/yr 241Am and release fraction of 0.001. Any radionuclide on the chart of the nuclides could be encountered during characterization and stabilization operations. The radionuclides specifically listed in the NOC application were chosen to conservatively represent all radionuclide emissions that may occur in particulate form. A small contribution from the gaseous radionuclides may be encountered. Although any radionuclide could be present, for conservatism all beta/gamma is assumed to be Cs-137 and all alpha is assumed to be Am-241 for dose calculation estimates. Other radionuclides may be encountered and are approved so long as they are conservatively represented by the total alpha and total beta-gamma constituents.</p> <p>B/G-0   1.40E-02   Liquid/Particulate Solid   WAC 246-247-030(21)(a)            License PTE limit bounds 14.0 Ci/yr 137Cs and release fraction of 0.001. Any radionuclide on the chart of the nuclides could be</p>	Continuous	<b>CDM:</b> Ensured by meeting the conditions for this NOC.

Requirement	Compliance Status	Compliance Determination Method
<p>encountered during characterization and stabilization operations. The radionuclides specifically listed in the NOC application were chosen to conservatively represent all radionuclide emissions that may occur in particulate form. A small contribution from the gaseous radionuclides may be encountered. Although any radionuclide could be present, for conservatism all beta/gamma is assumed to be Cs-137 and all alpha is assumed to be Am-241 for dose calculation estimates. Other radionuclides may be encountered and are approved so long as they are conservatively represented by the total alpha and total beta-gamma constituents.</p> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)) DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>		
<p>The basis for selection of radioactive air controls/abateements for each emission unit shall be documented in sufficient detail to demonstrate compliance. DOH may audit the controls and determination of containment risk under this NOC, and independently judge the adequacy of controls, assigned risk and risk components for any activity. (WAC 246-247-040(5)) and WAC 246-247-080 (1, 8, 10))</p>	Continuous	CDM: Field interviews and record review.
<p>Soil Excavation Associated with Characterization/Stabilization: Soil may be excavated to support characterization/stabilization of central plateau emission units. An initial survey shall be performed of the area to be excavated. Surveys shall be performed throughout the excavation to assure that environmental protection is maintained. Once the excavation begins, water or other fixative of equal or better effectiveness shall be used, as necessary, to prevent the spread of dust. To the extent practicable using hand held instrument field survey techniques, the clean soil shall be separated from the soil identified as contaminated. The contaminated soil shall have a fixative applied or shall be covered by plastic at the end of the shift, and as necessary, to stabilize the contaminated soil.</p> <p>Radiological Controls for Soil Excavation:  A. Health Physics coverage shall be provided as specified in the radiological work permit. DOH does not approve work permits. DOH may independently judge the adequacy of the Health Physics coverage. Licensee shall maintain records of Health Physics coverage and survey results.  B. Beta-gamma surveys of the ground surface are required prior to excavation in Contamination Areas (CA's), High Contamination Areas (HCA's), Soil Contamination Areas (SCA's), and Underground Radioactive Material Areas (URMA's). If in an area of known or suspected alpha contamination, or if beta/gamma contamination is detected, alpha surveys shall be performed as well.</p>	Not Applicable	CDM: Soil was not excavated during the reporting period; therefore the requirements in this condition were not triggered.

Requirement	Compliance Status	Compliance Determination Method
<p>C. Suppressants such as water, fixatives, covers, or windscreens shall be used as necessary, including at the end of each shift or when sustained or predicted winds are &gt;20 mph.</p> <p>D. Excavation of radioactive material shall not commence if sustained winds are predicted to exceed 20 mph during the work shift.</p> <p>E. Excavation of radioactive material shall cease if sustained winds exceed 20 mph. A local wind-speed measurement device may be utilized in lieu of Hanford Meteorological Station readings, provided the reading is taken in an unobstructed location that is representative of the work area. Use of a local device and the measured wind-speed readings taken from it must be documented, and the documentation retained.</p> <p>F. If the contamination for the general area is greater than 2000 dpm/100 sq.cm. alpha or greater than 100,000 dpm/100 cm.sq. beta-gamma, place in a safe and stable condition and stop work, notify DOH, and implement the controls listed below. Once notifications have been made and the following controls implemented, excavation may continue:</p> <p>a. Soil shall be wetted prior to excavation if not already damp.</p> <p>b. General area workplace air monitoring shall be performed during excavation activities.</p> <p>c. Excavation and contaminated soil piles shall be covered with plastic, or fixative shall be applied, at the end of each shift or as necessary to prevent the spread of airborne contamination.</p> <p>G. Contaminated soil containing &gt;100,000 dpm/100 sq.cm. beta-gamma or &gt;2000 dpm/100 sq.cm. alpha shall be containerized or covered with clean fill if it is to be left for greater than 48 hours.</p> <p>H. If soil contamination exceeds 20 mrad/hour (open window reading), work shall be stopped and placed in a safe and stable condition, and adequacy of controls will be reassessed. DOH shall be notified (e-mail notification is required). Work may continue when approved by DOH (e-mail concurrence is required).</p> <p>I. If hot specks are detected during the radiological surveys, the specks shall be removed and contained before the activity is allowed to continue unless located in the bottom of the trench after excavation has been completed. Specks found in the bottom of the completed trench may be covered with clean fill. A hot speck is defined as a very small amount (i.e. less than or equal to 100 square centimeters) of contamination.</p> <p>Monitoring for Soil Excavation:</p> <p>J. At a minimum, pre-job and post-job surveys shall be made.</p> <p>K. Radiological monitoring shall be in accordance with approved governing procedures. DOH may independently judge the adequacy of the monitoring.</p> <p>Records for Soil Excavation:</p> <p>L. Work instructions (written).</p> <p>M. Radiological work permit.</p> <p>N. Radiological survey report(s).</p> <p>(WAC 246-247-040(5))</p>		
<p>DOH reserves the right to require additional monitoring on a case-by-case basis 6) (WAC 246-247-040(5)).</p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews and record review to verify additional monitoring was implemented.</p>
<p>Monitoring: In addition to the monitoring required on page one of this license, total alpha, total beta/gamma shall be monitored periodically, the period to be consistent with the duration of the activity. The bases for the monitoring method and the period shall be documented. Monitoring records shall explicitly</p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews and record review to verify additional monitoring was implemented.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>demonstrate compliance to the limit on TEDE to the MEI set down in this license. Monitoring may include air monitoring, or CAM records.</p> <p>For soil excavation, compliance may be demonstrated via calculation based on a release fraction of 0.001, appropriate Hanford dose conversion factors, soil survey records, excavated volume, and estimated Ci content per unit soil volume. Unless excavation is conducted in accord with the DOH approved</p> <p>Truck (Guzzler) license, credit for abatement or limited disturbance shall not be taken without prior written approval by DOH.</p> <p>The near-field monitoring system is not sufficient in itself to demonstrate compliance to the emission limits of the license (WAC 246-247-040 (1, 5, 6)).</p>		
<p>The characterization and stabilization activities licensed are limited to emission units managed by DOE/RL within the 200 West and 200 East areas, and 212 N, 212 P, and 212 R. DOH shall be informed, and written DOH concurrence obtained, prior to initiation of stabilization activities at 212 N, 212 P, or 212 R (WAC 246-247-040(5)).</p>	Continuous	CDM: Field interviews and record review.
<p>The characterization and stabilization activities licensed are limited to emission units listed in a compliance log maintained by a DOE central coordinator. The compliance log shall initially categorize each emission unit as low or high PTE on the basis of best available information. Low PTE is defined as 1.0 E-3 mrem/year or less, and high PTE is defined as greater than 1.0 E-3 mrem/year.</p> <p>Stabilization activities shall not be initiated for high PTE emission units without written DOH approval. Stabilization of emission units having PTE greater than 0.1 mrem/year shall require the submittal of a separate notice of construction application.</p> <p>Disturbance factors shall not be used in the determination of PTE except as by permission of DOH on a case-by-case basis. The WAC 246-247-030(21)(a) release fractions shall be assumed, except as may be approved otherwise on a case-by-case basis.</p> <p>In the case of emission units in which the work activity may be effectively isolated from a significant fraction of the source material comprising the PTE, DOH will, on a case-by-case basis, consider a suitably defined and</p>	Continuous	CDM: Field interviews and record review.

Requirement	Compliance Status	Compliance Determination Method
<p>calculated PTE less than that for the whole emission unit. "Effectively isolated" may but does not necessarily imply physical barriers. E-mail approval of such cases is required prior to use.</p> <p>Emission units may be added to the compliance log, provided DOH is given the new compliance log entry in writing (e-mail is sufficient). (WAC 246-247-040(5))</p>		
<p>The compliance log shall list estimated or measured actual calendar year emissions for each emission unit on which stabilization activities have commenced. Additionally, the compliance log shall provide a total project actual emission for the calendar year (WAC 246-247-040(5)).</p>	Continuous	<b>CDM:</b> Field interviews and record review.
<p>An initial copy of the compliance log shall be formally transmitted to DOH by June 30 or prior to initiating any activities under the license, whichever comes first. This initial transmittal shall provide all log information available by the time of submittal, and shall also include a projected list of emission units to be addressed under the license during the next 12 months. Following the date of the first transmittal, and by June 30 of each year, a copy of the previous calendar year compliance log shall be formally transmitted to DOH, along with a projected list of emission units to be addressed under the license during the next 12 months. The log shall be available for DOH inspection (WAC 246-247-040(5)).</p>	Intermittent	<p><b>CDM:</b> Field interviews and record review.</p> <p><b>Comment:</b> A deviation report was submitted because the log was submitted after June 30 (DOE/RL-2008-12, rev 0, Table 1, page 2, 2/08).</p>
<p>Characterization means entry and radiological/industrial/chemical characterization activities, not to include activities defined as stabilization below. The license allows characterization of low and high PTE emission units. Characterization is expected to improve the accuracy with which the PTE is estimated for a particular emission unit. Characterization data shall be documented to confirm the initial categorization:</p> <p>a. Characterization data may require the upgrading of a particular emission unit from low to high PTE. DOH shall then be informed, and written DOH concurrence to proceed to stabilization shall be required (email is adequate).</p> <p>b. Characterization data may allow the downgrading of a particular emission unit from high to low PTE. DOH shall then be informed (e-mail). The basis for the downgrading shall be provided to DOH as part of this information.</p> <p>c. Characterization activities shall be conducted in accord with the ALARA principle. (WAC 246-247-040(5))</p>	Continuous	<b>CDM:</b> Field interviews and RWPs.

Requirement	Compliance Status	Compliance Determination Method
<p>Stabilization means the size reduction, packaging/removal or fixing of whatever contamination or radioactive material may be removed or fixed without altering the existing emission unit structure or environmental containment function. Stabilization is not to proceed without first obtaining characterization data as above.</p> <p>a. Stabilization activities shall be conducted in accord with the ALARA principle. b. Monitoring and documentation sufficient to demonstrate compliance shall be maintained. c. Disposition and transportation of removed material shall be in accord with applicable regulations. (WAC 246-247-040(5))</p>	Continuous	CDM: Field interviews, record review and RWPs.
<p>Permit: AIR 07-1102 - A Issue Date:11-15-07 Effective Date:11-15-07            NOC: 200/600 Areas Facilities Support Decontamination Trailer (Intermittent Power Exhaust)            WDOH NOC ID: 678 Date In AOP: 12-05-07 Page in AOP: EU0486-029            NOC NOT UTILIZED DURING CY 2007 SEE <u>TABLE 3</u></p>		

**200 Area Diffuse/Fugitive - LERF/ETF**

WDOH Emission Unit ID : 486  
Page in AOP : EU0486-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
No active Abatement Controls in the AOP for this certification period.		
<p><b>Required Sampling:</b> Per the sitewide ambient monitoring program samples will be collected from the existing near-facility monitoring stations.  <b>Sampling Frequency:</b> Per the sitewide ambient monitoring program  <b>Radionuclide Requiring Measurement:</b> Each radionuclide that could contribute greater than 10 percent of the potential-to-emit TEDE</p>	Continuous	<p>CDM: Review of ABCASH data.            Comment: ABCASH EDP Numbers N498, N499, N972, and N999.</p>
<p><b>Federal and State Regulatory Requirement:</b> WAC 246-247-075[2]  <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114</p>	Continuous	CDM: NESHAPs Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528, latest revision).

Requirement	Compliance Status	Compliance Determination Method
Permit: AIR 06-1045 - E <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>NOC:</b> Operation of the Liquid Effluent Retention Facility and the 200 Area Effluent Treatment Facility <b>WDOH NOC ID:</b> 690 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0486-049		
<p>The total abated emission limit for this Notice of Construction is limited to 4.59E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).</p>	Continuous	<p><b>CDM:</b> Tracking radionuclide data as specified in administrative procedures.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The operation of the Liquid Effluent Retention Facility/200 Area Effluent Treatment Facility (LERF/ETF), which includes the load-in station and load-in station filter skid.</p> <p>Incoming wastewater can be added directly to the ETF process or received at the LERF or the load-in station. The LERF is allowed to receive wastewaters via underground pipelines from generator facilities, via pipeline from the load-in station, or directly through a series of access ports located at each basin. The load-in station accommodates wastewater receipt via container (e.g., drums, carboys, tankers, etc.).</p> <p>The ETF wastewater treatment process shall be comprised of a main treatment train and a secondary treatment train. The main treatment train shall provide for the removal or destruction of dangerous and radioactive contaminants from incoming wastewater. After treatment, the effluent shall be transferred to the verification tanks where it is sampled then discharged. Treated effluent is comparable to deionized water and contains tritium, which cannot be economically removed. Contaminants removed in the main treatment train are concentrated in the secondary treatment train. The contaminants shall be heated and dried to a powder form or removed as sludge and dried by the addition of absorbents. These residues shall be containerized and disposed onsite as radioactive waste.</p> <p>Additional approval of the process for this activity is contained in the following Conditions/Limitations.</p>	Continuous	<p><b>CDM:</b> Review of facility and procedure change documents as specified in administrative procedures.</p> <p><b>Comment:</b> Facility design and procedure changes require documentation that includes environmental reviews to determine if the change is a modification of the emission unit.</p>
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 8.48E-02 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p>	Continuous	<p><b>CDM:</b> Tracking radionuclide data as specified in administrative procedures.</p> <p><b>Comment:</b> The quantities of individual</p>

Requirement	Compliance Status	Compliance Determination Method
<p>Alpha-0   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Alpha release rate is assumed to be Pu-239/240. The release rate is based on the maximum PTE for the load-in station. (diffuse/fugitive) is based on ETF operating capacity (54.3 million gallons/yr). In addition to the isotopes specifically listed as approved under this NOC, other radionuclides may be encountered and are approved so long as they are conservatively represented by the total alpha and total beta-gamma constituents.</p> <p>Am-241   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Beta-0   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Beta/Gamma release rate is assumed to be Sr-90/Cs-137. The release rate is based on the maximum PTE for the load-in station. (diffuse/fugitive) is based on ETF operating capacity (54.3 million gallons/yr). In addition to the isotopes specifically listed as approved under this NOC, other radionuclides may be encountered and are approved so long as they are conservatively represented by the total alpha and total beta-gamma constituents.</p> <p>C-14   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cm-244   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Co-60   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Cs-134   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Eu-154   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Eu-155   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>H-3   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>I-129   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>K-40   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Mn-54   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>Na-22   Liquid/Particulate Solid   WAC 246-247-030(21)(a)</p>		<p>radionuclides are tracked based on sample results, flow rates, and process knowledge. The MEI dose and potential-to-emit are calculated and the results are placed in the facility record.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.  Nb-94   Liquid/Particulate Solid   WAC 246-247-030(21)(a)  Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.  Np-237   Liquid/Particulate Solid   WAC 246-247-030(21)(a)  Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.  Pu-238   Liquid/Particulate Solid   WAC 246-247-030(21)(a)  Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.  Pu-241   Liquid/Particulate Solid   WAC 246-247-030(21)(a)  Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.  Ra-226   Liquid/Particulate Solid   WAC 246-247-030(21)(a)  Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.  Ru-106   Liquid/Particulate Solid   WAC 246-247-030(21)(a)  Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.  Sb-125   Liquid/Particulate Solid   WAC 246-247-030(21)(a)  Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.  Se-79   Liquid/Particulate Solid   WAC 246-247-030(21)(a)  Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.  Tc-99   Liquid/Particulate Solid   WAC 246-247-030(21)(a)  Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.  U-233   Liquid/Particulate Solid   WAC 246-247-030(21)(a)  Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.  U-234   Liquid/Particulate Solid   WAC 246-247-030(21)(a)  Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.  U-235   Liquid/Particulate Solid   WAC 246-247-030(21)(a)  Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.  U-236   Liquid/Particulate Solid   WAC 246-247-030(21)(a)  Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.  U-238   Liquid/Particulate Solid   WAC 246-247-030(21)(a)  Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.  Zn-65   Liquid/Particulate Solid   WAC 246-247-030(21)(a)  Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.  Zr-95   Liquid/Particulate Solid   WAC 246-247-030(21)(a)</p>		

Requirement	Compliance Status	Compliance Determination Method																																			
<p>Contributes less than 0.1 mrem/yr to the MEI, and represents less than 10% of the unabated PTE and represents less than 25% of the abated dose.</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <table border="0"> <tr> <td>Am-241</td> <td>C-14</td> <td>Ce-144</td> <td>Cm-244</td> <td>Co-60</td> </tr> <tr> <td>Cs-134</td> <td>Cs-137</td> <td>Eu-154</td> <td>Eu-155</td> <td>H-3</td> </tr> <tr> <td>I-29</td> <td>K-40</td> <td>Mn-54</td> <td>Na-22</td> <td>Nb-94</td> </tr> <tr> <td>Np-237</td> <td>Pu-238</td> <td>Pu-239/240</td> <td>Pu-241</td> <td>Ra-226</td> </tr> <tr> <td>Ru-106</td> <td>Sb-125</td> <td>Se-79</td> <td>Sr-90</td> <td>Tc-99</td> </tr> <tr> <td>U-233</td> <td>U-234</td> <td>U-235</td> <td>U-236</td> <td>U-238</td> </tr> <tr> <td>Zn-65</td> <td>Zr-95</td> <td></td> <td></td> <td></td> </tr> </table> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. WAC 246-247-110(9). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>	Am-241	C-14	Ce-144	Cm-244	Co-60	Cs-134	Cs-137	Eu-154	Eu-155	H-3	I-29	K-40	Mn-54	Na-22	Nb-94	Np-237	Pu-238	Pu-239/240	Pu-241	Ra-226	Ru-106	Sb-125	Se-79	Sr-90	Tc-99	U-233	U-234	U-235	U-236	U-238	Zn-65	Zr-95					
Am-241	C-14	Ce-144	Cm-244	Co-60																																	
Cs-134	Cs-137	Eu-154	Eu-155	H-3																																	
I-29	K-40	Mn-54	Na-22	Nb-94																																	
Np-237	Pu-238	Pu-239/240	Pu-241	Ra-226																																	
Ru-106	Sb-125	Se-79	Sr-90	Tc-99																																	
U-233	U-234	U-235	U-236	U-238																																	
Zn-65	Zr-95																																				
<p>The 200 Area Diffuse/Fugitive Emission Unit at LERF/ETF is limited to the following:</p> <ul style="list-style-type: none"> <li>-- LERF wastewater receipt via pipeline and LERF access ports.</li> <li>-- Minor leaks during transfers when using vented pipelines.</li> <li>-- LERF operations and maintenance.</li> <li>-- LERF leachate collection system sampling and sump pumping.</li> <li>-- Load-in station wastewater receipts via container.</li> <li>-- Load-in station filter skid operation and maintenance.</li> <li>-- Load-in station tank operation, maintenance, and repair.</li> <li>-- Wastewater tanker inspection, pressure testing, and repair.</li> <li>-- Minor leaks and spills to secondary containment systems.</li> <li>-- Storage and transfer of treated effluent containing tritium.</li> <li>-- Effluent sampling.</li> <li>-- Purgewater open-top settling tank operation.</li> </ul>	Continuous	CDM: Field walkdowns and facility procedure review.																																			
<p>The emissions for this activity from the all LERF basins and diffuse/fugitive emissions are limited to 4.59E-02 mrem/year unabated and abated.</p>	Continuous	CDM: The Annual Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007.																																			

Requirement	Compliance Status	Compliance Determination Method
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The load-in station consists of two load-in tanks, a sump, transfer pumps, a skid-mounted filtration system, level instrumentation for tanker trucks, underground transfer lines that allow transfers to either the LERF or the ETF, and leak detection capabilities for the containment basin and transfer lines. Containerized wastewaters received at the load-in station are typically routed through the filter skid. When solids buildup causes differential pressure across a filter housing to become excessive, the filter elements are replaced. The filtration system is shut down, the system is vented to atmosphere by opening a quick release vent cap on top of each filter housing, and solution in the housing is drained to the load-in station sump. The housing is then opened and the spent filter elements are placed in a disposal container. After filter change-out, the sump is emptied to the load-in station, the LERF, or the ETF. The capability to filter sump discharges is also provided at the load-in station. Small shipments that cannot be pumped directly into the filter skid are first drained into the sump, then pumped through the filter skid using the sump pump. Wastewater tanker inspection, pressure testing, and repair are also conducted at the load-in station as needed to meet annual U.S. Department of Transportation certification requirements. Tankers, which may contain a wastewater heel, are pressurized with compressed air, leak checked at 80 percent of service pressure, and integrity tested at 150 percent of service pressure. After the test is complete, the compressed air is gradually vented from the tanker to the atmosphere. Minor repairs (e.g., seal replacement) are performed as needed to successfully complete the certification test. Hydrostatic testing is inherently safer and is preferred over pneumatic testing because it minimizes the volume of pressurized vapor space. When hydrostatic testing is performed, the tanker is filled with verification water or other clean water before pressurizing the tanker. At the conclusion of the test, the used water is treated as a new wastewater.</p>	<p>Continuous</p>	<p><b>CDM:</b> Review of facility and procedure change documents as specified in administrative procedures.</p> <p><b>Comment:</b> Facility design and procedure changes require documentation that includes environmental reviews to determine if the change is a modification of the emission unit.</p>

**200 Area Diffuse/Fugitive - IDF**

WDOH Emission Unit ID : 486

Page in AOP : EU0486-001

Requirement	Compliance Status	Compliance Determination Method
<p>For the time period of : (01-01-07 to 12-31-07)</p>		
<p>No active Abatement Controls in the AOP for this certification period.</p>		
<p><b>Required Sampling:</b> Per the sitewide ambient monitoring program samples will be collected from the existing near-facility monitoring stations.  <b>Sampling Frequency:</b> Per the sitewide ambient monitoring program  <b>Radionuclide Requiring Measurement:</b> Each radionuclide that could contribute greater than 10 percent of the potential-to-emit TEDE</p>	<p>Continuous</p>	<p><b>CDM:</b> Field interviews, Hanford Site near-facility/field monitoring program.</p>

Requirement	Compliance Status	Compliance Determination Method
<p><b>Federal and State Regulatory Requirement:</b> WAC 246-247-075[2]  <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114</p>	Continuous	<p><b>CDM:</b> CH2M HILL NESHAP quality assurance program.</p>
<p style="text-align: center;">Permit: AIR 06-1063 <b>Issue Date:</b>10-05-06 <b>Effective Date:</b>10-05-06  <b>NOC:</b> Operation of the Integrated Disposal Facility (IDF)  <b>WDOH NOC ID:</b> 713 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0486-082</p>		
Requirement	Compliance Status	Compliance Determination Method
<p>The total abated emission limit for this Notice of Construction is limited to 4.85E-01 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice of Construction is limited to 4.85E-01 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).</p>	Not Applicable	<p><b>CDM:</b> Field interviews. Waste has not been introduced to the Integrated Disposal Facility. The facility is operating under care taker status.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The IDF will provide for disposal of two types of waste: LLW and MLLW. MLLW includes ILAW (WTP ILAW and Demonstration Bulk Vitrification System ILAW) and newly generated IDF operations waste.</p> <p>MLLW and LLW cells in the IDF have equally sized ultimate capacities of 450,000 m<sup>3</sup> (1.5x10<sup>7</sup>ft<sup>3</sup>) each, for the full IDF build out capacity of 900,000 m<sup>3</sup> (3.18x10<sup>7</sup> ft<sup>3</sup>) (ROO 21633, "Preliminary Closure Plan for the Integrated Disposal Facility"). The IDF is expandable up to the full build out capacity. Expansion is dependant upon waste generation and waste generation forecasts. Leachate generation and associated management of the leachate are minimized by the expansion approach.</p> <p>The forecasted volumes of MLLW from WTP from WTP ILAW and Demonstration Bulk Vitrification System vitrified ILAW waste processed were derived form ORP 11242, "River Protection Project System Plan" as follows:</p> <p>- 352,000 m<sup>3</sup> (1.2x10<sup>6</sup> ft<sup>3</sup>) of ILAW packages</p> <p>The remaining capacity will be used for the newly generated IDF operations waste and will act as a buffer for the two cells' overall capacity, should it be required. The estimate for the MLLW generated from operation of the IDF is unknown; however, based on engineering judgment, the yearly amount would not be significant. The 450,000 m<sup>3</sup> (1.59x10<sup>7</sup> ft<sup>3</sup>) capacity of Cell I and associated ILAW volumes are listed as information only. This value is used as a bounding volume for calculating the ILAW radiological air emissions.</p> <p>Low-level radioactive waste is not spent nuclear fuel, Transuranic (TRU) waste, high-level radioactive waste, byproduct material (as defined in Section 11e(2) of the Atomic Energy Act of 1954), or naturally occurring radioactive material (DOE 435.1, Radioactive</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>Waste Management). Both contact handle and remote-handle LLW will be disposed at the IDF.</p> <p>LLW Category I: This waste contains radioactivity not classified as spent nuclear fuel, TRU waste, or high-level waste. LLW Category I waste also meets the radionuclide limits for Category I waste defined in HNF-EP-0063 Hanford Site Solid Waste Acceptance Criteria. This waste may be comprised of either contact-handle or remote-handle waste considered low-activity waste with very low concentrations of long-lived radionuclides.</p> <p>LLW Category III: This waste also contains radioactivity not classified as spent nuclear fuel, TRU waste, or high-level waste. In addition, it exceeds the radionuclide limits for Category I waste and meets the Category III limits defined in HNF-EP-0063. This waste may be comprised of either contact-handle or remote-handle waste considered moderate-activity to high-activity waste with low to moderate concentrations of long-lived radionuclides, in stabilized form that minimizes subsistence for a period of 1,000 yrs.</p> <p>MLLW is a dangerous, extremely hazardous, or acutely hazardous waste that contains LLW. Contact-handle MLLW has a dose rate equal to or less than 200 mrem/h and contains radioactivity not classified as spent nuclear fuel or TRU waste. Remote-handle MLLW has a dose rate greater than 200 mrem/h and contains radioactivity not classified as spent nuclear fuel, TRU waste, or high-level waste.</p> <p>Newly generated IDF operations waste is potentially dangerous, mixed, or LLW generated from the operations of the IDF that could include, personal protective equipment, rags, waste material from the maintenance of equipment or vehicles, and waste generated at the leachate waste treatment facility that is returned to the IDF for disposal.</p> <p>The packages for waste shall meet applicable federal transportation regulations under Title 49, Code of Federal Regulations (49 CFR) container requirements for the hazard class/division of the waste, except that packaging for onsite transfers under an approved package-specific safety document might be allowed where cost or technical constraints make the use of a U.S. Department of Transportation (DOT) compliant package unfeasible. Outer containers shall be in good condition, with no visible crack, holes, dents, bulges, pit or scale corrosion, or other damage that could compromise container integrity, in compliance with WAC 173-303, "Dangerous Waste Regulations." Minor external surface rust that can be sanded or brushed off will be acceptable. Containers having some pit or scale corrosion could be acceptable for storage provided the integrity of the container is confirmed.</p> <p>MLLW generated from IDF operations will consist of 208 liter drums, medium boxes, small boxes, long equipment containers, and other containers. MLLW is defined as dangerous or hazardous waste in WAC 173-303, and therefore should be disposed in Cell 1.</p> <p>LLW will be shipped primarily in 208 liter drums, 322 liter drums, other drums, MB-V boxes, medium boxes, small boxes, and other containers. LLW is not a dangerous or hazardous waste as defined in WAC 173-303, and therefore should be disposed in Cell 2. However, because the volume of remote-handle LLW is expected to be small, remote-handle LLW may be disposed in Cell 1 along with remote-handle MLLW. This would avoid the need to set up remote handling operations in both Cell 1 and Cell 2, and will provide greater flexibility for LLW disposal operations in Cell 2.</p> <p>WTP-ILAW: MLLW includes the low-activity waste fraction of the</p>		

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<p>Hanford Site tank waste that is immobilized in a glass matrix at the WPT.</p> <p>Other ILAW Streams - Demonstration Bulk Vitrification System: MLLW that contains the low-activity fraction of the Hanford Site tank waste immobilized in a glass matrix is produced by the Demonstration Bulk Vitrification System.</p> <p>ILAW Containers and Packaging: The ILAW package shall be compatible with crane lifting and movement. The package shall be equipped with lifting and other handling apparatus designed to allow safe lifting, movement, and stacking of the packages when fully loaded. The package shall maintain its integrity during handling, transportation, and lifting during disposal at the IDF.</p> <p>The WTP ILAW packages are stainless steel cylinders that have been filled with vitrified low-activity waste, which is physically similar to molten glass, then sealed and cooled. These packages will be remote-handled. The Demonstration Bulk Vitrification System containers, also known as Vitrification boxes, are filled with material similar to the material in the ILAW packages. The ILAW and Demonstration Bulk Vitrification System packages will be disposed in Cell 1.</p> <p>The IDF consists of an expandable, lined landfill in a series of near-surface disposal cells that will be developed in phases located in the 200 East Area on the Hanford Site. The landfill will be divided lengthwise into two distinct cells, Cell 1 for disposal of MLLW and Cell 2 for disposal of LLW. The IDF is designed to provide an approved disposal facility for the permanent, environmentally safe disposition of ILAW, newly generated IDF operations waste and LLW that meets the environmental requirements and is approved by the DOE and the State of Washington, Department of Ecology (Ecology).</p> <p>The IDF is designed for ILAW package transportation, receipt, unloading, emplacement in a disposal cell, and periodic backfill of the disposal cell. Also included are receipt, unloading, emplacement, and periodic backfill of Demonstration Bulk Vitrification System containers, newly generated IDF operations waste, and LLW from Hanford Site sources. In the initial phase of the IDF, the volume of remote-handle LLW is projected to be very small. Rather than set up a separate remote-handle operation for this small volume of LLW, remote-handle LLW may be placed in the cell with remote-handle MLLW.</p> <p>Disposal cells are installed in a sequential manner and are aligned within the disposal site in a north-south orientation to minimize impact to the aquifer beneath the site. The cells have separate leachate collection, handling, and storage systems to maintain waste separation.</p> <p>Two cells will be constructed in the first phase of the IDF, Cell 1 (west half) and Cell 2 (east half). Each cell is approximately 3.2 hectares (8ac) in size, and when fully developed, the complete IDF will occupy approximately 25 hectares (62 ac). Subsequent phase development of the IDF will connect to the southern edge of Cells 1 and 2 such that the bottom grades are continuous between cells.</p> <p>Support facilities, such as changing room, a lunchroom, and offices, will be provided for IDF personnel. Changing facilities for male and female personnel will be furnished with lockers, showers, restroom facilities, benches, and both clean and dirty laundry storage. The building also will contain office space and a control room, and is planned to be a radiologically clean facility.</p> <p>ILAW: The ILAW packages will be transported from the WTP and Demonstration Bulk Vitrification System to the IDF by the onsite,</p>		

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<p>DOT compliant transportation system. The recommended mode of transport is a commercially available tractor/trailer combination capable of hauling ILAW packages in a DOT compliant, shielded overpack. The configuration required will depend on the total weight and weight distribution relative to the axles to insure the axle load limitations for roadway use are not exceeded.</p> <p>LLW and MLLW: Various transport vehicles will be used to transport other wastes to the IDF. Commercially available tractor/trailer combinations typically will be used for LLW. LLW will be transported from various locations within the Hanford Site. Container sizes and shapes will vary but are expected to be mostly rectangular or drums of standard sizes. The timing and frequency of delivery to the IDF will vary, depending on operations and waste generation rates from the facilities where these wastes are generated. Transport to the IDF site for disposal will be coordinated with IDF transport operations to avoid conflicts or disruptions to IDF transport schedules, which will take precedence.</p> <p>Upon arrival at the IDF, the loaded transporter will proceed through the disposal site gate and stop at the receiving station. The receiving station will be provided by the operations contractor.</p> <p>At the receiving station, the shipping documents will be verified and the packages will be inspected. The operation concepts for the arrival activity will include:</p> <p>The truck driver will present shipping documents to facility operations personnel at the receiving station. A shift supervisor or quality control inspector will verify that the shipping documents are acceptable.</p> <p>After shipping documents are verified and the transporter passes inspection, the loaded transporter will be released to travel to the full trailer staging area for cooling, as needed.</p> <p>Cool-Down Staging Area - ILAW: When the ILAW packages are received for transportation, they may still be at elevated temperatures. Because of possible elevated temperature, operations restrictions will be in place during transportation and prior to disposal in the IDF. Once the ILAW package is received at the IDF, the full trailer will be staged in a designated area within Cell 1 over the bottom liner in a place where trailer storage will not interfere with other IDF operations. This area will be moved from time to time, to avoid interference with the waste disposal operations.</p> <p>ILAW: After the ILAW package has cooled sufficiently, the trailer will be moved to an appropriate unloading position in Cell 1. Once in position, a crawler crane will be used to move the ILAW package from the transportation container into the designated disposal location within the disposal cell.</p> <p>Periodically, after emplacement of approximately 81 ILAW package, the crawler crane must move to a new unloading station. Void-fill operations will be performed by a mobile crane after the crawler crane moves to a new unloading position.</p> <p>LLW and MLLW: Unloading and placement of remote-handle MLLW and LLW will be done using a crane. Unloading and placement of contact-handle MLLW and LLW will be done using a crane or other appropriate equipment.</p> <p>General Waste Placement and Layer Construction Procedures: The IDF configuration is based on four layers with a uniform height of 3.3 m (10.8 ft) (2.3 m [7.5 ft] ILAW package plus 1 m [3.3 ft] operations layer). Waste containers other than the ILAW packages will be</p>		

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<p>variable height and will be placed in the 3.3 m (10.8 ft) high layers to achieve best use of space. Containers may be stacked on top of each other within each layer if adequate soil cover is provided over the containers. Additional waste container stability analyses will have to be done by the operations contractor to verify waste placement and backfill stability for stacked containers. Containers that have a height greater than the 3.3 m (10.8 ft) layer height will be allowed to project out of the top of the layer. In such cases, it may be necessary to mound cover soil around the individual projecting containers to provide sufficient cover for shielding until they are completely covered by subsequent layers.</p> <p>Because of the large area available for waste disposal in each cell, flexibility to relocate filling operations to another area within each cell will exist if an event occurs that causes operations to temporarily halt placement of ILAW packages or other waste containers at the current working position. This will allow waste container placement to continue while the situation that caused the operations to cease is resolved.</p> <p>ILAW: Two basic configurations were developed. Both make use of ecology block shield walls to shield the crane operator from exposure to the ILAW packages, with one using a temporary shield wall and the other using a permanent shield wall. Both of the basic ILAW package configurations include two variations. One variation is a grid pack arrangement of the ILAW packages and the other variation is a tight pack arrangement.</p> <p>Temporary Shield Wall Configuration: The ILAW package configurations that use a temporary shield wall will require that cover soil be placed over and around the ILAW packages prior to removing the shield wall. This soil cover will have to include the side of the ILAW packages facing the temporary shield wall so that after the wall is removed, the soil will provide the shielding for equipment operators and other operations personnel.</p> <p>Permanent Shield Wall Configuration: By leaving the ecology block shield wall in place, the wide area between the ILAW packages and the shield wall for the cover soil to slope to the ground can be eliminated. The ILAW package configurations that use a permanent shield wall will allow ILAW packages to be placed up close to the wall, thereby making better use of the available space in the landfill.</p> <p>Grid Pack and Tight Pack Arrangements: With the grid pack array, the ILAW packages will be placed in a close packed square arrangement. The grid pack array consists of four packages in the array, which is square in shape with a base dimension of slightly over 0.6 m (2 ft). With the tight pack array, the ILAW packages will be placed in a close packed triangular arrangement. The tight pack array consists of three packages in the array, which is triangular in shape with an altitude dimension of approximately 0.5 m (1.5 ft).</p> <p>LLW and MLLW: Packaging emplacement configurations will depend on opening size and volume of interstitial spaces between LLW and any MLLW containers from IDF operations, and on configuration of the containers and the placement of the containers relative to one another. The placement of the containers will be carefully planned to efficiently pack the containers into the smallest volume possible, and to avoid large interstitial spaces.</p> <p>The general approach to calculating backfill quantities uses a volume of fill to waste ratio of 1.5 to 1.</p> <p>Radiation exposure assessment evaluations have determined that 0.5 m (1.5 ft) of soil cover placed over the ILAW packages with a crane prior</p>		

Requirement	Compliance Status	Compliance Determination Method
<p>to operation of equipment on the cover soil will provide adequate radiation shielding to equipment operators. The surface of the initial 0.5 m (1.5 ft) layer will be smoothed and leveled with a bulldozer to facilitate subsequent compaction and placement of the final lift.</p> <p>After completion of the partial placement of the operations layer with the mobile crane, placement of the operations layer to the full 1 m (3.3 ft) depth will be completed using a loader, dump truck, bulldozer, and compactor. The specific movements and activities of earthmoving equipment will be based on disposal cell configuration plans and elevation monuments established prior to initiating a new layer.</p> <p>Compaction of the initial 0.5 m (1.5 ft) of the operations layer and placement of the remainder of the operations layer will not take place in the active array in which packages are being placed. Rather, the remainder of operations layer placement will take place in the previous array of ILAW packages so that there will be a placed and partially covered array of ILAW packages in place to stabilize and support the bulldozer. In addition, compaction of the initial 0.5 m (1.5 ft) of operations layer should not take place until all the voids between the permanent shield wall and the ILAW packages is have been filled, and the initial 0.5 m (1.5 ft) of the operations layer has been placed in the active array of ILAW packages to provide shielding from the ILAW packages for the bulldozer operator. Compaction of the first 0.5 m (1.5 ft) layer of cover soil placed by the mobile crane and smoothed by the dozer should be accomplished with a vibratory roller. The vibrations of the compactor will help to fill voids that may have occurred during interstitial space filling by promoting cover soil to flow into the voids. As cover soil is moved into the voids below, additional soil placement will be required to replace the migrating material. This material should be the same low moisture content, low fines content sand from the onsite soil sources as that used for interstitial fill. The remaining thickness of cover fill, up to the full 1 m (3.3 ft) thickness, will be placed by a bulldozer operating on top of the layer and compacted with a vibratory roller. The soil for this upper layer should include a higher fines content of up to 25 percent, and should be placed and compacted at or slightly below optimum content.</p> <p>In general, the loader, which will be stationed at the soil stockpile, will fill a dump truck. The dump truck will deliver cover soil to a location near the package array to be covered. The bulldozer then will spread the soil over the package array to the full 1 m (3.3 ft) depth.</p> <p>A water truck will be provided for compaction and dust control. The truck will be operated as needed to spray water for compaction and to suppress dust by driving to a location safe for the operator to spray water over the cover material being compacted. In addition to dust control and compaction within the trench, an operations dust control plan will be developed to cover other areas within the boundary of the IDF.</p> <p>A temporary rain curtain may be used to control the amount of clean stormwater run-off that enters the leachate collection system. The rain curtain can be used in areas where no ILAW packages have been placed or in the area where ILAW packages and the full 1 m (3.3 ft) operations layer have been placed. The rain curtain would be removed prior to placing additional waste in the area that it covered.</p> <p>The Leachate Handling Systems shall be designed to segregate MLLW leachate generated in Cell 1 from the LLW leachate generated in Cell 2. The Leachate Handling System shall be designed to manage the leachate generated from a 25 year, 24 hour storm event collected over the entire footprint of the landfill.</p> <p>The leachate handling system design shall also comply with the</p>		

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<p>following technical requirements:</p> <p>The landfill shall control water that contacts waste through physical barriers and collection through the leachate collection system. This system shall collect, pump, and store any water that migrated through the landfill and shall provide systems for loading leachate into transport trucks. Leachate meeting the treatment facility waste acceptance criteria shall be transported by truck for storage at the treatment facility. The leachate will then be transferred for treatment. Any leachate not meeting treatment facility waste acceptance criteria will be handled on a case-by-case basis and will be handled, stored, and disposed in accordance with federal and state regulations.</p>																																																																																																								
<p>The Annual Possession Quantity is limited to the following radionuclides (Curies/year):</p> <table border="0"> <tr><td>Ac-227</td><td>1.50E+00</td><td>Am-241</td><td>7.61E+05</td><td>Am-243</td><td>1.39E+02</td></tr> <tr><td>C-14</td><td>2.08E+02</td><td>Cd-113 m</td><td>9.64E+04</td><td>Cm-242</td><td>5.22E+03</td></tr> <tr><td>Cm-243</td><td>2.33E+02</td><td>Cm-244</td><td>3.05E+03</td><td>Co-60</td><td>4.20E+05</td></tr> <tr><td>Cs-134</td><td>6.08E+06</td><td>Cs-137</td><td>4.07E+06</td><td>Eu-152</td><td>1.90E+04</td></tr> <tr><td>Eu-154</td><td>.76E+06</td><td>Eu-155</td><td>3.31E+06</td><td>H-3</td><td>6.03E+05</td></tr> <tr><td>I-129</td><td>8.23E+02</td><td>Nb-93 m</td><td>2.01E+04</td><td>Ni-59</td><td>1.81E+03</td></tr> <tr><td>Ni-63</td><td>1.77E+05</td><td>Np-237</td><td>8.16E+02</td><td>Pa-231</td><td>5.98E+00</td></tr> <tr><td>Pu-238</td><td>1.23E+03</td><td>Pu-239</td><td>4.34E+04</td><td>Pu-240</td><td>6.12E+03</td></tr> <tr><td>Pu-241</td><td>2.40E+05</td><td>Pu-242</td><td>7.69E-01</td><td>Ra-226</td><td>1.52E+01</td></tr> <tr><td>Ra-228</td><td>4.77E+02</td><td>Ru-106</td><td>1.18E+05</td><td>Sb-125</td><td>2.93E+06</td></tr> <tr><td>Se-79</td><td>2.46E+03</td><td>Sm-151</td><td>1.09E+07</td><td>Sn-126</td><td>1.88E+03</td></tr> <tr><td>Sr-90</td><td>2.49E+07</td><td>Tc-99</td><td>2.27E+05</td><td>Th-229</td><td>5.14E+00</td></tr> <tr><td>Th-232</td><td>2.69E+01</td><td>U-232</td><td>7.39E+02</td><td>U-233</td><td>2.80E+03</td></tr> <tr><td>U-234</td><td>1.58E+03</td><td>U-235</td><td>6.84E+01</td><td>U-236</td><td>1.67E+01</td></tr> <tr><td>U-238</td><td>1.60E+03</td><td>Zr-93</td><td>1.52E+04</td><td></td><td></td></tr> </table>	Ac-227	1.50E+00	Am-241	7.61E+05	Am-243	1.39E+02	C-14	2.08E+02	Cd-113 m	9.64E+04	Cm-242	5.22E+03	Cm-243	2.33E+02	Cm-244	3.05E+03	Co-60	4.20E+05	Cs-134	6.08E+06	Cs-137	4.07E+06	Eu-152	1.90E+04	Eu-154	.76E+06	Eu-155	3.31E+06	H-3	6.03E+05	I-129	8.23E+02	Nb-93 m	2.01E+04	Ni-59	1.81E+03	Ni-63	1.77E+05	Np-237	8.16E+02	Pa-231	5.98E+00	Pu-238	1.23E+03	Pu-239	4.34E+04	Pu-240	6.12E+03	Pu-241	2.40E+05	Pu-242	7.69E-01	Ra-226	1.52E+01	Ra-228	4.77E+02	Ru-106	1.18E+05	Sb-125	2.93E+06	Se-79	2.46E+03	Sm-151	1.09E+07	Sn-126	1.88E+03	Sr-90	2.49E+07	Tc-99	2.27E+05	Th-229	5.14E+00	Th-232	2.69E+01	U-232	7.39E+02	U-233	2.80E+03	U-234	1.58E+03	U-235	6.84E+01	U-236	1.67E+01	U-238	1.60E+03	Zr-93	1.52E+04			<p>Not Applicable</p>	<p>CDM: Field interviews. Waste has not been introduced to the Integrated Disposal Facility. The facility is operating under care taker status.</p>												
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<p>The following isotopes could be found in the Integrated Disposal Facility but will contribute less than 0.1 mrem/year to the MEI, and represent less than 10% of the unabated PTE and less than 25% of the abated dose:</p> <table border="0"> <tr><td>Ag-108 m</td><td>Ag-110 m</td><td>Am-242 m</td><td>Ar-37</td><td>Ar-39</td><td>Ar-42</td></tr> <tr><td>Au-195</td><td>Ba-133</td><td>Ba-140</td><td>B-10</td><td>Be-7</td><td>Bi-207</td></tr> <tr><td>Bk-247</td><td>Ca-41</td><td>Ca-45</td><td>Cd-109</td><td>Ce-141</td><td>Ce-144</td></tr> <tr><td>Cf-249</td><td>Cf-250</td><td>Cf-251</td><td>Cf-252</td><td>C1-36</td><td>Cm-245</td></tr> <tr><td>Cm-246</td><td>Cm-247</td><td>Cm-248</td><td>Cm-250</td><td>Co-56</td><td>Co-57</td></tr> <tr><td>Co-58</td><td>Cr-51</td><td>Cs-135</td><td>Cs-136</td><td>Es-254</td><td>Eu-150</td></tr> <tr><td>Fe-55</td><td>Fe-59</td><td>Fe-60</td><td>Gd-152</td><td>Gd-153</td><td>Ge-68</td></tr> <tr><td>Hf-175</td><td>Hf-181</td><td>Hg-203</td><td>I-125</td><td>K-40</td><td>Kr-85</td></tr> <tr><td>Mn-54</td><td>Mo-93</td><td>Na-22</td><td>Nb-91</td><td>Nb-94</td><td>Nb-95</td></tr> <tr><td>Nd-147</td><td>P-32</td><td>P-33</td><td>Pb-210</td><td>Pd-107</td><td>Pm-147</td></tr> <tr><td>Po-210</td><td>Pu-236</td><td>Pu-244</td><td>Rb-83</td><td>Rb-84</td><td>Rb-86</td></tr> <tr><td>Re-187</td><td>Ru-103</td><td>S-35</td><td>Sb-124</td><td>Sb-126</td><td>Sc-46</td></tr> <tr><td>Se-75</td><td>Si-32</td><td>Sm-147</td><td>Sn-113</td><td>Sn-119 m</td><td>Sn-121 m</td></tr> <tr><td>Sr-82</td><td>Sr-85</td><td>Sr-89</td><td>Ta-182</td><td>Te-121</td><td>Te-123</td></tr> <tr><td>Te-125 m</td><td>Te-127 m</td><td>Te-129 m</td><td>Th-228</td><td>Th-230</td><td>Th-234</td></tr> <tr><td>Ti-44</td><td>Tl-204</td><td>Tm-170</td><td>V-49</td><td>W-185</td><td>Xe-131 m</td></tr> <tr><td>Y-88</td><td>Zn-65</td><td>Zr-95</td><td></td><td></td><td></td></tr> </table>	Ag-108 m	Ag-110 m	Am-242 m	Ar-37	Ar-39	Ar-42	Au-195	Ba-133	Ba-140	B-10	Be-7	Bi-207	Bk-247	Ca-41	Ca-45	Cd-109	Ce-141	Ce-144	Cf-249	Cf-250	Cf-251	Cf-252	C1-36	Cm-245	Cm-246	Cm-247	Cm-248	Cm-250	Co-56	Co-57	Co-58	Cr-51	Cs-135	Cs-136	Es-254	Eu-150	Fe-55	Fe-59	Fe-60	Gd-152	Gd-153	Ge-68	Hf-175	Hf-181	Hg-203	I-125	K-40	Kr-85	Mn-54	Mo-93	Na-22	Nb-91	Nb-94	Nb-95	Nd-147	P-32	P-33	Pb-210	Pd-107	Pm-147	Po-210	Pu-236	Pu-244	Rb-83	Rb-84	Rb-86	Re-187	Ru-103	S-35	Sb-124	Sb-126	Sc-46	Se-75	Si-32	Sm-147	Sn-113	Sn-119 m	Sn-121 m	Sr-82	Sr-85	Sr-89	Ta-182	Te-121	Te-123	Te-125 m	Te-127 m	Te-129 m	Th-228	Th-230	Th-234	Ti-44	Tl-204	Tm-170	V-49	W-185	Xe-131 m	Y-88	Zn-65	Zr-95				<p>Not Applicable</p>	<p>CDM: Field interviews. Waste has not been introduced to the Integrated Disposal Facility. The facility is operating under care taker status.</p>
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<p>All waste shall be containerized and disposed of in closed containers; if a vent is required it shall contain a filter with a minimum efficiency of 99.97% when tested with 0.3 micron particles.</p>	<p>Not Applicable</p>	<p>CDM: Field interviews. Waste has not been introduced to the Integrated Disposal Facility. The facility is operating under care taker status.</p>																																																																																																						
<p>The Annual Possession Quantity shall be tracked on a WDOH approved log.</p>	<p>Not Applicable</p>	<p>CDM: Field interviews. Waste has not been introduced to the Integrated Disposal Facility. The facility is operating under care taker status.</p>																																																																																																						
<p>Monthly radiological contamination surveys shall be conducted of the soil cover and perimeter of the pit to</p>	<p>Not Applicable</p>	<p>CDM: Field interviews. Waste has not been introduced to the</p>																																																																																																						

Requirement	Compliance Status	Compliance Determination Method
detect any spread of contamination Any soil contamination detected shall be reported to WDOH.		Integrated Disposal Facility. The facility is operating under care taker status.
Water shall be used for dust suppression during the use of mobile cranes, dozers, and vibratory rollers, during placement and compaction of the cover soil.	Not Applicable	CDM: Field interviews. Waste has not been introduced to the Integrated Disposal Facility. The facility is operating under care taker status.
Fixatives shall be supplied to contaminated soils and debris that will be left inactive less than 24 hours at the end of the work operations if the sustained wind speed is predicted during the next work shift is predicted to be equal to or greater than 20 mph.	Not Applicable	CDM: Field interviews. Waste has not been introduced to the Integrated Disposal Facility. The facility is operating under care taker status.
Fixatives shall be applied to any contaminated soil and debris that will be inactive for more than 24 hours.	Not Applicable	CDM: Field interviews. Waste has not been introduced to the Integrated Disposal Facility. The facility is operating under care taker status.
Prior to receipt of radioactive material in the IDF facility a list and location of the near-facility monitors shall be provided to WDOH for review and approval Power for a co-located ambient air sampler shall be provided for WDOH use at a monitoring station of WDOH choice.	Continuous	CDM: Field interviews. A list of the near-facility monitors has been approved by WDOH. Waste has not been introduced to the Integrated Disposal Facility. The facility is operating under care taker status.

**200 Area Diffuse/Fugitive - WRAP**

WDOH Emission Unit ID : 486

Page in AOP : EU0486-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
No active Abatement Controls in the AOP for this certification period.		
<b>Required Sampling:</b> Per the sitewide ambient monitoring program samples will be collected from the existing near-facility monitoring stations. <b>Sampling Frequency:</b> Per the sitewide ambient monitoring program <b>Radionuclide Requiring Measurement:</b> Each radionuclide that could contribute greater than 10 percent of the potential-to-emit TEDE	Continuous	CDM: Review of the data in ABCASH as collected from the required near-facility monitoring. HNF-EP-0835, Statement of Work for Services Provided by the WSCF for the Effluent Monitoring Program During the Calendar Year 2007.
<b>Federal and State Regulatory Requirement:</b> WAC 246-247-075[2]	Continuous	CDM: NESHAPs Quality Assurance Project Plan for Radioactive Air

Requirement	Compliance Status	Compliance Determination Method
<b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114		Emissions (HNF-EP-0528, latest revision).
<b>Permit: AIR 06-1006 - B Issue Date:10-05-06 Effective Date:10-05-06 Obsolete Date: 03-29-07</b> <b>NOC: Construction and Operation of the Waste Receiving and Processing (WRAP)</b> <b>WDOH NOC ID: 638 Date In AOP: 01-01-07 Page in AOP: EU0486-006</b>		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 5.63E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).	Continuous	<b>CDM:</b> The Annual Radioactive Air Emissions Report for the Hanford Site, Calendar Year 2007.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p><b>At the WRAP FACILITY--</b> Examining, assaying, characterizing, treating, verifying, and repackaging solid radioactive material and mixed waste to enable treatment, storage, or disposal of low-level waste (LLW), transuranic (TRU) waste, TRU mixed waste, and low-level mixed waste (LLMW) in contact handled (CH) containers where the external surface dose rate does not exceed 200 millirem per hour.</p> <p><b>At SHIPPING AND RECEIVING (200 Area Diffuse/Fugitive Emissions)--</b> Containers delivered to and transferred/shipped from the shipping and receiving shall be unloaded, visually inspected, bar code labeled, and radiologically surveyed with information pertaining to each container entered into the data management system.</p> <p>Following visual inspection, transfer incoming drums to the NDE/NDA area for further characterization using the process described for the NDE/NDA below.</p> <p>Once characterized, verified, and/or certified, the certified TRU waste must be loaded into a transuranic package transporter (TRUPACT-2) shipping cask for shipment to the Waste Isolation Pilot Plant (WIPP) in New Mexico. Verified LLW shall be transferred for disposal onsite. Mixed waste must be moved to an offsite treatment or permitted storage facility, or to an onsite treatment, disposal, and/or storage unit. Radioactive material that fails verification shall be returned to the generator, processed to correct the problem, or sent to another facility for further reprocessing.</p> <p><b>During NONDESTRUCTIVE EXAMINATION/NONDESTRUCTIVE ASSAY SYSTEMS (200 Area Diffuse/Fugitive Emissions)--</b> The NDE/NDA shall used to examine and to certify LLW, LLMW, TRU, and TRU mixed waste container contents without opening the containers.</p> <p><b>In the PROCESS AREA (296-W-4 Emission Unit)--</b> The process area consists of four glovebox lines: a TRU waste process glovebox, a TRU waste restricted waste management (RWM) glovebox, a LLW process glovebox (with supercompaction capability that also can be used for TRU waste processing), and a LLW RWM glovebox. The following is allowed in the process gloveboxes: drums</p>	Continuous	<b>CDM:</b> NOC Application and process descriptions are contained in procedures. Process did not change during reporting period.

Requirement	Compliance Status	Compliance Determination Method
<p>opened, contents sorted and sampled, if necessary, noncompliant items removed and transferred to the RWM gloveboxes, and remaining compliant waste repackaged into new drums.</p> <p>Incoming drums generally shall be opened in gloveboxes. However, loosening of a lid or replace a damaged lid outside of a glovebox is allowed.</p> <p>In the TRANSURANIC WASTE PROCESS LINE-- The TRU waste process glovebox line consists of stainless steel modular gloveboxes bolted together in a linear configuration. Windows shall be gasketed and bolted to the glovebox wall, and gloveports shall be fitted to the glovebox wall and windows to accept push-through type gloves. Glovebox ventilation shall be the once-through type. Air shall be drawn from the process room, through a nontestable high-efficiency process filter, and into the glovebox. The air shall be exhausted from the glovebox through another nontestable high-efficiency process filter to the combined glovebox exhaust system.</p> <p>Process operations shall be performed inside of the gloveboxes by using the gloves and/or remote controlled manipulators. Drums shall be loaded into the glovebox through airlock and sealed-type entry systems.</p> <p>In the TRANSURANIC WASTE RESTRICTED WASTE MANAGEMENT LINE-- The TRU waste RWM glovebox line consists of stainless steel. Window, gloveport, ventilation, and manipulator features shall comply to those described for the TRU waste process line glovebox. Glovebox ventilation shall be the once-through type. Air shall be drawn from the process room, through a nontestable high-efficiency process filter, and into the glovebox. The air shall be exhausted from the glovebox through another nontestable high-efficiency process filter to the combined glovebox exhaust system.</p> <p>The treatment and repackaging operations that occur in the TRU waste RWM glovebox is limited to the following.</p> <p>Aerosol cans are depressurized and drained. The drained liquids are treated within the gloveboxes or retained in containers, which are sent to storage outside of the WRAP Facility. Vapors from the aerosol cans shall pass through a series of demisters for removal of entrained liquids, and shall be vented to the glovebox exhaust.</p> <p>Miscellaneous inorganic liquids shall be sampled for characterization, neutralized if required, and solidified using stabilizing additives.</p> <p>Miscellaneous organic liquids shall be sampled for characterization, treated within the gloveboxes or repackaged for transfer to storage facilities pending future treatment.</p> <p>Corrosive materials shall be neutralized. After neutralization, the materials shall be solidified or loaded out for storage or treatment outside the WRAP Facility.</p> <p>Other treatment such as mercury amalgamation, stabilization of heavy metals, and macroencapsulation are allowed to be performed.</p> <p>Radioactive material shall be repackaged to meet acceptance criteria of the receiving facility.</p> <p>Radioactive material is sampled.</p> <p>The empty aerosol cans and other treated LLW packages will be loaded into new drums and routed to the LLW process glovebox for</p>		

Requirement	Compliance Status	Compliance Determination Method
<p>compaction or loaded out of the RWM glovebox for storage, disposal, or additional treatment.</p> <p>In the LOW-LEVEL WASTE PROCESS LINE-- The LLW process glovebox line consists of stainless steel modular gloveboxes bolted together in a linear configuration. Glovebox ventilation shall be of the once-through type. Air shall be drawn from the process room, through a nontestable high-efficiency process filter, and into the glovebox. The air shall be exhausted from the glovebox through another nontestable high-efficiency process filter to the combined glovebox exhaust system.</p> <p>Drums shall enter the glovebox through an airlock entry system. Noncompliant items shall be bar code labeled and transferred to the LLW RWM glovebox using a reusable transfer system. Compliant waste shall be compacted and repackaged into new drums.</p> <p>The LLW process glovebox will be modified to support CH-TRU processing, and include the capability for supercompaction. A one-trip drum exit port will be installed on the LLW glovebox. An improved drum tipper will be used to enable sorting capability, and a commercial non-destructive assay system for glovebox material balance control will be installed.</p> <p>In the LOW-LEVEL WASTE RESTRICTED WASTE MANAGEMENT PROCESS LINE-- The operations in the LLW RWM process line is limited those as described for the operations in the TRU waste RWM line.</p>		
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 1.13E-02 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Alpha-0   3.41E-05   Liquid/Particulate Solid   WAC 246-247-030(21)(e) License PTE limit bounds 3.41E-05 ci/yr 241Am and release fraction of 2E-09 (AIR 99-1006). Any radionuclide on the chart of the nuclides could be encountered during WRAP fugitive emissions activities. The radionuclides specifically listed in the NOC application were chosen to conservatively represent all radionuclide emissions that may occur in particulate form. A small contribution from the gaseous radionuclides may be encountered. Although any radionuclide could be present, for conservatism all alpha is assumed to be 241Am and all beta/gamma is assumed to be 90Sr for dose calculation estimates. Other radionuclides may be encountered and are approved so long as they are conservatively represented by the total alpha and total beta/gamma constituents.</p> <p>B/G-0   5.11E-04   Liquid/Particulate Solid   WAC 246-247-030(21)(e) License PTE limit bounds 5.11 E-04 90Sr and release fraction of 2E-09 (AIR 99-1006). Any radionuclide on the chart of the nuclides could be encountered during WRAP fugitive emissions activities. The radionuclides specifically listed in the NOC application were chosen to conservatively represent all radionuclide emissions that may occur in particulate form. A small contribution from the gaseous radionuclides may be encountered. Although any radionuclide could be present, for conservatism all alpha is assumed to be 241Am and all beta/gamma is assumed to be 90Sr for dose calculation estimates. Other radionuclides may be encountered and are approved so long as they are conservatively represented by the total alpha and total beta/gamma constituents.</p> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the</p>	Continuous	<p><b>CDM:</b> Verified the basis of the PTE calculation in the NOC application and ensure continued compliance via facility Data Management System (DMS) tracking per operational procedure WRP1-OP-0503.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. WAC 246-247-110(9). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>		
<p>Permit: AIR 07-308 - B Issue Date:03-29-07 Effective Date:03-29-07            NOC: Construction and Operation of the Waste Receiving and Processing (WRAP)            WDOH NOC ID: 638 Date In AOP: 07-26-07 Page in AOP: EU0486-006</p>		
Requirement	Compliance Status	Compliance Determination Method
<p>The total abated emission limit for this Notice of Construction is limited to 5.63E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).</p>	Continuous	<p>CDM: The Annual Radioactive Air Emissions Report for the Hanford Site, Calendar Year 2007.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>At the WRAP FACILITY--            Examining, assaying, characterizing, treating, verifying, and repackaging solid radioactive material and mixed waste to enable treatment, storage, or disposal of low-level waste (LLW), transuranic (TRU) waste, TRU mixed waste, and low-level mixed waste (LLMW) in contact handled (CH) containers where the external surface dose rate does not exceed 200 millirem per hour. CH containers are defined as packages having surface dose rates of less than 200 millirem per hour. Remote-handled (RH) containers (i.e., containers where the external surface dose rate is equal to or greater than 200 millirem per hour) also are processed and stored at WRAP in accordance with the approved safety analysis.</p> <p>At SHIPPING AND RECEIVING (200 Area Diffuse/Fugitive Emissions)--            Containers delivered to and transferred/shipped from the shipping and receiving shall be unloaded, visually inspected, bar code labeled, and radiologically surveyed with information pertaining to each container entered into the data management system.</p> <p>Following visual inspection, transfer incoming drums to the NDE/NDA area for further characterization using the process described for the NDE/NDA below.</p> <p>Once characterized, verified, and/or certified, the certified TRU waste must be loaded into a transuranic package transporter (TRUPACT-2) shipping cask for shipment to the Waste Isolation Pilot Plant (WIPP) in New Mexico. Verified LLW shall be transferred for disposal onsite. Mixed waste must be moved to an offsite treatment or permitted storage facility, or to an onsite treatment, disposal, and/or storage unit.</p>	Continuous	<p>CDM: NOC Application and process descriptions are contained in procedures. Process did not change during reporting period.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>Radioactive material that fails verification shall be returned to the generator, processed to correct the problem, or sent to another facility for further reprocessing.</p> <p>During NONDESTRUCTIVE EXAMINATION/NONDESTRUCTIVE ASSAY SYSTEMS (200 Area Diffuse/Fugitive Emissions)-- The NDE/NDA shall used to examine and to certify LLW, LLMW, TRU, and TRU mixed waste container contents without opening the containers.</p> <p>In the PROCESS AREA (296-W-4 Emission Unit)-- The process area consists of four glovebox lines: a TRU waste process glovebox, a TRU waste restricted waste management (RWM) glovebox, a LLW process glovebox (with supercompaction capability that also can be used for TRU waste processing), and a LLW RWM glovebox. The following is allowed in the process gloveboxes: drums opened, contents sorted and sampled, if necessary, noncompliant items removed and transferred to the RWM gloveboxes, and remaining compliant waste repackaged into new drums.</p> <p>Incoming drums generally shall be opened in gloveboxes. However, loosening of a lid or replace a damaged lid outside of a glovebox is allowed.</p> <p>In the TRANSURANIC WASTE PROCESS LINE-- The TRU waste process glovebox line consists of stainless steel modular gloveboxes bolted together in a linear configuration. Windows shall be gasketed and bolted to the glovebox wall, and gloveports shall be fitted to the glovebox wall and windows to accept push-through type gloves. Glovebox ventilation shall be the once-through type. Air shall be drawn from the process room, through a nontestable high-efficiency process filter, and into the glovebox. The air shall be exhausted from the glovebox through another nontestable high-efficiency process filter to the combined glovebox exhaust system.</p> <p>Process operations shall be performed inside of the gloveboxes by using the gloves and/or remote controlled manipulators. Drums shall be loaded into the glovebox through airlock and sealed-type entry systems.</p> <p>In the TRANSURANIC WASTE RESTRICTED WASTE MANAGEMENT LINE-- The TRU waste RWM glovebox line consists of stainless steel. Window, gloveport, ventilation, and manipulator features shall comply to those described for the TRU waste process line glovebox. Glovebox ventilation shall be the once-through type. Air shall be drawn from the process room, through a nontestable high-efficiency process filter, and into the glovebox. The air shall be exhausted from the glovebox through another nontestable high-efficiency process filter to the combined glovebox exhaust system.</p> <p>The treatment and repackaging operations that occur in the TRU waste RWM glovebox is limited to the following.</p> <p>Aerosol cans are depressurized and drained. The drained liquids are treated within the gloveboxes or retained in containers, which are sent to storage outside of the WRAP Facility. Vapors from the aerosol cans shall pass through a series of demisters for removal of entrained liquids, and shall be vented to the glovebox exhaust.</p> <p>Miscellaneous inorganic liquids shall be sampled for characterization, neutralized if required, and solidified using stabilizing additives.</p> <p>Miscellaneous organic liquids shall be sampled for characterization,</p>		

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<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 1.13E+02 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Alpha-0 3.41E-05 Liquid/Particulate Solid WAC 246-247-030(21)(a) License PTE limit bounds 3.41E-05 Ci/yr 241Am and release fraction of 2E-09 (AIR 99-1006). Any radionuclide on the chart of the nuclides could be encountered during WRAP fugitive emissions activities. The radionuclides specifically listed in the NOC application were chosen to conservatively represent all radionuclide emissions that may occur in particulate form. A small contribution from the gaseous radionuclides may be encountered. Although any radionuclide could be present, for conservatism all alpha is assumed to be 241Am and all beta/gamma is assumed to be 90Sr for dose calculation estimates. Other radionuclides may be encountered and are approved so long as they are conservatively represented by the total alpha and total beta-gamma constituents.</p> <p>B/G-0 5.11E-04 Liquid/Particulate Solid WAC 246-247-030(21)(a)</p>	<p>Continuous</p>	<p><b>CDM:</b> Verified the basis of the PTE calculation in the NOC application and insure continued compliance via facility Data Management System (DMS) tracking per operational procedure WRPI-OP-0503.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>License PTE limit bounds 5.11E-04 90Sr and release fraction of 2E-09 (AIR 99-1006). Any radionuclide on the chart of the nuclides could be encountered during WRAP fugitive emissions activities. The radionuclides specifically listed in the NOC application were chosen to conservatively represent all radionuclide emissions that may occur in particulate form. A small contribution from the gaseous radionuclides may be encountered. Although any radionuclide could be present, for conservatism all alpha is assumed to be 241Am and all beta/gamma is assumed to be 90Sr for dose calculation estimates. Other radionuclides may be encountered and are approved so long as they are conservatively represented by the total alpha and total beta-gamma constituents.</p> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. WAC 246-247-110(9). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>		

**200 Area Diffuse/Fugitive - T Plant**

WDOH Emission Unit ID : 486

Page in AOP : EU0486-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
No active Abatement Controls in the AOP for this certification period.		
<p><b>Required Sampling:</b> Per the sitewide ambient monitoring program samples will be collected from the existing near-facility monitoring stations.</p> <p><b>Sampling Frequency:</b> Per the sitewide ambient monitoring program</p> <p><b>Radionuclide Requiring Measurement:</b> Each radionuclide that could contribute greater than 10 percent of the potential-to-emit TEDE</p>	Continuous	<p><b>CDM:</b> Review of the data in ABCASH as collected from the required near-facility monitoring.</p>
<p><b>Federal and State Regulatory Requirement:</b> WAC 246-247-075[2]</p> <p><b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114</p>	Continuous	<p><b>CDM:</b> The NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528) specifies the hardware and method used to sample and the analytical methods</p>

Requirement	Compliance Status	Compliance Determination Method
		used in the laboratory.
Permit: AIR 06-1013 - B <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>NOC:</b> Operation of the 2706-T Building <b>WDOH NOC ID:</b> 648 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0486-009		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 7.50E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).	Continuous	<b>CDM:</b> Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted. The approved activities are limited to:</p> <p>A1) Packaging and Repackaging Waste - Packaging and repackaging activities are performed for waste generated at 2706-T as well as for onsite and offsite generators. The repackaging of waste supports waste acceptance criteria for other TSD facilities. For example, prohibited items from waste packages are removed and either staged for either handling or repackaging using remote or manual methods.</p> <p>Packaging and repackaging activities are:            A1a) Sorting.            A1b) Segregation.            A1c) Removing prohibited items.            A1d) Compositing/aggregating solids or liquids.            A1e) Adding absorbent.            A1f) Size reduction [e.g., cutting (jaws, saws, torches)], bending, folding, crushing (e.g., drum crusher), shredding, compacting, or similar methods that do not have a higher extent of disruption].            A1g) Void filling.            A1h) Pressure relief/release (e.g., aerosol cans, gas cylinders, drums, or other similar containers).</p> <p>A2) Verification Activities - Verification support activities are provided for waste and other materials that are generated on or off the Hanford Site.</p> <p>Verification activities are:            A2a) Physical observation.            A2b) Nondestructive examination (NDE).            A2c) Nondestructive assay (NDA).            A2d) Chemical field screening.            A2e) Radiological surveys.            A2f) Radiological samples.            A2g) Headspace gas sampling.            A2h) Chemical sampling.</p> <p>A3) Sampling Activities - Sampling of waste generated by operations or by other onsite or offsite generators is performed. The purpose of sampling is to confirm process knowledge, characterize waste, support verification, and determine land disposal requirements as applicable. Sampling activities are:            A3a) Field screening {e.g., pH paper, oxidizer, volatile organic analyses (VOAs), polychlorinated biphenyls (PCBs), or similar</p>	Continuous	<b>CDM:</b> DO-100-039, Package Transuranic Waste; DO-100-012, Package Mixed Waste in Drums and Boxes; DO-100-022, Package Low-Level Waste; DO-100-027, Package Nonradioactive Dangerous Waste; WMP 370, Section 1.10, Verification Program.

Requirement	Compliance Status	Compliance Determination Method
<p>screening parameters].  A3b) Obtaining a sample for analysis [e.g., grab, composite, composite liquid waste sampler (COLIWASA), or other similar sampling techniques].  A3c) Shipping/transferring the samples to an approved laboratory for analysis.  A3d) Disposition of sample returns (e.g., placement back into the parent container or another approved container/tank).  A3e) Headspace gas analysis [typically in support of the Waste Isolation Pilot Plant (WIPP) Project].</p> <p>A4) Decontamination/Refurbishment Activities - Materials, equipment, and waste can be decontaminated (e.g., free release, reduce the radiological levels, or other similar criteria) using a variety of methods. Equipment can also be repaired and refurbished within the 2706-T facility. Within 2706-T, decontamination of 2706-T structural components may be performed.</p> <p>Decontamination and refurbishment activities at 2706-T are:  A4a) Water (fog, high or low-pressure spraying).  A4b) Steam.  A4c) Ice blasting.  A4d) Vacuum blasting.  A4e) Brushing.  A4f) Abrasive tools.  A4g) Scraping.  A4h) Washing (e.g., chemicals/detergents).  A4i) Immersion.  A4j) Electro-polishing.  A4k) Cutting (e.g., removal by sawing, torch cutting more highly radioactive components or other similar methods).  A4l) Rust/paint removal.  A4m) Sand blasting.  A4n) Vacuuming.</p> <p>A5) Maintenance Activities - A variety of preventative and /or repair maintenance activities are performed at 2706-T. Some maintenance activities involve the temporary shut down of the 296-T-7 exhaust stack.</p> <p>Maintenance activities are:  A5a) Painting.  A5b) Crane maintenance.  A5c) Electronic systems functional checks and repairs [CAMs, personnel contamination monitors (PCMs)].  A5d) Calibrations.  A5e) Mechanical overhaul and rebuild.  A5f) Bearing replacement.  A5g) Pump and motor alignment.  Maintenance may be performed on:  A5h) Rollup doors.  A5i) Heat pumps.  A5j) Exhaust fans.  A5k) Transformers.  A5l) Scale systems.  A5m) Wire rope.  A5n) Stack systems.  A5o) Forklifts.</p> <p>A6) Waste Treatment Activities - 2706-T is a RCRA treatment and Storage facility permitted by the Washington State Department of Ecology (Ecology).</p> <p>Treatment activities are:  A6a) Macroencapsulation.</p>		

Requirement	Compliance Status	Compliance Determination Method
<p>A6b) Absorption.  A6c) Neutralization.  A6d) Immobilization.  A6e) Encapsulation.  A6f) Stabilization (solidification, cementation, grouting).  A6g) Compaction.  A6h) Amalgamation.  A6i) Segregation.  A6j) Shredding.  A6k) Venting and drilling.  A6l) Size Reduction.  A7) Recycling Activities - Materials are recycled whenever possible. Recycled materials are: ferrous and non-ferrous metal, light bulbs, aerosol cans, oils, and batteries.</p> <p>A8) Storage Activities - 2706-T stores materials (chemicals, or equipment, or similar materials) to support operations. Radioactive wastes may be stored uncontainerized or in:  A8a) Containers (boxes, drums, tanker trucks/railcars, or large diameter containers).  A8b) Tanks.  A8c) Sumps and pipes.</p> <p>A9) Equipment, Materials, and Waste Movement Activities.- The movement of materials, equipment and waste is necessary to support operations and maintenance. Movement activities (using a forklift, crane, truck, doll, personnel) are:  A9a) Receiving waste (liquid, solid, semi-solid) for storage and/or treatment.  A9b) Movement of waste (liquid, solid, semi-solid) and equipment.  A9c) Movement of liquids, sludges, or other waste form containers and/or tanks via transfer lines.  A9d) Waste container transfers.  A9e) Placing and storing chemical products in flammable cabinets or other approved storage locations.  A9f) Movement of contaminated material.</p> <p>A10) Housekeeping Activities - Housekeeping activities involve maintaining 2706-T in a clean and orderly condition.</p> <p>Housekeeping activities are:  A10a) Sweeping (brooms).  A10b) Mopping (squeegees or mops).  A10c) Vacuuming.  A10d) Dusting.  A10e) Wiping (sponges, towels).  A10f) Picking up debris.  A10g) Removal of trash.</p> <p>A11) Surveillance Activities - Surveillance activities involve walking down and inspecting various areas, systems, and components. Surveillances typically consist of daily, weekly, and monthly inspections of waste containers, tanks, buildings, or similar locations. Surveillances are subject to change (adding, deleting and/or modifying) as operations, maintenance, engineering, and radiological control dictates. Surveillances, inspections, and maintenance activities that do not have the potential to create airborne contamination can occur within the 2706-T exhaust stack emission system is shutdown.</p> <p>The following surveillances are performed at 2706-T:</p> <p>A11a) Container storage areas treatment and storage tanks and ancillary equipment.  A11b) General condition of building structures.  A11c) Cold weather surveillances (typically, between October 12 and</p>		

Requirement	Compliance Status	Compliance Determination Method
<p>March 31). A11d) Inspection of equipment. A11e) Inspection of HEPA filtered vacuums. A11f) Radiological surveys.</p> <p>2706-T: The 2706-T facility includes the 2706-T building and the 2706-TA Building. The 2706-T Building and the 2706-TA Building make up a single structure and are described briefly here. The 2706-T facility handles low-level waste, mixed low level waste, and transuranic (TRU) waste.</p> <p>The 2706-T Building was built in 1959 as a low-level decontamination building. The original building was 66 feet long and 50 ft. wide. The 2706-TA Building was added in 1994/1995 over the concrete pad on the west side of the 2706-T. One rollup-door and one man-door provide access between 2706-T and 2706-TA Building. Three heat pumps provide heating, ventilation, and air conditioning for the 2706-T Building operations area. Waste handling and decontamination operational areas of the 2706-T Building are open and unobstructed. The 2706-T building is a pre-engineered metal building. The foundation is concrete slab on grade throughout. The 2706-T Building includes two pits, one for decontamination and treatment of motor vehicles and other large equipment, and one for rail car decontamination and treatment. These pits can also be used to support collection of liquids from waste handling activities.</p> <p>Current operations in 2706-T Building include waste sampling, packaging and repackaging, head-gas sampling, managing waste container, decontamination/refurbishment, maintenance, recycling, storage, housekeeping, surveillance, and movement activities. One egress door leads directly to the exterior of 2706-T Building. Other doors lead directly to the non-ventilated lean-to on the north side, and an air lock provides access to the 2706-TA Building operations area. The railway and auto pits have metal grating and some wooden covers to prevent falls into the pits. An epoxy floor sealant had been applied to all operational area floors. To support these operations, greenhouses are used as necessary in 2706-T. Greenhouses are temporary or semi-permanent radioactive material confinement structures, and can be used for contamination control. If used, greenhouses shall exhaust to the areas ventilated by the 296-T-7 ventilation systems.</p> <p>The atmosphere clean-up train (ACT-1) system, sprinkler system riser room, and electrical room are located in the south lean-to (non-ventilated).</p> <p>2706-TA: The 2706-TA Building is an addition to the 2706-T Building installed in the 1990s as an add-on over the concrete storage pad located west of the building. The 2706-TA Building is approximately 54 feet long, 45 ft wide, and 23 feet high. There are two rollup doors located at the waste end of the building. The 2706-TA Building has steel primary and secondary structural elements and corrugated sheet metal exterior siding and roofing panels. Three heat pumps provide heating, ventilation, and air conditioning for the 2706-TA Building operations area. The floor is concrete slab on grade. An epoxy floor sealant had been applied to all operational are floors. Waste handling and decontamination operational areas of the 2706-TA Building are open and unobstructed.</p> <p>Current operations in 2706-TA Building include waste sampling, packaging and repackaging, head-gas sampling, managing waste container, decontamination/refurbishment, maintenance, recycling, storage, housekeeping, surveillance, and movement activities. To support waste activities, greenhouses are used if necessary. Greenhouses are temporary or semi-permanent radioactive material confinement structures, and can be sued for contamination control.</p>		

Requirement	Compliance Status	Compliance Determination Method
<p>When used, greenhouses shall exhaust to the areas ventilated by the 296-T-7 ventilation system.</p> <p>Attached to the south side of 2706-TA Building is a lean-to made up of two rooms. The larger room houses the new ACT-2 HEPA filter system, which serves the operational areas. The ACT-1 and ACT-2 systems exhaust through the 296-T-7 stack. The second room houses electronic controllers and electrical switchgear supporting operations.</p> <p>Emissions from these activities are exhausted through 296-T-7, except for emissions resulting from vented TRU containers stored within the facility, which may be released to the 200 Area diffuse and fugitive emission unit when the ventilation system is not in operation.</p>		
<p>The PTE for this project as determined under WAC 246-247-030(21a-e) [as specified in the application] is 7.50E-02 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Alpha-0 2.20E-04 Liquid/Particulate Solid WAC 246-247-030 (21) (a) conservatively assumed to be 241-Am in dose calculations</p> <p>B/G-0 1.10E-02 Liquid/Particulate Solid WAC 246-247-030 (21) (a) conservatively assumed to be 137-Cs in dose calculations</p> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the AIR Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>	Continuous	<p><b>CDM:</b> Inventory Control Program, WMP-340, Section 1.08; Air Emission Compliance for 2706-T Operational Activities, WMP-340, Section 1.10; PHMC Radiological Control Manual, HNF-5173.</p>
<p>All activities involving potentially airborne radioactive materials in 2706-T shall be conducted in accordance with the ALARA principle (WAC 246-247-040(5)).</p>	Continuous	<p><b>CDM:</b> HNF-5173, Rev. 3, PHMC Radiological Control Manual; HNF-RD-15332, Environmental Protection Requirements, Section 2.5; HNF-PRO-15333, Environmental Protection Processes, Section 5.5.</p>
<p>Accidental releases with a probability of occurrence during the expected life of the emission unit of greater than 1% must be addressed. All such probable anticipated accidental releases shall be documented, and that documentation supplied to the department upon request (WAC 246-247-075(11)).</p>	Continuous	<p><b>CDM:</b> Potential accident scenarios at the T Plant Complex have been addressed and documented in the Master Documented Safety Analysis (MDSA) for the Solid Waste Operations Complex, (SWOC), HNF-14741.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>The PTE and abated emissions to the 200 Area diffuse and fugitive emission unit are limited to 7.5 E-03 mrem/year. The ventilation system shall be in operation when activities involving radioactive or contaminated materials are performed within the ventilated space. The ventilation system shall be in operation if any part of the 2706-T Facility is posted as a high contamination area or higher. Storage/movement of ventilated (NucFil or vent clip) TRU containers is permitted when the ventilation system is not operating. No specific compliance demonstration is necessary beyond the compliance with posting requirements (WAC 246-247-040(5)).</p>	<p>Continuous</p>	<p><b>CDM:</b> Operate The 2706-T ACT-1 Ventilation System, DO-060-014, Section 5.33 Note / TSR-LCO 3.3.1;  Operate The 2706-T ACT-2 Ventilation System, DO-060-015, Section 5.3.3, Note / TSR-LCO 3.3.1; 2706-T Ventilation Logbook, (No Document#)</p>
<p align="center"><b>Permit: AIR 06-1062 - C Issue Date:10-05-06 Effective Date:10-05-06 Obsolete Date: 03-15-07</b>  <b>NOC: Consolidated T Plant Operations</b>  <b>WDOH NOC ID: 711 Date In AOP: 01-01-07 Page in AOP: EU0486-82</b></p>		
Requirement	Compliance Status	Compliance Determination Method
<p>The total abated emission limit for this Notice of Construction is limited to 5.60E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).</p>	<p>Continuous</p>	<p><b>CDM:</b> Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>This consolidated T-Plant license supersedes all radioactive air licenses for 291-T-1.</p> <p>a. This approval subsumes those activities approved in three previous license approvals, retains/revises the specific conditions and limitations of those approvals, and replaces them as the radioactive air license for T-Plant:</p> <p>i. AIR 03-1208 (NOC ID # 445, "Storage in T-Plant Complex of Sludge from K-Basins")  ii. AIR 01-1010 (NOC ID # 499, "T-Plant Complex Fuel Removal Project")  iii. AIR 02-704 (NOC ID # 500, "Entering and Characterizing of the 224-T Facility Process Cells")</p> <p>b. With additional conditions and limitations provided herein, this approval also extends to new activities discussed in the NOC application "Radioactive Air Emissions Notice of Construction for Consolidated T Plant Operations", DOE/RL-2004-50, Rev.0, September, 2004, described briefly:</p> <p>i. Receipt, Storage, Treatment, and Loads out of Contact-Handled and Remote-Handled Transuranic (TRU) and Transuranic Mixed Waste (M-91 Initiative)  ii. Treatment ( in addition to storage ) of K-Basin Sludge from the North Load out Pit (NLOP)  iii. Such activities considered routine at T Plant as are described in succeeding conditions.</p> <p>Activities a)i through a)iii may emit radioactive air through 291-T-1. Additionally, activity a)iii may emit to the 200 Area Diffuse &amp;</p>	<p>Continuous</p>	<p><b>CDM:</b> DO-100-039, Package Transuranic Waste;  DO-100-012, Package Mixed Waste in Drums and Boxes;  DO-100-022, Package Low-Level Waste;  DO-100-027, Package Nonradioactive Dangerous Waste WMP 370, Section 1.10, Verification Program.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>Fugitive emission unit and to Portable Temporary Radioactive Air Emission Units.</p>		
<p>The PTE for this project as determined under WAC 246-247-030(21a-e) [as specified in the application] is 1.20E+02 mrem/year. Approved are the associated potential release rates (Curies/year) of:            Alpha-0                      1.78E-04                      Beta-0            5.49E-05</p> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the AIR Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>	<p>Continuous</p>	<p><b>CDM:</b> T Plant Curie Inventory Logbook, HNF-N-42.</p> <p><b>Comment:</b> These are the same compliance determination methods for Conditions 13 and 19.</p>
<p>A. Entry/Characterization of 224-T Process Cells:            A1) (Deleted)            A2) All work covered by this NOC must be completed by December 31, 2005.            A3) (Deleted)            A4) (Deleted)            A5) HPT coverage shall be provided during all cell entries and excavation activities.            A6) (Deleted)            A7) When a HEPA Filtered Vacuum Radioactive Air Emission Unit (HEPA VAC) is used, the condition, controls, monitoring requirements and limitations of the latest approved revision of the HEPA VAC Notice of Construction shall be required.            A8) (Deleted)            A9) Approved activities for the Entry/Characterization of 224-T Process Cells are:            A9a) Approval extends to entry of the 224-T Facility to determine the condition and contents of the facility's cells, tanks, and vessels, as described below: A containment tent shall be erected outside each access door. The containment tent shall consist of two or more chambers, where the inner chamber shall surround the cell door and the outer chamber shall function as an airlock. Alpha and beta continuous air monitors (CAM) shall monitor each chamber and shall run continuously whenever the cell door is open. The inner chamber shall be fitted with a Type I portable temporary radioactive air emissions unit (PTRAEU) exhaustor to provide air flow and contamination control in the containment tent. The exhaustor shall be run intermittently to control radiological conditions, at the direction of the field work supervisor in collaboration with the health physics technician (HPT). The containment tent shall be isolated from the cell (door closed or otherwise blocked) before operating the exhaustor. The Type I PTRAEU shall be used in accordance with the conditions, controls, monitoring requirements and limitations of the latest approved revision of the PTRAEU NOC (DOE/RL-96-75).            A9b) The following characterization activities are allowed in the cells and/or containment tent:            A9b1) Establishing radiological conditions/map (i.e., dose rates, smearable and fixed contamination, and airborne concentrations).            A9b2) Nondestructive data analyses (NDA) measurements of</p>	<p>Not Applicable</p>	<p><b>CDM:</b> No entries or characterizations occurred in the 224-T Process Cells for this reporting period; therefore this requirement was not triggered.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>equipment.  A9b3) Collection of liquid and solid samples form open vessels, trenches, or sumps.  A9b4) Collection of ultrasonic data on vessels and piping.  A9b5) Tanking photographs.  A9b6) Performing visual inspections.  A9b7) Removing flanges to collect samples from inside equipment or piping.  A9b8) Cutting or drilling into piping to collect samples with appropriate equipment such as a reciprocating saw, a circular saw, a hacksaw, a tri-tool, or an abrasive wheel.  Aa9b9) Minor decontamination activities such as wiping down, applying fixatives or sealants, etc., performed in the cell or in the containment tent.  A9b10) Decontamination to reduce dose rates or remove contamination for personnel safety, to remove characterization equipment brought in, or to remove incidental loose equipment or waste found in the cell.  A9b11) Size reduction and packaging and containerizing incidental, loose equipment or waste found in the cell for removal and /or disposal.  A9b12) Removal of infiltrated water form the pit and the submerged tanks in C-Cell by pumping into tanker trucks for subsequent disposal.  A9b13) Characterization of the removed water prior to disposal.  A9b14) Investigation of the source of water infiltrated into C-Cell.  A9b15) Sealing and grouting of leaks causing water infiltration.  A9b16) A small amount of excavation is allowed to take place around the cell access doors to support installation of the containment tents. Manual digging methods with shovels, picks and rakes shall be used. Up to two cubic meters of contaminated may be disturbed. A9b17) Within the containment tent, the weather barrier cover over the cell access door shall be removed. The integrity and functionality of the cell door shall be determined and as a result the door may be removed and replaced with another door. Any other physical barrier that limits access to the cell also shall be removed.  A9b18) (Deleted) (WAC 246-247-040(5))</p>		
<p>Actions to assure quality of periodic confirmatory measurement shall be as follows:  (1) Implementation of quality checks supporting the periodic confirmatory measurements. These checks shall assure that the emissions measurements are sufficient to verify low emissions.  (2) (Deleted)  (3) An annual calibration will be performed on the existing sample flow meter or an annual function check will be performed if the flow meter is replaced by either a rotameter or a magnahelic gauge.  (4) The effluent samples will be collected on standard (very high efficiency particulate air) sample filters.  (5) The laboratory sample analysis will meet the requirements of Appendix B, Method 114(3); and  (6) The following items shall be documented in a NESHAP Quality Assurance Project Plan or other documents.  (i) The sample collection and analysis procedures used.  (ii) The quality control program for evaluation and tracking the quality of the periodic confirmatory measurement data against preset criteria. The quality control program should include, where applicable, a system of replicates, spiked samples , split samples, blanks and control charts. The number and frequency of such quality control checks shall be identified: and  (iii) The sample tracking system to provide positive identification of samples and data through all phases of the sample collection, analysis, and reporting system. Sample handling and preservation procedures, to maintain the integrity of the samples during collection, storage, and analysis. (WAC 246-247- 040(5))(WAC 246-247-075(3))(WAC 246-247-075(6))(WAC 246-247-075(13)).</p>	<p>Not Applicable</p>	<p><b>CDM: Quality Assurance Program Description, HNF-MP-599; NESHAP Quality Assurance Project Plan for Radioactive Air Emissions, HNF-EP-0528.</b></p>

Requirement	Compliance Status	Compliance Determination Method
<p>After backfilling, the soil surface radiological contamination levels shall be verified to be less than 5,000 dpm/100 cm<sup>2</sup> beta/gamma and less than 100 dpm/100 cm<sup>2</sup> alpha. If contamination is present above these levels, the contaminated soil shall be removed and containerized for disposal or covered or fixed to provide containment of the contamination. (WAC 246-247-040(5))</p>	<p>Not Applicable</p>	<p><b>CDM:</b> Soil excavating activities did not take place during this reporting period; therefore this backfilling requirement was not triggered.</p>
<p>All activities involving radioactive materials shall be conducted in accordance with the ALARA principle. (WAC 246-247-040(5))</p>	<p>Continuous</p>	<p><b>CDM:</b> HNF-5173, Rev. 3, PHMC Radiological Control Manual.</p>
<p>Appropriate excavation controls such as water, fixatives, covers, or windscreens shall be applied, if needed, as determined by the contractor's Health Physics organization. Spoil piles containing contaminated soil shall be segregated from the clean soil. Containerizing soil for disposal may also be performed. (WAC 246-247-040(5))(WAC 246-247-060(5))</p>	<p>Not Applicable</p>	<p><b>CDM:</b> Soil excavating activities did not take place during this reporting period; therefore these excavation controls were not triggered.</p>
<p>If a Portable/Temporary Radioactive Air Emission Unit (PTRAEU) is used, the conditions, controls, monitoring requirements and limitations of the latest approved version of the PTRAEU Notice of Construction shall be required. (WAC 246-247-060(5))(WAC 246-247-080(7))</p>	<p>Not Applicable</p>	<p><b>CDM:</b> No activities requiring the use of the PTRAEU NOC occurred at the T Plant Complex in 2007, therefore this requirement to follow the PTRAEU NOC was not triggered.</p> <p><b>Comment:</b> DO-021-030, Operate Portable Exhauster</p>
<p>Periodic confirmatory measurements (PCM) for the diffuse and fugitive emissions shall be performed and shall consist of the radiological surveys from the soil excavation activities. Compliance shall be demonstrated by showing that actual emissions are inherently less than the estimated emissions, which are based and calculated from the same contamination levels.</p> <p>If a PTRAEU of HEPA filtered vacuum radioactive air emission unit is used, PCM for emissions from those units shall be performed as required by the respective NOCs. (WAC 246-247-040(5))(WAC 246-247-080(7))</p>	<p>Not Applicable</p>	<p><b>CDM:</b> Soil excavating or PTRAEU activities did not take place during this reporting period; therefore these PCM requirements were not triggered.</p>
<p>The dose to the maximally exposed member of the public from unabated diffuse and fugitive emissions associated with excavation activities under this NOC shall not exceed 3.05E-03 mrem/year. For the purposes of dose estimation, gross beta air concentrations shall be conservatively assumed to consist entirely of Sr-90. Also for the purposes of dose estimation, gross alpha air concentrations associated with excavation under this NOC shall be conservatively assumed to consist entirely of Am-241. (WAC 246-247-040(5))</p>	<p>Continuous</p>	<p><b>CDM:</b> Soil excavating activities did not take place during this reporting period, therefore this dose limit was not exceeded</p>

Requirement	Compliance Status	Compliance Determination Method
Total volume of contaminated soil disturbed in excavation for installation of containment tents shall not exceed two cubic meters. (WAC 246-247-040(5))	Continuous	<b>CDM:</b> Soil excavating activities did not take place during this reporting period, therefore this total volume limit was not exceeded.
Permit: AIR 07-306 - C Issue Date:03-23-07 Effective Date:03-15-07 NOC: Consolidated T Plant Operations WDOH NOC ID: 711 Date In AOP: 07-26-07 Page in AOP: EU0486-079		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 5.60E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).	Continuous	<b>CDM:</b> Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>This consolidated T-Plant license supersedes all radioactive air licenses for 291-T-1.</p> <p>a. This approval subsumes those activities approved in three previous license approvals, retains/revises the specific conditions and limitations of those approvals, and replaces them as the radioactive air license for T-Plant:</p> <p>i. AIR 03-1208 (NOC ID # 445, "Storage in T-Plant Complex of Sludge from K-Basins")            ii. AIR 01-1010 (NOC ID # 499, "T-Plant Complex Fuel Removal Project")            iii. AIR 02-704 (NOC ID # 500, "Entering and Characterizing of the 224-T Facility Process Cells")</p> <p>b. With additional conditions and limitations provided herein, this approval also extends to new activities discussed in the NOC application "Radioactive Air Emissions Notice of Construction for Consolidated T Plant Operations", DOE/RL-2004-50, Rev.0, September, 2004, described briefly:</p> <p>i. Receipt, Storage, Treatment, and Loads out of Contact-Handled and Remote-Handled Transuranic (TRU) and Transuranic Mixed Waste (M-91 Initiative)            ii. Treatment ( in addition to storage ) of K-Basin Sludge from the North Load out Pit (NLOP)            iii. Such activities considered routine at T Plant as are described in succeeding conditions.</p> <p>Activities a)i through a)iii may emit radioactive air through 291-T-1. Additionally, activity a)iii may emit to the 200 Area Diffuse &amp; Fugitive emission unit and to Portable Temporary Radioactive Air Emission Units.</p>	Continuous	<b>CDM:</b> DO-100-039, Package Transuranic Waste; DO-100-012, Package Mixed Waste in Drums and Boxes; DO-100-022, Package Low-Level Waste; DO-100-027, Package Nonradioactive Dangerous Waste WMP 370, Section 1.10, Verification Program.
The PTE for this project as determined under WAC 246-247-030(21a-e) [as specified in the application] is 1.20E+02 mrem/year. Approved are the associated potential release rates (Curies/year) of: Alpha-0            1.78E-04	Continuous	<b>CDM:</b> T Plant Curie Inventory Logbook, HNF-N-42.  <b>Comment:</b> These are the same compliance determination methods for

Requirement	Compliance Status	Compliance Determination Method
<p>Beta-0                      5.49E-05</p> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the AIR Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>		<p>Conditions 13 and 19.</p>
<p>A. Entry/Characterization of 224-T Process Cells:  A1) (Deleted)  A2) All work covered by this NOC must be completed by December 31, 2005.  A3) (Deleted)  A4) (Deleted)  A5) HPT coverage shall be provided during all cell entries and excavation activities.  A6) (Deleted)  A7) When a HEPA Filtered Vacuum Radioactive Air Emission Unit (HEPA VAC) is used, the condition, controls, monitoring requirements and limitations of the latest approved revision of the HEPA VAC Notice of Construction shall be required.  A8) (Deleted)  A9) Approved activities for the Entry/Characterization of 224-T Process Cells are:  A9a) Approval extends to entry of the 224-T Facility to determine the condition and contents of the facility's cells, tanks, and vessels, as described below: A containment tent shall be erected outside each access door. The containment tent shall consist of two or more chambers, where the inner chamber shall surround the cell door and the outer chamber shall function as an airlock. Alpha and beta continuous air monitors (CAM) shall monitor each chamber and shall run continuously whenever the cell door is open. The inner chamber shall be fitted with a Type I portable temporary radioactive air emissions unit (PTRAEU) exhaustor to provide air flow and contamination control in the containment tent. The exhaustor shall be run intermittently to control radiological conditions, at the direction of the field work supervisor in collaboration with the health physics technician (HPT). The containment tent shall be isolated from the cell (door closed or otherwise blocked) before operating the exhaustor. The Type I PTRAEU shall be used in accordance with the conditions, controls, monitoring requirements and limitations of the latest approved revision of the PTRAEU NOC (DOE/RL-96-75)  A9b) The following characterization activities are allowed in the cells and/or containment tent:  A9b1) Establishing radiological conditions/map (i.e., dose rates, smearable and fixed contamination, and airborne concentrations).  A9b2) Nondestructive data analyses (NDA) measurements of equipment.  A9b3) Collection of liquid and solid samples from open vessels, trenches, or sumps.  A9b4) Collection of ultrasonic data on vessels and piping.  A9b5) Tanking photographs.  A9b6) Performing visual inspections.  A9b7) Removing flanges to collect samples from inside equipment or</p>	<p>Not Applicable</p>	<p><b>CDM:</b> No entries or characterizations occurred in the 224-T Process Cells for this reporting period; therefore this requirement was not triggered.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>           piping.            A9b8) Cutting or drilling into piping to collect samples with appropriate equipment such as a reciprocating saw, a circular saw, a hacksaw, a tri-tool, or an abrasive wheel.            Aa9b9) Minor decontamination activities such a wiping down, applying fixatives or sealants, etc., performed in the cell or in the containment tent.            A9b10) Decontamination to reduce dose rates or remove contamination for personnel safety, to remove characterization equipment brought in, or to remove incidental loose equipment or waste found in the cell.            A9b11) Size reduction and packaging and containerizing incidental, loose equipment or waste found in the cell for removal and /or disposal.            A9b12) Removal of infiltrated water form the pit and the submerged tanks in C-Cell by pumping into tanker trucks for subsequent disposal.            A9b13) Characterization of the removed water prior to disposal.            A9b14) Investigation of the source of water infiltrated into C-Cell.            A9b15) Sealing and grouting of leaks causing water infiltration.            A9b16) A small amount of excavation is allowed to take place around the cell access doors to support installation of the containment tents. Manual digging methods with shovels, picks and rakes shall be used. Up to two cubic meters of contaminated may be disturbed.            A9b17) Within the containment tent, the weather barrier cover over the cell access door shall be removed. The integrity and functionality of the cell door shall be determined and as a result the door may be removed and replaced with another door. Any other physical barrier that limits access to the cell also shall be removed.            A9b18) (Deleted) (WAC 246-247-040(5))         </p>		
<p>           Actions to assure quality of periodic confirmatory measurement shall be as follows:            (1) Implementation of quality checks supporting the periodic confirmatory measurements. These checks shall assure that the emissions measurements are sufficient to verify low emissions.            (2) (Deleted)            (3) An annual calibration will be performed on the existing sample flow meter or an annual function check will be performed if the flow meter is replaced by either a rotameter or a magnahelic gauge.            (4) The effluent samples will be collected on standard (very high efficiency particulate air) sample filters.            (5) The laboratory sample analysis will meet the requirements of Appendix B, Method 114(3); and            (6) The following items shall be documented in a NESHAP Quality Assurance Project Plan or other documents.            (i) The sample collection and analysis procedures used.            (ii) The quality control program for evaluation and tracking the quality of the periodic confirmatory measurement data against preset criteria. The quality control program should include, where applicable, a system of replicates, spiked samples , split samples, blanks and control charts. The number and frequency of such quality control checks shall be identified: and            (iii) The sample tracking system to provide positive identification of samples and data through all phases of the sample collection, analysis, and reporting system.         </p>	Continuous	<p> <b>CDM: Quality Assurance Program Description, HNF-MP-599;</b>  <b>NESHAP Quality Assurance Project Plan for Radioactive Air Emissions, HNF-EP-0528.</b> </p>

Requirement	Compliance Status	Compliance Determination Method
Sample handling and preservation procedures, to maintain the integrity of the samples during collection, storage, and analysis. (WAC 246-247-040(5))(WAC 246-247-075(3))(WAC 246-247-075(6))(WAC 246-247-075(13)).		
After backfilling, the soil surface radiological contamination levels shall be verified to be less than 5,000 dpm/100 cm <sup>2</sup> beta/gamma and less than 100 dpm/100 cm <sup>2</sup> alpha. If contamination is present above these levels, the contaminated soil shall be removed and containerized for disposal or covered or fixed to provide containment of the contamination. (WAC 246-247-040(5))	Not Applicable	<b>CDM:</b> Soil excavating activities did not take place during this reporting period, therefore this backfilling requirement was not triggered
All activities involving radioactive materials shall be conducted in accordance with radiation control procedures approved in accord with applicable QA program. (WAC 246-247-040(5))	Continuous	<b>CDM:</b> HNF-5173, Rev. 3, PHMC Radiological Control Manual.
Appropriate excavation controls such as water, fixatives, covers, or windscreens shall be applied, if needed, as determined by the contractor's Health Physics organization. Spoil piles containing contaminated soil shall be segregated from the clean soil. Containerizing soil for disposal may also be performed. (WAC 246-247-040(5))(WAC 246-247-060(5))	Not Applicable	<b>CDM:</b> Soil excavating activities did not take place during this reporting period; therefore these excavation control requirements were not triggered.
If a Portable/Temporary Radioactive Air Emission Unit (PTRAEU) is used, the conditions, controls, monitoring requirements and limitations of the latest approved version of the PTRAEU Notice of Construction shall be required. (WAC 246-247-060(5))(WAC 246-247-080(7))	Not Applicable	<b>CDM:</b> No activities requiring the use of the PTRAEU NOC occurred at the T Plant Complex in 2007, therefore this requirement to follow the PTRAEU NOC was not triggered. <b>Comment:</b> DO-021-030, Operate Portable Exhauster
<p>Periodic confirmatory measurements (PCM) for the diffuse and fugitive emissions shall be performed and shall consist of the radiological surveys from the soil excavation activities. Compliance shall be demonstrated by showing that actual emissions are inherently less than the estimated emissions, which are based and calculated from the same contamination levels.</p> <p>If a PTRAEU of HEPA filtered vacuum radioactive air emission unit is used, PCM for emissions from those units shall be performed as required by the respective NOCs. (WAC 246-247-040(5))(WAC 246-247-080(7))</p>	Not Applicable	<b>CDM:</b> Soil excavating or PTRAEU activities did not take place during this reporting period, therefore these PCM requirements were not triggered
The dose to the maximally exposed member of the public from unabated diffuse and fugitive emissions associated with excavation activities under this NOC	Continuous	<b>CDM:</b> Soil excavating activities did not take place during this reporting period, therefore this dose limit was not

Requirement	Compliance Status	Compliance Determination Method
shall not exceed 3.05E-03 mrem/year. For the purposes of dose estimation, gross beta air concentrations shall be conservatively assumed to consist entirely of Sr-90. Also for the purposes of dose estimation, gross alpha air concentrations associated with excavation under this NOC shall be conservatively assumed to consist entirely of Am-241. (WAC 246-247-040(5))		exceeded.
Total volume of contaminated soil disturbed in excavation for installation of containment tents shall not exceed two cubic meters. (WAC 246-247-040(5))	Continuous	CDM: Soil excavating activities did not take place during this reporting period, therefore the total volume limit was not exceeded

**200 Area Diffuse/Fugitive - TRU Retrieval**

WDOH Emission Unit ID : 486  
Page in AOP : EU0486-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
No active Abatement Controls in the AOP for this certification period.		
<p><b>Required Sampling:</b> Per the sitewide ambient monitoring program samples will be collected from the existing near-facility monitoring stations.</p> <p><b>Sampling Frequency:</b> Per the sitewide ambient monitoring program</p> <p><b>Radionuclide Requiring Measurement:</b> Each radionuclide that could contribute greater than 10 percent of the potential-to-emit TEDE</p>	Continuous	CDM: Review of information in ABCASH database.
<p><b>Federal and State Regulatory Requirement:</b> WAC 246-247-075[2]</p> <p><b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114</p>	Continuous	CDM: NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528) specifies the hardware and methods used to sample the analytical methods used in the laboratory.

Requirement	Compliance Status	Compliance Determination Method
<p align="center">Permit: AIR 06-1054 - B <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>Obsolete Date:</b> 03-15-07  <b>NOC:</b> Operation of the Transuranic Waste Retrieval Project  <b>WDOH NOC ID:</b> 700 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0486-068</p>		
<p>The total abated emission limit for this Notice of Construction is limited to 4.30E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).</p>	<p>Continuous</p>	<p><b>CDM:</b> Annual evaluation of retrieval rates, containers/curies handled.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>Approved is the retrieval (unearth) and inspection of containers of suspect-transuranic (TRU) and TRU waste from trenches in the Low Level Burial Grounds (LLBG) and install NucFil filters or equivalent (as approved by the department) in the unvented (or inadequately vented) TRU containers. Venting and headspace gas sampling (HSGS) may be performed at the LLBG (in place with engineering controls or within venting enclosure) or at the following facilities licensed for such work (CWC, WRAP, or T Plant Complex). In addition, LLW containers posing a safety hazard (e.g., potential for pressurization, bulging, or similar abnormal condition) may also be vented.</p> <p>The venting of fiberglass reinforced polyester plywood (FRP) boxes is also approved. Two FRP venting systems will be used. Both systems will be capable of mating to various size FRP boxes.</p> <p>The first vent system uses a steel plate held against the side of an FRP box by a forklift as a blast shield for personnel protection in the event the container is pressurized. A gasket will provide a seal between the steel plate and the FRP box. A glove bag will be attached to the steel plate and the FRP box to provide for contamination control during the drilling of the FRP box. The glove bag contains a HEPA-type filter for passive control of contaminated particulates that may escape from the FRP box during the drilling operation.</p> <p>After the steel plate and glove bag are in place personnel will drill a pilot hole in the FRP box, monitor for the presence of contamination and hazardous gases, and install a Nucfil ® filter. A time weighted release of 30 minutes per box is allowed for drilling and filter installation. These activities will be conducted through glove ports that are an integral part of the glove bag. The drilling will be done with non-sparking and cold drilling techniques. A static dissipating cleaner manufactured by Statico ® or equivalent will be used to decay electrostatic build up in the fiberglass during drilling.</p> <p>A second vent system may be used that is similar to the portable Drum Venting System operating at T-Plant. A glove bag with HEPA-type filter is used without the steel plate and drilling will be done remotely. The drill assembly and motor and bit type will remain the same as the T-Plant system. The system uses a pneumatic cold drilling technique that utilizes remote activation. The venting system is placed on the top or side of the FRP box and held in place with a strap or clamps throughout the drilling and filter installation operation. A static dissipating cleaner manufactured by Statico ® or equivalent will be used to decay electrostatic build up in the fiberglass during drilling. A time weighted release of 30 minutes per box is allowed for drilling and filter installation. After holes are drilled, Nucfil ® filters will be hand installed in the FRP box using glove ports in the glove bag.</p> <p>Additional approval of the process for this activity is contained in the following Conditions/Limitations.</p>	<p>Continuous</p>	<p><b>CDM:</b> Facility operating procedures.</p>

Requirement	Compliance Status	Compliance Determination Method																				
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 5.40E-02 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Alpha-0   1.40E-04   Liquid/Particulate Solid   WAC 246-247-030(21)(e) Alpha release rate based on Am-241. Release rate for installation of Nucfil filters using the Dart System. See Condition 4.</p> <p>Alpha-0   3.30E-05   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Alpha release rate based on Am-241. Release rate for excavation of soil (contamination detected). See condition 18.</p> <p>Alpha-0   6.70E-05   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Alpha release rate based on Am-241. Release rate for excavation of soil (Higher contamination level, controls required). See condition 18.</p> <p>Alpha-0   9.40E-05   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Alpha release rate based on Am-241. Release rate for excavation of soil (notification level). See condition 18.</p> <p>Alpha-0   2.80E-05   Solid   WAC 246-247-030(21)(e) Release rate based on Am-241. Release rate for staging/handling vented containers. See Condition 5.</p> <p>B/G-0   2.20E-04   Liquid/Particulate Solid   WAC 246-247-030(21)(e) Beta/Gamma release rate based on Cs-137. Release rate for excavation of soil (contamination detected). See condition 18.</p> <p>B/G-0   4.40E-04   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Beta/Gamma release rate based on Cs-137. Release rate for excavation of soil ( Higher contamination level, controls required). See condition 18.</p> <p>B/G-0   6.20E-04   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Beta/Gamma release rate based on Cs-137. Release rate for excavation of soil (notification level). See condition 18.</p> <p>B/G-0   2.10E-03   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Beta/Gamma release rate based on Cs-137. Release rate for installation of Nucfil filters using the Dart System. See condition 4.</p> <p>Beta-0   4.10E-04   Solid   WAC 246-247-030(21)(e) Release rate based on Cs-137. Release rate for staging/handling vented containers. See Condition 5.</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <table border="0"> <tr> <td>Am-241</td> <td>Am-243</td> <td>Cf-252</td> <td>Cm-244</td> <td>Cs-134</td> </tr> <tr> <td>Cs-137</td> <td>Eu-152</td> <td>Eu-154</td> <td>Pu-238</td> <td>Pu-239/240</td> </tr> <tr> <td>Pu-241</td> <td>Sr-90</td> <td>U-234</td> <td>U-235</td> <td>U-236</td> </tr> <tr> <td>U-238</td> <td></td> <td></td> <td></td> <td></td> </tr> </table> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. WAC 246-247-110(9). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under</p>	Am-241	Am-243	Cf-252	Cm-244	Cs-134	Cs-137	Eu-152	Eu-154	Pu-238	Pu-239/240	Pu-241	Sr-90	U-234	U-235	U-236	U-238					<p>Continuous</p>	<p>CDM: Annual evaluation of retrieval rates, containers/curies handled.</p>
Am-241	Am-243	Cf-252	Cm-244	Cs-134																		
Cs-137	Eu-152	Eu-154	Pu-238	Pu-239/240																		
Pu-241	Sr-90	U-234	U-235	U-236																		
U-238																						

Requirement	Compliance Status	Compliance Determination Method
<p>WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification. DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>		
<p>A maximum of 1,000 containers/yr are approved to have installation of NucFil filters using the Dart System. The potential unabated release rate from using the Dart System for installation of NucFil filters is 1.4 E-4 Ci/yr americium-241 and 2.1 E-3 Ci/yr cesium-137 and is based on a release fraction of 1.0E-3 and a pressure release time of 1 hour. All of the emissions from a pressurized container are routed through the HEPA-type NucFil filter (certified 99.97% removal efficiency); therefore, the abated release rate is 4.8 E-8 Ci/yr americium-241 and 7.1 E-7 Ci/yr cesium-137. This alternative release fraction is approved for this emission unit.</p>	Continuous	<p><b>CDM:</b> Annual evaluation of retrieval rates, containers/curies handled.</p>
<p>A maximum of 11,000 vented containers of waste (including 1,000 containers that are not designated s TRU waste, which could be retrieved with vents in place) are approved to be retrieved per year. Once vented, the containers are allowed to be staged with the other retrieved containers for further handling, resulting in the staging/storage of a maximum of 11,000 vented containers per year at the LLBG. Using an average release fraction of 2.00 E-09 for fugitive emissions from vented containers (as used in the WRAP NOC, DOE/RL-2000-34), the potential unabated release rate from the staging of vented containers is 2.8 E-05 Ci/yr americium-241 and 4.1 E-04 Ci/yr cesium-137. This alternative release fraction is approved for this emission unit.</p>	Continuous	<p><b>CDM:</b> Annual evaluation of retrieval rates, containers/curies handled.</p>
<p>Additional monitoring for the diffuse and fugitive emissions will consist of radiological surveys from the soil excavation activities.</p>	Continuous	<p><b>CDM:</b> Facility operations and radiological control procedures.</p>
<p>Both alpha and beta/gamma surveys shall be performed for all removable contamination surveys and for soil surveys (direct reading). Alpha surveys alone shall be performed for direct readings of container surfaces. Beta/gamma direct readings are influenced by container contents, so are not as useful and are not required.</p>	Continuous	<p><b>CDM:</b> Facility operations and radiological control procedures.</p>
<p>Dust controls such as water, fixatives, covers, or windscreens will be applied, as determined by the Radiological Control organization.</p>	Continuous	<p><b>CDM:</b> Facility operation and radiological control procedures.</p>
<p>Excavation activities will be stopped if contamination (other than spot contamination) with detection readings</p>	Continuous	<p><b>CDM:</b> Facility operation procedures, Fluor Hanford notification procedure</p>

Requirement	Compliance Status	Compliance Determination Method
<p>greater than 500,000 dpm/100 cm<sup>2</sup> beta/gamma or greater than 28,000 dpm/100 cm<sup>2</sup> alpha is encountered.</p> <p>Excavation will not continue at that site (but may proceed at other sites) until an internal review of the work and encountered conditions has been performed and an internal determination has been made that no threat to personnel safety or the environment exists, or until proper controls (i.e., removal and disposal, water, fixatives, or covers) have been put in place to mitigate any further potential for emissions; and the WDOH has been contacted and briefed of the situation.</p>		and notification logbook.
<p>For bulk transfer of contaminated soils, a backhoe or front-end loader may only be used when the material is wetted during the transfer process.</p>	Continuous	CDM: Facility operations and radiological control procedures.
<p>Health physics technician (HPT) coverage will be provided during the excavation activities, continuously when in close proximity to containers.</p>	Continuous	CDM: Facility operations and radiological control procedures.
<p>It is recognized that other radionuclides may be present in very limited quantities.</p>	Not Applicable	CDM: This is a statement of fact. There is no action to be taken by the Permittee.
<p>Manual methods will be used to excavate soil in close proximity to containers (after overburden is removed).</p>	Continuous	CDM: Facility operations procedures.
<p>Operational limits for TRU retrieval (contamination levels) will be established in the activity work packages and associated RWPs. Fixatives or other controls will be employed if contamination levels (other than spot contamination) exceed 100,000 disintegrations per minute per 100 square centimeters (dpm/100 cm<sup>2</sup>) beta/gamma or exceed 2,000 dpm/100 cm<sup>2</sup> alpha.</p>	Continuous	CDM: Facility operations and radiological control procedures and radiological work permits.
<p>Spoil piles containing contaminated soil will be segregated from the clean soil and dust controls such as water, fixatives, or covers will be applied at the end of each shift or when sustained or predicted wind speeds are &gt;20 mph. Containerizing spoils for disposal may be performed.</p>	Continuous	CDM: Facility operations and radiological control procedures.
<p>The department shall be notified within 24 hours of all drum vents that fail to be installed properly when using the dart system (an example of a "failure" would be where the Dart is used in a thin or corroded spot where the dart punches a hole through the lid).</p>	Continuous	CDM: Facility operations and radiological control procedures.
<p>The potential unabated release rate from manual excavation is based on a release fraction of 1.0E-3.</p>	Not Applicable	CDM: There is no action to be taken by the Permittee. This conveys a statement from the basis for the PTE calculations in the NOC application.

Requirement	Compliance Status	Compliance Determination Method
<p>The process for handling of abnormal containers is approved as meeting ALARACT, and this process and associated records and procedures will be subject to inspection upon request by the department.</p>	<p>Not Applicable</p>	<p><b>CDM:</b> There is no action to be takne by the Permittee. This conveys an action to be takne by the Agency.</p>
<p>This approval applies to these additional activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p><b>TRU Waste Retrieval</b> The area to be excavated is managed as a 'clean' area, free of surface contamination measurable with field survey instruments. Because of the possibility of encountering previously undetected subsurface contamination, or future contamination from windblown sources, all work will be performed in accordance with as low as reasonably achievable (ALARA) requirements as determined by the Radiological Control organization. These requirements shall be carried out through the activity work packages and associated radiological work permits (RWP) which will be managed as required retrievable records for this activity.</p> <p>The overburden soil will be removed to expose the waste containers. Excavation equipment will be chosen to effectively remove soil and retrieve the waste containers while minimizing damage to the containers. Excavation activities will be monitored to identify contamination that might be present and to minimize emissions. Any contaminated soils will be managed in accordance with applicable requirements and regulations.</p> <p>The most efficient methodology for removing the uncontaminated overburden from the containers will include the maximum use of conventional methods such as backhoes, front-end loaders, mechanical brooms (boom mounted), or manual digging with shovels and similar hand tools. Only manual methods (hand tools) shall be used to excavate contaminated soil. All facilities must be able to demonstrate the reliability and accuracy of emissions monitoring data (WAC 246-247-075(13)).</p> <p>The specific steps or approach to uncovering the containers will vary according to the configuration of the trench to be uncovered, the nearby trenches or fences, the designated location of the spoils pile, the planned extent of the soil removal, etc. Therefore, excavation activities will be planned before arriving at the job site. Excavation activities will be controlled closely. When the quantity of soil removed with heavy equipment has reached the logical end, hand tools or HVUs could be used to complete the uncontaminated soil removal operations to access and remove the plastic and plywood materials (to be set aside for reuse or disposal) covering the containers.</p> <p>The exposed containers will be visually inspected and surveyed for contamination. Abnormal drum conditions will be managed as follow: Contaminated containers will be decontaminated or over packed. Bulging or potentially pressurized containers will be vented as described in the Venting Containers Section. Retrieval activities will include appropriate disposition of small amounts of incidental contaminated soil (e.g., containerized or fixed in place). Larger areas of contamination shall be fixed and the area posted as required by the Radiological Control organization for later disposition. Bulk transfer of contaminated soils for disposal in another trench also could occur.</p> <p>&lt;&gt; All containers will be inspected to verify integrity. The container inspection will consist of a visual examination to determine if there are significant corrosion, holes, dents or other visual deformities. All containers may be moved, turned, or otherwise relocated (manually or with powered equipment, slings, clamps, or appropriate rigging) to</p>	<p>Continuous</p>	<p><b>CDM:</b> Facility operations and radiological control procedures.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>facilitate an adequate visual inspection.</p> <p>Over packing containers with minor defects (pinholes, corrosion) is routinely performed at the LLBG and CWC and is expected for up to 10 to 50 percent of the retrieved containers. Precautions will be provided to safely retrieve containers of questionable integrity. The process description for management of abnormal containers will be maintained in written procedures. Operating procedures will be established to safely deal with these containers. Containers that obviously are reached or deformed also will be safely removed. Removal methods will be determined on a case-by-case basis. A breached container that can provide secure confinement will be relocated to an area for repackaging or over packing. If the container cannot provide adequate confinement for the contents, the container and contents will be over packed before being relocated. The over packed containers will be managed according to the LLW (including mixed waste) or TRU waste designation (TRU containers are those with TRU content greater than 100 nCi/g), established by records or assay.</p> <p>After a container is inspected visually and the structural integrity established, the container (if shown by assay or records to be designated as TRU) will be staged for venting, if necessary, or moved to another TSD unit for venting. Retrieved TRU waste containers in their staged configuration at the LLBG will be inspected for outwardly visible signs of corrosion or degradation (over packing as needed).</p>		
<p>This approval applies to these additional activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p><b>Venting of Containers</b> All work shall be performed in accordance with the LLBG radiological control procedures and ALARA requirements. These requirements are carried out through the procedures, activity work packages, and associated RWPs.</p> <p>The vent filters will be installed in designated containers by using the Drum Venting System (DVS) and/or Dart System. The methodology will require penetrating the container and inserting a vent. Penetration of the lid will be accomplished by either drilling through the lid with a filter assembly fitted with a short hollow drill bit (using DVS) or puncturing the lid with a filter dart (using Dart system). Either method will result in emissions being routed through a filter during the venting process.</p> <p>Most drums slated for venting will be vented with the DVS, consisting of a trailer with a chamber allowing an operator to sample the drum (screening HSGS for hydrogen content) and install a NucFil filter. Potential emissions from these operations are point source emissions.</p> <p>Bulging or potentially pressurized drums will be evaluated to determine best method and location to vent (Dart-in place, Dart-relocate, or move to the DVS). The Dart System is a portable unit that straps directly onto a drum, using a pneumatic driver remotely activated by wire or radio transmitter. This system penetrates the drum lid without risk of contamination release to install a NucFil filter with an aluminum bronze housing to prevent the possibility of sparking. Potential emissions from these operations will be considered diffuse and fugitive. The same Dart System will be used to install sample ports, consisting of a closure set screw covering a septum for withdrawing a sample for HSGS, in containers with existing vents at the LLBG, CWC, WRAP, or T Plant Complex, without creating a new pathway for potential emissions.</p>	<p>Continuous</p>	<p><b>CDM:</b> Facility operations and radiological control procedures. <b>Comment:</b></p>

Requirement	Compliance Status	Compliance Determination Method
WDOH will be notified per WAC 246-247-080(5) if a loss of containment occurs (dropping, spilling, puncturing a container, or otherwise encountering loss of integrity where contamination escapes containment), which exceeds 100,000 dpm/100 cm <sup>2</sup> beta/gamma or 2,000 dpm/100 cm <sup>2</sup> alpha removable contamination.	Intermittent	<b>CDM:</b> Facility operations and radiological control procedures. Fluor Hanford notification procedure and notification logbook.  <b>Comment:</b> Notification for an event on 7/25/07 was not provided until 7/30/07.
Deteriorated containers involving a loss of containment from handling/retrieval of 22) such containers (dropping, spilling, puncturing or crushing a container, where containment is lost, or otherwise encountering loss of containment) have a probability of greater than 1% while excavating the V-Notch Trench. Planning for such incidents shall be addressed prior to performing retrieval work in the horizontal V-notched trench configuration. A new application shall be submitted to the department for approval prior doing any work on the horizontal V-notched trench configuration.	Continuous	<b>CDM:</b> NOC was revised to account for V-Notch Trench retrieval activities.

Permit: AIR 07-307 - B **Issue Date:**03-23-07 **Effective Date:**03-15-07 **Obsolete Date:** 10-19-07  
**NOC:** Operation of the Transuranic Waste Retrieval Project  
**WDOH NOC ID:** 719 **Date In AOP:** 07-26-07 **Page in AOP:** EU0486-094

Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 3.44E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).	Continuous	<b>CDM:</b> Annual evaluation of retrieval rates, containers/curies handled.
Excavation and Retrieval of Containers (drums or boxes) Work will be performed in accordance with as low as reasonably achievable (ALARA).  The specific steps or approach to uncovering the containers will vary according to the configuration of the trench to be uncovered, the proximity of nearby trenches or fences, the designated location of the spoils pile, the planned extent of the soil removal, and other similar considerations.  Work to be performed within the V notched trenches is similar to the ongoing TRU retrieval project, but much of it may be performed within a weather resistant structure(s) that will be relocatable along the trench. Weather enclosures are effectively used for similar remediation activities at other U.S. Department of Energy (DOE) sites and in general industrial use. The use of a weather resistant enclosure could allow a more effective recovery from events involving degraded containers and potential contamination spreads.  The overburden soil will be removed to expose the waste containers. Excavation equipment will be chosen to effectively remove soil and retrieve the waste containers while minimizing damage to the containers. Excavation activities will be monitored to identify contamination that might be present and to minimize emissions.	Continuous	<b>CDM:</b> Facility operations and radiological control procedures.

Requirement	Compliance Status	Compliance Determination Method
<p>The most efficient methodology for removing the uncontaminated overburden from the containers will include the maximum use of conventional methods such as backhoes, front end loaders, mechanical brooms (boom mounted), or manual digging with shovels and similar hand tools. Hand tools predominantly may be used to excavate contaminated soil. High efficiency particulate air (HEPA) filtered vacuums may be used for soil excavation, and spot contamination in accordance with the HEPA filtered vacuum unit (HVU) NOC (DOE/RL 97 50, as amended). Within the V Notched trenches, it is more likely that the use of a vacuum to remove larger quantities of soil from the top surface of buried containers and soil materials in the interstices surrounding containers will be employed. Any use of the sitewide Guzzler® will be performed under the NOC applicable to the unit.</p> <p>Excavation activities will be controlled closely. When the quantity of soil removed with heavy equipment has reached the logical end, hand tools, light equipment, or HVUs may be used to complete the soil removal operations and to access and remove the plastic and plywood materials (to be set aside for reuse or disposal) covering the containers.</p> <p>The exposed containers will be visually inspected and surveyed for contamination. Abnormal drum conditions will be managed as follows: Contaminated containers will be decontaminated or overpacked as needed. Bulging or potentially pressurized containers will be vented. Retrieval activities will include appropriate disposition of small amounts of incidental contaminated soil (e.g., containerized or fixed in place). Larger areas of contamination could be fixed and the area posted as required by the Radiological Control organization for later disposition. Bulk transfer of contaminated soils for disposal in another trench also could occur. All containers will be inspected to verify integrity. The container inspection will consist of a visual examination to determine if there are significant corrosion, holes, dents or other visual deformities. All containers could be moved, turned, or otherwise relocated (manually or with powered equipment, slings, clamps, or appropriate rigging) to facilitate an adequate visual inspection.</p> <p>Overpacking containers with minor defects (pinholes, corrosion) is routinely performed at the LLBG and CWC. Precautions will be provided to safely retrieve containers of questionable integrity. It is expected that 10 to 100 percent of the newly retrieved containers will require overpacking or some other form of confinement. Breached and heavily corroded containers will usually be overpacked before being relocated. However, if a breached or heavily corroded container can provide adequate confinement, it may be relocated to an area for overpacking. The overpacked containers will be managed according to the LLW (including mixed waste) or TRU waste designation (TRU containers are those with TRU content greater than 100 nCi/g), established by records or assay.</p> <p>After a container is inspected visually and the structural integrity established, the container, if unvented, will be staged for venting, or moved to another TSD unit for venting. Retrieved TRU waste containers in their staged configuration at the LLBG will be inspected for outwardly visible signs of corrosion or degradation (overpacking as needed).</p> <p><b>Venting of Containers</b> All work will be performed in accordance with the applicable operating procedures, radiological control procedures, radiological work permit (RWPs) and ALARA requirements.</p> <p>Experience at other DOE sites has shown a potential for flammable gases to be present in some containers. Therefore all containers will be evaluated and vented if needed even if not specifically designated as</p>		

Requirement	Compliance Status	Compliance Determination Method
<p>TRU containers.</p> <p>The vent filters will continue to be installed in designated containers via one of the drum venting systems that ensures personnel and environmental protection. The methodology will require penetrating the container and inserting a vent. Penetration of the lid will be accomplished by either drilling through the lid or puncturing the lid with a filter dart (using Dart System). Container venting systems are described in the following text. Designated drums slated for venting will be vented with the MDVS, Catagorical DVS, or other venting methods (with prior approval of WDOH).</p> <p><b>MDVS (Mobile Drum Venting System)</b> The MDVS is enclosed in a trailer containing system equipment allowing an operator to sample and/or vent the drum and install a NucFil® filter or equivalent. Potential emissions from MDVS operations are point source emissions. Bulging or potentially pressurized drums may be overpacked, placed in restraints and then vented.</p> <p>The MDVS trailer may be equipped with a HEPA vacuum system to prevent contamination from exiting through any incidental gaps and to clean room air in the event of airborne contamination. These emissions will be accounted for with the sitewide HEPA Vacuum NOC. The system could be automatically activated when the continuous air monitor (CAM) alarms or it could be manually activated. The CAM and/or air sample results will be used to verify the PTE is within the limits of the sitewide HEPA vacuum NOC.</p> <p><b>Dart System</b> The Dart System is a portable unit that clamps directly onto a drum, using a pneumatic driver remotely activated by wire or radio transmitter. This system penetrates the drum lid with minimal risk of contamination release to install a NucFil® filter with an aluminum bronze housing to prevent the possibility of sparking. Potential emissions from these operations will be considered diffuse and fugitive.</p> <p><b>Catagorical DVS2 (Drum Venting System 2)</b> A vent system utilizing a pneumatic drill DVS2 is remotely actuated to vent the drum. After the drum is vented, a filter is hand-installed, the head-space of the drum is sampled and the drum is staged in a designated area for diffusion.</p> <p>Glove bags may be used to contain potential contamination. A portable HEPA vacuum with variable speed is connected to the HEPA filter on the glovebag and will be used for exhausting the glovebag. The vacuum will be operated during venting and for a short time following venting at a low flow. Glovebags will also have ports to check for contamination or hazardous gases.</p> <p>As many as three venting assemblies will be installed in a weather enclosure such as a Conex box. Connections for the third assembly may be used with the TRU Retrieval Drum Restraint in the event of a bulged or high DE-Ci drum.</p> <p><b>Other Venting Methods</b> The venting of other containers, the majority being fiberglass reinforced plywood (FRP) boxes but could also be metal containers - hereafter referred to collectively as boxes, located in CWC and the LLBG may be done. Two venting systems for the boxes will be used. Both systems will be capable of mating to various sized boxes and will be capable of installing a Nucfil® filter or equivalent into the box headspace.</p>		

Requirement	Compliance Status	Compliance Determination Method
<p>One type of vent system uses a steel plate held in place against the side of a box by a forklift as a blast shield for personnel protection in the event the container is pressurized. A rubber gasket will provide a seal between the steel plate and the box. A glove bag will then be attached to the steel plate and the box to provide for contamination control during the drilling of the box. The glove bag contains a HEPA-type filter for passive control of contaminated particulates that may escape from the box during the drilling operation. In the event contamination is encountered during filter installation, a HEPA vacuum would be connected for use only after the filter is installed. The HEPA vacuum would be subject to the sitewide HEPA vacuum NOC.</p> <p>After the steel plate and glove bag are in place personnel will drill a pilot hole in the box, monitor for the presence of contamination and hazardous gases, and install a Nucfil® filter or equivalent. A time weighted release of 60 minutes per box is allowed for drilling and filter installation. These activities will be conducted through glove ports that are an integral part of the glove bag. The drilling will be done with non-sparking and cold drilling techniques. A static dissipating cleaner manufactured by STATICO™ or equivalent will be used to decay electrostatic build up in the fiberglass during drilling.</p> <p>A second type of vent system for FRP boxes may be used that is similar to the portable DVS operating at T Plant. There could be several of these units in use within the LLBG. A glove bag with HEPA-type filter is used but without the steel plate and the drilling will be done remotely. The drill assembly and motor and bit type will remain the same. The system uses a pneumatic cold drilling technique that utilizes remote activation. The FRP venting system is placed on the top or side of the box and held in place with straps or clamps throughout the drilling and filter installation operation. A static dissipating cleaner manufactured by STATICO™ or an equivalent will be used to decay electrostatic build up in the fiberglass during drilling. A time weighted release of 60 minutes per box is allowed for drilling and filter installation. After holes are drilled, Nucfil® filters or equivalent will be hand installed in the box using glove ports in the glovebag.</p> <p>In the event contamination is encountered during the installation of a Nucfil® a HEPA vacuum would be connected for use only after the Nucfil® is installed. The HEPA vacuum would be subject to the sitewide HEPA vacuum NOC.</p>		
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 9.01E-02 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Alpha-0   2.81E-05   Liquid/Particulate Solid   WAC 246-246-030(21)(a) Alpha release rate based on Am-241. Release rate for excavation of soil (notification level). See condition 19.</p> <p>Alpha-0   3.00E-05   Solid   WAC 246-246-030(21)(e) Release rate based on Am-241. Release rate for staging/handling vented containers. See Condition 5.</p> <p>Alpha-0   1.43E-04   Liquid/Particulate Solid   WAC 246-246-030(21)(e) Alpha release rate based on Am-241. Release rate for installation of Nucfil filters using the Dart System. See condition 4.</p> <p>Alpha-0   1.00E-04   Liquid/Particulate Solid   WAC 246-246-030(21)(a) Alpha release rate based on Am-241. Release rate for excavation of soil (contamination detected). See Condition 19.</p>	<p>Continuous</p>	<p>CDM: Annual evaluation of retrieval rates, containers/curies handled.</p>

Requirement	Compliance Status	Compliance Determination Method																				
<p>Alpha-0   2.01E-05   Liquid/Particulate Solid   WAC 246-246-030(21)(a) Alpha release rate based on Am-241. Release rate for excavation of soil (Higher contamination level, controls required). See condition 19.</p> <p>B/G-0   2.14E-03   Liquid/Particulate Solid   WAC 246-246-030(21)(e) Beta/Gamma release rate based on Cs-137. Release rate for installation of Nucil filters using the Dart System. See Condition 4.</p> <p>B/G-0   4.50E-04   Liquid/Particulate Solid   WAC 246-246-030(21)(e) Release rate based on Cs-137. Release rate for staging/handling vented containers. See Condition 5.</p> <p>B/G-0   6.64E-04   Liquid/Particulate Solid   WAC 246-246-030(21)(a) Beta/Gamma release rate based on Cs-137. Release rate for excavation of soil (contamination detected). See Condition 19.</p> <p>B/G-0   1.33E-04   Liquid/Particulate Solid   WAC 246-246-030(21)(a) Beta/Gamma release rate based on Cs-137. Release rate for excavation of soil (Higher contamination level, controls required). See Condition 19.</p> <p>B/G-0   6.64E-05   Liquid/Particulate Solid   WAC 246-246-030(21)(a) Beta/Gamma release rate based on Cs-137. Release rate for excavation of soil (notification level). See condition 19.</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <table border="0"> <tr> <td>Am-241</td> <td>Am-243</td> <td>Cf-252</td> <td>Cm-244</td> <td>Cs-134</td> </tr> <tr> <td>Cs-137</td> <td>Eu-152</td> <td>Eu-154</td> <td>Pu-238</td> <td>Pu-239/240</td> </tr> <tr> <td>Pu-241</td> <td>Sr-90</td> <td>U-234</td> <td>U-235</td> <td>U-236</td> </tr> <tr> <td>U-238</td> <td></td> <td></td> <td></td> <td></td> </tr> </table> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. WAC 246-247-110(9). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>	Am-241	Am-243	Cf-252	Cm-244	Cs-134	Cs-137	Eu-152	Eu-154	Pu-238	Pu-239/240	Pu-241	Sr-90	U-234	U-235	U-236	U-238						
Am-241	Am-243	Cf-252	Cm-244	Cs-134																		
Cs-137	Eu-152	Eu-154	Pu-238	Pu-239/240																		
Pu-241	Sr-90	U-234	U-235	U-236																		
U-238																						
<p>A maximum of 1,000 containers/yr are approved to have installation of NucFil filters using the Dart System. The potential unabated release rate from using the Dart System for installation of NucFil filters is 1.4 E-4 Ci/yr americium-241 and 2.1 E-3 Ci/yr cesium-137 and is based on a release fraction of 1.0E-3 and a pressure release time of 1 hour. All of the emissions from a pressurized container are routed through the HEPA-type NucFil filter (certified 99.97% removal efficiency); therefore, the abated release rate is 4.8 E-8 Ci/yr americium-241 and 7.1 E-7 Ci/yr cesium-137. These alternative release fractions are approved for this</p>	<p>Continuous</p>	<p><b>CDM:</b> Annual evaluation of retrieval rates, containers/curies handled.</p>																				

Requirement	Compliance Status	Compliance Determination Method
<p>emission unit. Emissions will be tracked as DE-Ci. An average of 53 DE-Ci is assumed with a maximum of 1.27E-03 DE-Ci/yr unabated released from the staging and handling of vented containers.</p>		
<p>A maximum of 12,000 vented containers of waste (including containers that are not designated as TRU waste, and those could be retrieved with vents in place) are approved to be retrieved per year. Once vented, the containers are allowed to be staged with the other retrieved containers for further handling, resulting in the staging/storage of a maximum of 12,000 vented containers per year at the LLBG. Using an release fraction of 2.00 E-09 for fugitive emissions from vented containers (as used in the WRAP NOC, DOE/RL-2000-34), the potential unabated release rate from the staging of vented containers is 3.0 E-05 Ci/yr alpha (americium-241) and 4.5 E-04 Ci/yr beta (cesium-137). These alternative release fractions are approved for this emission unit. Emissions will be tracked as DE-Ci. An average of 53 DE-Ci is assumed with a maximum of 1.27 E-03 DE-Ci/yr unabated released from the staging and handling of vented containers.</p>	Continuous	CDM: Annual evaluation of retrieval rates, containers/curies handled.
<p>Additional monitoring for the diffuse and fugitive emissions will consist of radiological surveys from the soil excavation activities.</p>	Continuous	CDM: Facility operations and radiological control procedures.
<p>Both alpha and beta/gamma surveys shall be performed for all removable contamination surveys and for soil surveys (direct reading). Alpha surveys alone shall be performed for direct readings of container surfaces. Beta/gamma direct readings are influenced by container contents, so are not as useful and are not required.</p>	Continuous	CDM: Facility operations and radiological control procedures.
<p>Dust controls such as water, fixatives, covers, or windscreens will be applied, as determined by the Radiological Control organization.</p>	Continuous	CDM: Facility operations and radiological control procedures.
<p>Excavation activities will be stopped if contamination (other than spot contamination) with detection readings greater than 500,000 dpm/100 cm<sup>2</sup> beta/gamma or greater than 28,000 dpm/100 cm<sup>2</sup> alpha is encountered.</p> <p>Excavation will not continue at that site (but may proceed at other sites) until an internal review of the work and encountered conditions has been performed and an internal determination has been made that no threat to personnel safety or the environment exists, or until proper controls (i.e., removal and disposal, water, fixatives, or covers) have been put in place to mitigate any further potential for emissions; and the WDOH has been contacted and briefed of the situation.</p>	Continuous	CDM: Facility operations and radiological control procedures.

Requirement	Compliance Status	Compliance Determination Method
For bulk transfer of contaminated soils, a backhoe or front-end loader may only be used when the material is wetted during the transfer process.	Continuous	<b>CDM:</b> Facility operations procedures.
Health physics technician (HPT) coverage will be provided during the excavation activities, continuously when in close proximity to containers.	Continuous	<b>CDM:</b> Facility operations and radiological control procedures.
It is recognized that other radionuclides may be present in very limited quantities.	Not Applicable	<b>CDM:</b> This is a statement of fact. There is no action to be taken by the Permittee.
Manual methods will be used to excavate soil in close proximity to containers (after overburden is removed).	Continuous	<b>CDM:</b> Facility operations procedures.
Operational limits for TRU retrieval (contamination levels) will be established in the activity work packages and associated RWPs. Fixatives or other controls will be employed if contamination levels (other than spot contamination) exceed 100,000 disintegrations per minute per 100 square centimeters (dpm/100 cm <sup>2</sup> ) beta/gamma or exceed 2,000 dpm/100 cm <sup>2</sup> alpha.	Continuous	<b>CDM:</b> Facility operations and radiological control procedures and radiological work permits.
Spoil piles containing contaminated soil will be segregated from the clean soil and dust controls such as water, fixatives, or covers will be applied at the end of each shift or when sustained or predicted wind speeds are >20 mph. Containerizing spoils for disposal may be performed.	Continuous	<b>CDM:</b> Facility operations and radiological control procedures.
The department shall be notified within 24 hours of all drum vents that fail to be installed properly and smears show >2,000 dpm/100 cm <sup>2</sup> alpha or >100,000 dpm/100 cm <sup>2</sup> beta/gamma removable contamination when using the dart system (an example of a "failure" would be where the Dart is used in a thin or corroded spot where the dart punches a hole through the lid).	Continuous	<b>CDM:</b> Facility operations and radiological control procedures.
The potential unabated release rate from manual excavation is based on a release fraction of 1.0E-3.	Continuous	<b>CDM:</b> There is no action to be taken by the Permittee. This conveys a statement of fact from the basis for the PTE calculations in the NOC application.
The process for handling of abnormal containers is approved as meeting ALARACT, and this process and associated records and procedures will be subject to inspection upon request by the department.	Not Applicable	<b>CDM:</b> There is no action to be taken by the Permittee. This conveys an action to be taken by the Agency.
This approval applies to these additional activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.  TRU Waste Retrieval	Continuous	<b>CDM:</b> Facility operations and radiological control procedures.

Requirement	Compliance Status	Compliance Determination Method
<p>Encountering contamination is expected during excavation; therefore, to determine a potential to emit if contamination is encountered, the administrative control points for contamination, as monitored by standard radiological field instrumentation, will be used to bound emissions based on current efficiencies of typical SWSD field contamination instruments. To determine the corresponding soil concentration in picocuries per grams of individual radionuclides, conversion factors, as developed in Soil Contamination Standards for Protection of Personnel (HNF 2418) were used. The average soil density was assumed to be 98 pounds per cubic foot. The beta gamma contributing radionuclides were assumed to be represented by cesium 137 and the alpha contributing radionuclides were assumed to be represented by americium 241 (predominant alpha contributing radionuclide in the soil is unknown; therefore, assumption of americium 241 will produce the most conservative dose consequence). The respective volumes of contaminated soil (i.e., 300 m<sup>3</sup>, 3 m<sup>3</sup>, and 0.3 m<sup>3</sup>) at the three contamination levels are considered as released from manual excavation, using a release fraction of 1.0 E-3.</p> <p>The potential unabated dose rate from manual excavation is 2.79 E-03 mrem/year. No credit is taken for abatement; therefore, the abated emissions are assumed as the unabated emissions. Although fixatives and similar controls would be employed for the higher contamination level and notification level contamination, no credit is being taken for abatement; therefore, the abated dose rate is the unabated dose rate.</p>		
<p>This approval applies to these additional activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>Venting of Containers</p> <p>All work shall be performed in accordance with the LLBG radiological control procedures and ALARA requirements. These requirements are carried out through the procedures, activity work packages, and associated RWP's.</p> <p>The vent filters will be installed in designated containers by using the Drum Venting System (DVS) and/or Dart System. The methodology will require penetrating the container and inserting a vent. Penetration of the lid will be accomplished by either drilling through the lid with a filter assembly fitted with a short hollow drill bit (using DVS) or puncturing the lid with a filter dart (using Dart system). Either method will result in emissions being routed through a filter during the venting process.</p> <p>Most drums slated for venting will be vented with the DVS, consisting of a trailer with a chamber allowing an operator to sample the drum (screening HSGS for hydrogen content) and install a NucFil® filter. Potential emissions from these operations are point source emissions.</p> <p>Bulging or potentially pressurized drums will be evaluated to determine best method and location to vent (Dart-in place, Dart-relocate, or move to the DVS). The Dart System is a portable unit that straps directly onto a drum, using a pneumatic driver remotely activated by wire or radio transmitter. This system penetrates the drum lid without risk of contamination release to install a NucFil® filter with an aluminum bronze housing to prevent the possibility of sparking. Potential emissions from these operations will be considered diffuse and fugitive. The same Dart System will be used to install sample ports, consisting of a closure set screw covering a septum for withdrawing a sample for HSGS, in containers with existing vents at the LLBG, CWC, WRAP, or T Plant Complex, without creating a new pathway for potential emissions.</p>	<p>Continuous</p>	<p>CDM: Facility operations and radiological control procedures.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>WDOH will be notified per WAC 246-247-080(5) if a loss of containment occurs (dropping, spilling, puncturing a container, or otherwise encountering loss of integrity where contamination escapes containment), which exceeds 100,000 dpm/100 cm<sup>2</sup> beta/gamma or 2,000 dpm/100 cm<sup>2</sup> alpha removable contamination.</p>	<p>Continuous</p>	<p>CDM: Facility operations and radiological control procedures.</p>
<p align="center">Permit: AIR 07-1012 - B Issue Date: 10-22-07 Effective Date: 10-19-07            NOC: Operation of the Transuranic Waste Retrieval Project            WDOH NOC ID: 719 Date In AOP: 12-05-07 Page in AOP: EU0486-095</p>		
Requirement	Compliance Status	Compliance Determination Method
<p>The total abated emission limit for this Notice of Construction is limited to 3.44E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).</p>	<p>Continuous</p>	<p>CDM: Annual evaluation of retrieval rates, containers/curies handled.</p>
<p>Excavation and Retrieval of Containers (drums or boxes)            Work will be performed in accordance with as low as reasonably achievable (ALARA).</p> <p>The specific steps or approach to uncovering the containers will vary according to the configuration of the trench to be uncovered, the proximity of nearby trenches or fences, the designated location of the spoils pile, the planned extent of the soil removal, and other similar considerations.</p> <p>Work to be performed within the V notched trenches is similar to the ongoing TRU retrieval project, but much of it may be performed within a weather resistant structure(s) that will be relocatable along the trench. Weather enclosures are effectively used for similar remediation activities at other U.S. Department of Energy (DOE) sites and in general industrial use. The use of a weather resistant enclosure could allow a more effective recovery from events involving degraded containers and potential contamination spreads.</p> <p>The overburden soil will be removed to expose the waste containers. Excavation equipment will be chosen to effectively remove soil and retrieve the waste containers while minimizing damage to the containers. Excavation activities will be monitored to identify contamination that might be present and to minimize emissions.</p> <p>The most efficient methodology for removing the uncontaminated overburden from the containers will include the maximum use of conventional methods such as backhoes, front end loaders, mechanical brooms (boom mounted), or manual digging with shovels and similar hand tools. Hand tools predominantly may be used to excavate contaminated soil. High efficiency particulate air (HEPA) filtered vacuums may be used for soil excavation, and spot contamination in accordance with the HEPA filtered vacuum unit (HVU) NOC (DOE/RL 97 50, as amended). Within the V Notched trenches, it is more likely that the use of a vacuum to remove larger quantities of soil from the top surface of buried containers and soil materials in the interstices surrounding containers will be employed. Any use of the sitewide Guzzler® will be performed under the NOC applicable to the unit.</p> <p>Excavation activities will be controlled closely. When the quantity of soil removed with heavy equipment has reached the logical end, hand tools, light equipment, or HVUs may be used to complete the soil</p>	<p>Continuous</p>	<p>CDM: Facility operations and radiological control procedures.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>removal operations and to access and remove the plastic and plywood materials (to be set aside for reuse or disposal) covering the containers.</p> <p>The exposed containers will be visually inspected and surveyed for contamination. Abnormal drum conditions will be managed as follows: Contaminated containers will be decontaminated or overpacked as needed. Bulging or potentially pressurized containers will be vented. Retrieval activities will include appropriate disposition of small amounts of incidental contaminated soil (e.g., containerized or fixed in place). Larger areas of contamination could be fixed and the area posted as required by the Radiological Control organization for later disposition. Bulk transfer of contaminated soils for disposal in another trench also could occur. All containers will be inspected to verify integrity. The container inspection will consist of a visual examination to determine if there are significant corrosion, holes, dents or other visual deformities. All containers could be moved, turned, or otherwise relocated (manually or with powered equipment, slings, clamps, or appropriate rigging) to facilitate an adequate visual inspection.</p> <p>Overpacking containers with minor defects (pinholes, corrosion) is routinely performed at the LLBG and CWC. Precautions will be provided to safely retrieve containers of questionable integrity. It is expected that 10 to 100 percent of the newly retrieved containers will require overpacking or some other form of confinement. Breached and heavily corroded containers will usually be overpacked before being relocated. However, if a breached or heavily corroded container can provide adequate confinement, it may be relocated to an area for overpacking. The overpacked containers will be managed according to the LLW (including mixed waste) or TRU waste designation (TRU containers are those with TRU content greater than 100 nCi/g), established by records or assay.</p> <p>After a container is inspected visually and the structural integrity established, the container, if unvented, will be staged for venting, or moved to another TSD unit for venting. Retrieved TRU waste containers in their staged configuration at the LLBG will be inspected for outwardly visible signs of corrosion or degradation (overpacking as needed).</p> <p><b>Venting of Containers</b> All work will be performed in accordance with the applicable operating procedures, radiological control procedures, radiological work permit (RWPs) and ALARA requirements.</p> <p>Experience at other DOE sites has shown a potential for flammable gases to be present in some containers. Therefore all containers will be evaluated and vented if needed even if not specifically designated as TRU containers.</p> <p>The vent filters will continue to be installed in designated containers via one of the drum venting systems that ensures personnel and environmental protection. The methodology will require penetrating the container and inserting a vent. Penetration of the lid will be accomplished by either drilling through the lid or puncturing the lid with a filter dart (using Dart System). Container venting systems are described in the following text. Designated drums slated for venting will be vented with the MDVS, Catagorical DVS, or other venting methods (with prior approval of WDOH).</p> <p><b>MDVS (Mobile Drum Venting System)</b> The MDVS is enclosed in a trailer containing system equipment allowing an operator to sample and/or vent the drum and install a NucFil® filter or equivalent. Potential emissions from MDVS operations are point source emissions. Bulging or potentially pressurized drums may be overpacked, placed in restraints and then</p>		

Requirement	Compliance Status	Compliance Determination Method
<p>vented.</p> <p>The MDVS trailer may be equipped with a HEPA vacuum system to prevent contamination from exiting through any incidental gaps and to clean room air in the event of airborne contamination. These emissions will be accounted for with the sitewide HEPA Vacuum NOC. The system could be automatically activated when the continuous air monitor (CAM) alarms or it could be manually activated. The CAM and/or air sample results will be used to verify the PTE is within the limits of the sitewide HEPA vacuum NOC.</p> <p><b>Dart System</b> The Dart System is a portable unit that clamps directly onto a drum, using a pneumatic driver remotely activated by wire or radio transmitter. This system penetrates the drum lid with minimal risk of contamination release to install a NucFil® filter with an aluminum bronze housing to prevent the possibility of sparking. Potential emissions from these operations will be considered diffuse and fugitive.</p> <p><b>Catagorical DVS2 (Drum Venting System 2)</b> The DVS2 vent system, utilizing a pneumatic drill, is remotely actuated to vent the drum. After the drum is vented, a filter is hand-installed; the headspace of the drum is sampled and analyzed in the DVS2 via a sample port on the filter. The analysis process involves withdrawing a sample directly from the container head space through flexible tubing to a gas chromatograph (GC) for analysis. During analysis, the sample is heated up to 212°F (100°C) within the GC and subsequently allowed to cool to 70°F (21°C) or below before it is emitted to the atmosphere. Up to 150 of these samples are planned to be done per week per GC. No more than 9,000 drums per year will be analyzed by the combined HSGS units. Upon completion of analysis, the drum is staged in a designated area for diffusion. Glove bags may be used to contain potential contamination. A portable HEPA vacuum with a variable speed is connected to the HEPA filter on the glovebag and will be used for exhausting the glovebag. The vacuum will be operated during venting and for a short time following venting at a low flow. The vacuum may or may not be operated during the headspace analyses activities. Glovebags will also have ports to check for contamination or hazardous gases. As many as three venting assemblies will be installed in a weather enclosure such as a Conex box. Connections for the third assembly may be used with the TRU Retrieval Drum Restraint in the event of a bulged or high DE-Ci drum.</p> <p>The DVS2 unit will be installed within an enclosure such as a Conex box or trailer, and within the CWC complex, with side doors that will open to accommodate loading and unloading the drums.</p> <p>The HSGS analysis unit in the DVS2 will exhaust through the HEPA vacuum, although the vacuum may or may not be operating when the analysis is performed. A small percentage (0.5%) of the sample stream will be released as diffuse and fugitive.</p> <p><b>Other Venting Methods</b> The venting of other containers, the majority being fiberglass reinforced plywood (FRP) boxes but could also be metal containers - hereafter referred to collectively as boxes, located in CWC and the LLBG may be done. Two venting systems for the boxes will be used. Both systems will be capable of mating to various sized boxes and will be capable of installing a Nucfil® filter or equivalent into the box headspace.</p> <p>One type of vent system uses a steel plate held in place against the side of a box by a forklift as a blast shield for personnel protection in the event the container is pressurized. A rubber gasket will provide a seal</p>		

Requirement	Compliance Status	Compliance Determination Method
<p>between the steel plate and the box. A glove bag will then be attached to the steel plate and the box to provide for contamination control during the drilling of the box. The glove bag contains a HEPA-type filter for passive control of contaminated particulates that may escape from the box during the drilling operation. In the event contamination is encountered during filter installation, a HEPA vacuum would be connected for use only after the filter is installed. The HEPA vacuum would be subject to the sitewide HEPA vacuum NOC.</p> <p>After the steel plate and glove bag are in place personnel will drill a pilot hole in the box, monitor for the presence of contamination and hazardous gases, and install a Nucfil® filter or equivalent. A time weighted release of 60 minutes per box is allowed for drilling and filter installation. These activities will be conducted through glove ports that are an integral part of the glove bag. The drilling will be done with non-sparking and cold drilling techniques. A static dissipating cleaner manufactured by STATICO™ or equivalent will be used to decay electrostatic build up in the fiberglass during drilling.</p> <p>A second type of vent system for FRP boxes may be used that is similar to the portable DVS operating at T Plant. There could be several of these units in use within the LLBG. A glove bag with HEPA-type filter is used but without the steel plate and the drilling will be done remotely. The drill assembly and motor and bit type will remain the same. The system uses a pneumatic cold drilling technique that utilizes remote activation. The FRP venting system is placed on the top or side of the box and held in place with straps or clamps throughout the drilling and filter installation operation. A static dissipating cleaner manufactured by STATICO™ or an equivalent will be used to decay electrostatic build up in the fiberglass during drilling. A time weighted release of 60 minutes per box is allowed for drilling and filter installation. After holes are drilled, Nucfil® filters or equivalent will be hand installed in the box using glove ports in the glovebag.</p> <p>In the event contamination is encountered during the installation of a Nucfil® a HEPA vacuum would be connected for use only after the Nucfil® is installed. The HEPA vacuum would be subject to the sitewide HEPA vacuum NOC.</p>		
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 9.01E-02 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Alpha-0   2.81E-05   Liquid/Particulate Solid   WAC 246-246-030(21)(a) Alpha release rate based on Am-241. Release rate for excavation of soil (notification level) . See condition 19.</p> <p>Alpha-0   3.00E-05   Solid   WAC 246-246-030(21)(e) Release rate based on Am-241. Release rate for staging/handling vented containers. See Condition 5.</p> <p>Alpha-0   1.43E-04   Liquid/Particulate Solid   WAC 246-246-030(21)(e) Alpha release rate based on Am-241. Release rate for installation of Nucfil filters using the Dart System. See condition 4.</p> <p>Alpha-0   1.00E-04   Liquid/Particulate Solid   WAC 246-246-030(21)(a) Alpha release rate based on Am-241. Release rate for excavation of soil (contamination detected). See Condition 19.</p> <p>Alpha-0   2.01E-05   Liquid/Particulate Solid   WAC 246-246-030(21)(a)</p>	<p>Continuous</p>	<p>CDM: Annual evaluation of retrieval rates, containers/curies handled.</p>

Requirement	Compliance Status	Compliance Determination Method															
<p>Alpha release rate based on Am-241. Release rate for excavation of soil (Higher contamination level, controls required). See condition 19.</p> <p>B/G-0   2.14E-03   Liquid/Particulate Solid   WAC 246-246-030(21)(c) Beta/Gamma release rate based on Cs-137. Release rate for installation of Nucil filters using the Dart System. See Condition 4.</p> <p>B/G-0   4.50E-04   Liquid/Particulate Solid   WAC 246-246-030(21)(e) Release rate based on Cs-137. Release rate for staging/handling vented containers. See Condition 5.</p> <p>B/G-0   6.64E-04   Liquid/Particulate Solid   WAC 246-246-030(21)(a) Beta/Gamma release rate based on Cs-137. Release rate for excavation of soil (contamination detected). See Condition 19.</p> <p>B/G-0   1.33E-04   Liquid/Particulate Solid   WAC 246-246-030(21)(a) Beta/Gamma release rate based on Cs-137. Release rate for excavation of soil (Higher contamination level, controls required). See Condition 19.</p> <p>B/G-0   6.64E-05   Liquid/Particulate Solid   WAC 246-246-030(21)(a) Beta/Gamma release rate based on Cs-137. Release rate for excavation of soil (notification level). See condition 19.</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <table border="0"> <tr> <td>Am-241</td> <td>Am-243</td> <td>Cf-252</td> <td>Cm-244</td> <td>Cs-134</td> </tr> <tr> <td>Cs-137</td> <td>Eu-152</td> <td>Eu-154</td> <td>Pu-238</td> <td>Pu-239/240</td> </tr> <tr> <td>Pu-241</td> <td>Sr-90</td> <td>U-234</td> <td></td> <td></td> </tr> </table> <p>U-235   U-236 U-238  </p> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEL, or greater than 25% of the TEDE to the MEL after controls. WAC 246-247-110(9). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>	Am-241	Am-243	Cf-252	Cm-244	Cs-134	Cs-137	Eu-152	Eu-154	Pu-238	Pu-239/240	Pu-241	Sr-90	U-234				
Am-241	Am-243	Cf-252	Cm-244	Cs-134													
Cs-137	Eu-152	Eu-154	Pu-238	Pu-239/240													
Pu-241	Sr-90	U-234															
<p>A maximum of 1,000 containers/yr are approved to have installation of NucFil filters using the Dart System. The potential unabated release rate from using the Dart System for installation of NucFil filters is 1.4 E-4 Ci/yr americium-241 and 2.1 E-3 Ci/yr cesium-137 and is based on a release fraction of 1.0E-3 and a pressure release time of 1 hour. All of the emissions from a pressurized container are routed through the HEPA-type NucFil filter (certified 99.97% removal efficiency); therefore, the abated release rate is 4.8 E-8 Ci/yr americium-241 and 7.1 E-7 Ci/yr cesium-137. These alternative release fractions are approved for this</p>	<p>Continuous</p>	<p><b>CDM:</b> Annual evaluation of retrieval rates, containers/curies handled.</p>															

Requirement	Compliance Status	Compliance Determination Method
<p>emission unit. Emissions will be tracked as DE-Ci. An average of 53 DE-Ci is assumed with a maximum of 1.27E-03 DE-Ci/yr unabated released from the staging and handling of vented containers.</p>		
<p>A maximum of 12,000 vented containers of waste (including containers that are not designated as TRU waste, and those could be retrieved with vents in place) are approved to be retrieved per year. Once vented, the containers are allowed to be staged with the other retrieved containers for further handling, resulting in the staging/storage of a maximum of 12,000 vented containers per year at the LLBG. Using an release fraction of 2.00 E-09 for fugitive emissions from vented containers (as used in the WRAP NOC, DOE/RL-2000-34), the potential unabated release rate from the staging of vented containers is 3.0 E-05 Ci/yr alpha (americium-241) and 4.5 E-04 Ci/yr beta (cesium-137). These alternative release fractions are approved for this emission unit. Emissions will be tracked as DE-Ci. An average of 53 DE-Ci is assumed with a maximum of 1.27 E-03 DE-Ci/yr unabated released from the staging and handling of vented containers.</p>	Continuous	<p><b>CDM:</b> Annual evaluation of retrieval rates, containers/curies handled.</p>
<p>Additional monitoring for the diffuse and fugitive emissions will consist of radiological surveys from the soil excavation activities.</p>	Continuous	<p><b>CDM:</b> Facility operations and radiological control procedures.</p>
<p>Both alpha and beta/gamma surveys shall be performed for all removable contamination surveys and for soil surveys (direct reading). Alpha surveys alone shall be performed for direct readings of container surfaces. Beta/gamma direct readings are influenced by container contents, so are not as useful and are not required.</p>	Continuous	<p><b>CDM:</b> Facility operations and radiological control procedures.</p>
<p>Dust controls such as water, fixatives, covers, or windscreens will be applied, as determined by the Radiological Control organization.</p>	Continuous	<p><b>CDM:</b> Facility operations and radiological control procedures.</p>
<p>Excavation activities will be stopped if contamination (other than spot contamination) with detection readings greater than 500,000 dpm/100 cm<sup>2</sup> beta/gamma or greater than 28,000 dpm/100 cm<sup>2</sup> alpha is encountered.</p> <p>Excavation will not continue at that site (but may proceed at other sites) until an internal review of the work and encountered conditions has been performed and an internal determination has been made that no threat to personnel safety or the environment exists, or until proper controls (i.e., removal and disposal, water, fixatives, or covers) have been put in place to mitigate any further potential for emissions; and the WDOH has been contacted and briefed of the situation.</p>	Continuous	<p><b>CDM:</b> Facility operations and radiological control procedures.</p>

Requirement	Compliance Status	Compliance Determination Method
For bulk transfer of contaminated soils, a backhoe or front-end loader may only be used when the material is wetted during the transfer process.	Continuous	<b>CDM:</b> Facility operations procedures.
Health physics technician (HPT) coverage will be provided during the excavation activities, continuously when in close proximity to containers.	Continuous	<b>CDM:</b> Facility operations and radiological control procedures.
It is recognized that other radionuclides may be present in very limited quantities.	Not Applicable	<b>CDM:</b> This is a statement of fact. There is no action to be taken by the Permittee.
Manual methods or HVU will be used to excavate soil in close proximity to containers (after overburden is removed).	Continuous	<b>CDM:</b> Facility operations and radiological control procedures.
Operational limits for TRU retrieval (contamination levels) will be established in the activity work packages and associated RWPs. Fixatives or other controls will be employed if contamination levels (other than spot contamination) exceed 100,000 disintegrations per minute per 100 square centimeters (dpm/100 cm <sup>2</sup> ) beta/gamma or exceed 2,000 dpm/100 cm <sup>2</sup> alpha.	Continuous	<b>CDM:</b> Facility operations and radiological control procedures and radiological work permits.
Spoil piles containing contaminated soil will be segregated from the clean soil and dust controls such as water, fixatives, or covers will be applied at the end of each shift or when sustained or predicted windspeeds are >20 mph. Containerizing spoils for disposal may be performed.	Continuous	<b>CDM:</b> Facility operations and radiological control procedures.
The department shall be notified within 24 hours of all drum vents that fail to be installed properly and smears show >2,000 dpm/100 cm <sup>2</sup> alpha or >100,000 dpm/100 cm <sup>2</sup> beta/gamma removable contamination when using the dart system (an example of a "failure" would be where the Dart is used in a thin or corroded spot where the dart punches a hole through the lid).	Continuous	<b>CDM:</b> Facility operations and radiological control procedures.
The potential unabated release rate from manual excavation is based on a release fraction of 1.0E-3.	Not Applicable	<b>CDM:</b> Statement of fact.
The process for handling of abnormal containers is approved as meeting ALARACT and this process and associated records and procedures will be subject to inspection upon request by the department.	Not Applicable	<b>CDM:</b> There is no action to be taken by the Permittee. This conveys an action to be taken by the Agency.
This approval applies to these additional activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.  TRU Waste Retrieval	Continuous	<b>CDM:</b> Facility operations and radiological control procedures.

Requirement	Compliance Status	Compliance Determination Method
<p>Encountering contamination is expected during excavation; therefore, to determine a potential to emit if contamination is encountered, the administrative control points for contamination, as monitored by standard radiological field instrumentation, will be used to bound emissions based on current efficiencies of typical SWSD field contamination instruments. To determine the corresponding soil concentration in picocuries per grams of individual radionuclides, conversion factors, as developed in Soil Contamination Standards for Protection of Personnel (HNF 2418) were used. The average soil density was assumed to be 98 pounds per cubic foot. The beta gamma contributing radionuclides were assumed to be represented by cesium 137 and the alpha contributing radionuclides were assumed to be represented by americium 241 (predominant alpha contributing radionuclide in the soil is unknown; therefore, assumption of americium 241 will produce the most conservative dose consequence). The respective volumes of contaminated soil (i.e., 300 m<sup>3</sup>, 3 m<sup>3</sup>, and 0.3 m<sup>3</sup>) at the three contamination levels are considered as released from manual excavation, using a release fraction of 1.0 E-3.</p> <p>The potential unabated dose rate from manual excavation is 2.79 E-03 mrem/year. No credit is taken for abatement; therefore, the abated emissions are assumed as the unabated emissions. Although fixatives and similar controls would be employed for the higher contamination level and notification level contamination, no credit is being taken for abatement; therefore, the abated dose rate is the unabated dose rate.</p>		
<p>This approval applies to these additional activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p><b>Venting of Containers</b> All work shall be performed in accordance with the LLBG radiological control procedures and ALARA requirements. These requirements are carried out through the procedures, activity work packages, and associated RWPs.</p> <p>The vent filters will be installed in designated containers by using the Drum Venting System (DVS) and/or Dart System. The methodology will require penetrating the container and inserting a vent. Penetration of the lid will be accomplished by either drilling through the lid with a filter assembly fitted with a short hollow drill bit (using</p>	Continuous	CDM: Facility operations and radiological control procedures.

Requirement	Compliance Status	Compliance Determination Method
<p>DVS) or puncturing the lid with a filter dart (using Dart system). Either method will result in emissions being routed through a filter during the venting process.</p> <p>Most drums slated for venting will be vented with the DVS, consisting of a trailer with a chamber allowing an operator to sample the drum (screening HSGS for hydrogen content) and install a NucFil® filter. Potential emissions from these operations are point source emissions.</p> <p>Bulging or potentially pressurized drums will be evaluated to determine best method and location to vent (Dart-in place, Dart-relocate, or move to the DVS). The Dart System is a portable unit that straps directly onto a drum, using a pneumatic driver remotely activated by wire or radio transmitter. This system penetrates the drum lid without risk of contamination release to install a NucFil® filter with an aluminum bronze housing to prevent the possibility of sparking. Potential emissions from these operations will be considered diffuse and fugitive. The same Dart System will be used to install sample ports, consisting of a closure set screw covering a septum for withdrawing a sample for HSGS, in containers with existing vents at the LLBG, CWC, WRAP, or T Plant Complex, without creating a new pathway for potential emissions.</p>		
<p>WDOH will be notified per WAC 246-247-080(5) if a loss of containment occurs (dropping, spilling, puncturing a container, or otherwise encountering loss of integrity where contamination escapes containment), which exceeds 100,000 dpm/100 cm<sup>2</sup> beta/gamma or 2,000 dpm/100 cm<sup>2</sup> alpha removable contamination.</p>	Continuous	<p><b>CDM:</b> Facility operations and radiological control procedures. Fluor Hanford notification procedure and notification logbook.</p>

**W-296P047-001**

WDOH Emission Unit ID : 498

Page in AOP : EU0498-001

Requirement	Compliance Status	Compliance Determination Method
<p>For the time period of : (01-01-07 to 12-31-07)</p>		
<p><b>Zone or Area:</b> <b>Abatement Technology:</b> Heater <b>Required Units:</b> 1 <b>Add'l Description:</b></p>	Continuous	<p><b>CDM:</b> Field interviews. <b>Comment:</b> Portable exhauster 296-P-47 (EU ID 498) only operated under the Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations NOC.</p>

Requirement	Compliance Status	Compliance Determination Method
<b>Zone or Area:</b> <b>Abatement Technology:</b> Demister <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Field interviews. <b>Comment:</b> Portable exhauster 296-P-47 (EU ID 498) only operated under the Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations NOC.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Prefilter <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Field interviews. <b>Comment:</b> Portable exhauster 296-P-47 (EU ID 498) only operated under the Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations NOC.
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> 2 HEPA filters in series	Continuous	<b>CDM:</b> Field interviews. <b>Comment:</b> Portable exhauster 296-P-47 (EU ID 498) only operated under the Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations NOC.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Field interviews, CH2M HILL notification procedure and notification logbook. <b>Comment:</b> Exhauster shut down multiple times during the reporting period; reported per the CH2M HILL notification procedure. Portable exhauster 296-P-47 (EU ID 498) only operated under the Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations NOC.
<b>Required Sampling:</b> Record sample collected biweekly <b>Sampling Frequency:</b> Continuous <b>Radionuclide Requiring Measurement:</b> Each radionuclide that could contribute greater than 10% of the potential TEDE.	Continuous	<b>CDM:</b> ABCASH Program. <b>Comment:</b> ABCASH Program, EDP code number E096. Portable exhauster 296-P-47 (EU ID 498) only operated under the Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations NOC.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075 (2) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B Method 114	Continuous	<b>CDM:</b> CH2M HILL NESHAP quality assurance program. <b>Comment:</b> Portable exhauster 296-P-47 (EU ID 498) only operated under the Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations NOC.

Requirement	Compliance Status	Compliance Determination Method
<p align="center"> <b>Permit: AIR 06-1038 - B Issue Date:10-05-06 Effective Date:10-02-06</b>  <b>NOC: Liquid Pumping and Enhanced Sluicing on Tank 241-C-106</b>  <b>WDOH NOC ID: 683 Date In AOP: 01-01-07 Page in AOP: EU0498-001</b>  <b>NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3</b> </p>		
<p align="center"> <b>Permit: AIR 06-1057 - E Issue Date:10-05-06 Effective Date:10-05-06 Obsolete Date: 03-23-07</b>  <b>NOC: Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations</b>  <b>WDOH NOC ID: 703 Date In AOP: 01-01-07 Page in AOP: EU0498-012</b> </p>		
Requirement	Compliance Status	Compliance Determination Method
<p>The total abated emission limit for this Notice of Construction is limited to 1.31E+00 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice of Construction is limited to 1.61E+03 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).</p>	<p align="center">Continuous</p>	<p><b>CDM:</b> Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in (WAC 246-247-030(16)), may be conducted.</p> <p>The operation of the waste retrieval system(s) for the removal of radioactive wastes from all 149 Single Shell Tanks (SST) at the Hanford Site.</p> <p><b>SALTCAKE DISSOLUTION WASTE RETRIEVAL SYSTEM</b>  The saltcake dissolution waste retrieval system may be used to retrieve soluble saltcake waste. This method retrieves the soluble portion of the waste only, resulting in very few of the solids being pumped from the tank. The saltcake dissolution waste retrieval system deployed in the SSTs is for water, chemical agent, or catalyst liquid to be added to the tank using a variety of spray nozzles or "sprinklers". The approach is to sprinkle the waste surface with water, chemical agent, or catalyst liquid. The added water, chemical agent, or catalyst liquid must stay in contact with the saltcake for a long enough period of time for the brine to become saturated. Once the brine is saturated, it is pumped from the SST to a receiver tank, staging tank, storage DST or other staging/storage vessel associated with the supplemental treatment, packaging or disposal. Salt solution will be removed using the existing saltwell pump or other pump placed into the tank.</p> <p>A tank not equipped with a saltwell pump, a transfer pump (progressive cavity, vertical turbine) can be installed and operated.</p> <p>Remotely directable water distribution devices will be located in risers spaced far apart as practical. A combination of spraying water, chemical agent, or catalyst liquid to dissolve the saltcake can be used in conjunction with directing a flow of water or recirculating water at the waste to move it to the pump suction to allow the pumping of waste from the tank. Recirculated waste from the pump may be sent back to the tank as an alternative to using water to direct dissolution waste to the pump suction.</p> <p><b>MODIFIED SLUCING WASTE RETRIEVAL SYSTEM</b></p>	<p align="center">Continuous</p>	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>Modified sluicing can be used for some SST waste retrieval. Modified sluicing is the introduction of liquid at low to moderate pressures, not to exceed 1200 psi, and volumes into the waste. The liquid dissolves and breaks apart solid materials and suspends them in the waste slurry. A transfer pump installed in the tank provides the motive force to transfer the liquid slurry to a receiver tank.</p> <p>Modified sluicing introduces sluice liquid in a controlled fashion using multiple sluicing nozzles at varying pressures and flows, then pumps out the resultant waste slurry. This maintains minimal liquid inventories within the tank at all times. The liquids that could be used in modified sluicing include water, recirculated supernatant/water from the receiving Double Shell Tank, recirculated supernatant/water, chemical agent or catalyst liquid.</p> <p><b>VACUUM WASTE RETRIEVAL SYSTEM</b> A vacuum waste retrieval system can be used for waste retrieval activities in the (SSTs). The vacuum waste retrieval system is introduced into the SSTs by means of an articulating mast system (AMS). The AMS has a horizontal reach and rotational capabilities of 360 degrees. The AMS has a retracted position and can be extended vertically. Air is mixed at the suction end of the AMS enabling the required vertical lift for the waste to a topside receiver tank, batch vessel or a staging SST, storage DST, or other staging/storage vessels associated with supplemental treatment, packaging or disposal.</p> <p>The AMS will be deployed through and attached to standard riser flanges that are available on the SSTs. Cameras can also be installed in other risers for in-tank viewing and control of the AMS.</p> <p>For the 200-series tanks in the 241-C, 241-U, 241-B and 241-T Tank Farms a vacuum retrieval process tank, staging tank, staging SST, storage DST or other staging/storage vessel will be deployed. The receiver tank will receive waste in batches from whichever tank is connected into the vacuum retrieval system. The vacuum pressure used to draw up the waste from the tank to the receiver tank is relieved back into the SST being retrieved.</p> <p><b>MOBILE RETRIEVAL SYSTEM</b> A Mobile Retrieval System (MRS) can be used to retrieve waste from some SSTs. The MRS consists of two in-tank systems. The first is a robotic crawler inserted through one riser the second is an AMS inserted through a second riser. The AMS retrieves the sludge from the tank using a vacuum with assisting pneumatic conveyance. The AMS vacuum tube has a horizontal reach and can be extended to the bottom of the tank. The arm rotates 360 degrees. The vacuum will be directed through the AMS in the tank to the end effector, which is in contact with the waste. The pneumatic conveyance-assisted vacuum retrieval system will draw the waste up through the vacuum to the waste vessel in the vessel skid in batches. The AMS is then valved out while the waste vessel is emptied and pumped out through the over ground transfer lines to a DST, a staging SST or other treatment/disposal options. When the waste vessel is nearly empty, the transfer line will be valved out and the AMS will be valved back in and another batch of waste will be removed from the tank. This process will be repeated until waste near the center of the tank is removed. The robotic crawler will be remotely controlled to move and/or wash waste toward the center of the tank.</p> <p>The robotic crawler is equipped with a plow blade at the front for pushing/pulling wastes, a screw pump to jet wastes through a small nozzle towards the center of the tank, the ability to direct hot or cold water through the same nozzle to wash wastes off of in-tank equipment, dissolve waste agglomerations in the tank, and wash waste toward the center of the tank for removal.</p>		

Requirement	Compliance Status	Compliance Determination Method																																																																																																
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<p>The Annual Possession Quantity is limited to the following radionuclides (Curies/year):</p> <table border="0"> <tr><td>Ac-227</td><td>5.99E-08</td><td>Am-241</td><td>6.68E-03</td><td>Am-243</td><td>3.39E-01</td></tr> <tr><td>Ba-137 m</td><td>4.26E-07</td><td>C-14</td><td>6.25E-02</td><td>Cd-113 m</td><td>4.95E-02</td></tr> <tr><td>Cm-242</td><td>1.97E-01</td><td>Cm-243</td><td>1.80E-00</td><td>Cm-244</td><td>1.90E-01</td></tr> <tr><td>Co-60</td><td>2.52E-03</td><td>Cs-134</td><td>3.44E-04</td><td>Cs-137</td><td>4.89E-07</td></tr> <tr><td>Eu-152</td><td>6.49E-02</td><td>Eu-154</td><td>1.45E-04</td><td>Eu-155</td><td>9.54E-03</td></tr> <tr><td>H3</td><td>5.95E-03</td><td>I-129</td><td>2.95E-01</td><td>Nb-93 m</td><td>1.01E-03</td></tr> <tr><td>Ni-59</td><td>1.05E-02</td><td>Ni-63</td><td>9.30E-03</td><td>Np-237</td><td>9.50E-01</td></tr> <tr><td>Pu-231</td><td>1.25E-01</td><td>Pu-238</td><td>1.65E-02</td><td>Pu-239</td><td>3.17E-03</td></tr> <tr><td>Pu-240</td><td>5.36E-02</td><td>Pu-241</td><td>4.80E-03</td><td>Pu-242</td><td>3.34E-02</td></tr> <tr><td>Ra-226</td><td>1.27E-02</td><td>Ra-228</td><td>1.15E-01</td><td>Ru-106</td><td>1.22E-02</td></tr> <tr><td>Sb-125</td><td>1.73E-04</td><td>Se-79</td><td>6.36E-01</td><td>Sm-151</td><td>8.93E-05</td></tr> <tr><td>Sn-126</td><td>2.59E-02</td><td>Sr-90</td><td>2.91E-06</td><td>Tc-99</td><td>2.24E-04</td></tr> <tr><td>Th-229</td><td>4.20E-01</td><td>Th-232</td><td>1.26E-00</td><td>U-232</td><td>3.66E-00</td></tr> <tr><td>U-233</td><td>3.02E-01</td><td>U-234</td><td>1.07E-01</td><td>U-235</td><td>4.44E-01</td></tr> <tr><td>U-236</td><td>2.73E-01</td><td>U-238</td><td>9.86E-00</td><td>Y-90</td><td>2.91E-06</td></tr> <tr><td>Zr-93</td><td>1.25E+03</td><td></td><td></td><td></td><td></td></tr> </table>	Ac-227	5.99E-08	Am-241	6.68E-03	Am-243	3.39E-01	Ba-137 m	4.26E-07	C-14	6.25E-02	Cd-113 m	4.95E-02	Cm-242	1.97E-01	Cm-243	1.80E-00	Cm-244	1.90E-01	Co-60	2.52E-03	Cs-134	3.44E-04	Cs-137	4.89E-07	Eu-152	6.49E-02	Eu-154	1.45E-04	Eu-155	9.54E-03	H3	5.95E-03	I-129	2.95E-01	Nb-93 m	1.01E-03	Ni-59	1.05E-02	Ni-63	9.30E-03	Np-237	9.50E-01	Pu-231	1.25E-01	Pu-238	1.65E-02	Pu-239	3.17E-03	Pu-240	5.36E-02	Pu-241	4.80E-03	Pu-242	3.34E-02	Ra-226	1.27E-02	Ra-228	1.15E-01	Ru-106	1.22E-02	Sb-125	1.73E-04	Se-79	6.36E-01	Sm-151	8.93E-05	Sn-126	2.59E-02	Sr-90	2.91E-06	Tc-99	2.24E-04	Th-229	4.20E-01	Th-232	1.26E-00	U-232	3.66E-00	U-233	3.02E-01	U-234	1.07E-01	U-235	4.44E-01	U-236	2.73E-01	U-238	9.86E-00	Y-90	2.91E-06	Zr-93	1.25E+03					Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures perform work under ALARACT controls per WDOH approval dated March 05, 2007.
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A pre-operational NDA of the exhaustor(s) HEPA filters and a post-operational NDA will be performed the first time each of the four waste retrieval methods (mobile retrieval system, vacuum retrieval, supernatant sluicing, and saltcake dissolution with supernatant) when placed into service. The post-operational NDA should occur after one cycle or phase of waste retrieval operation is completed, a method replaces another method during a cycle/phase or six months from the in-service date, whichever occurs first. The facility may opt to replace the exhaustor's HEPA filters prior to placing a new waste retrieval method in service and eliminate the pre-operational NDA.	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.																																																																																																
All ductwork connections shall have a radiological survey performed monthly to ensure ductwork connections are not degrading.	Continuous	CDM: Annual Radiological Surveillance Task, Radiological Survey Reports, and field interviews.																																																																																																
All ductwork shall be pressure tested in accordance with the requirements of ASME AG-1 Section SA.	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.																																																																																																
All receiver tanks (including waste retrieval process tanks for tank TRU retrieval (staggering) SSTs, storage DSTs, or other staging/storage vessels, but not including batch vessel supporting vacuum retrieval) shall have active ventilation during waste receipt, unless alternative controls are documented and approved by WDOH.	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.																																																																																																
All ventilation ductwork from the exit of the tank to the inlet of the exhaustor filter housing shall be insulated.	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.																																																																																																
During waste retrieval operations liquid shall be introduced through sluicing and saltcake dissolution nozzles at a pressure not to exceed 1200 psig, and the nozzle shall be at least five inches from the waste surface.	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.																																																																																																

Requirement	Compliance Status	Compliance Determination Method
Each HEPA filter shall be in-place tested annually in accordance with the requirements of ASME AG-1 Section TA. HEPA filters shall have a minimum efficiency of 99.95%.	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.
General WAC 246-247 technology standard exemptions justified and documented in RPP-19233, WAC 246-247 technology standard exemption justification for waste tank ventilation systems, may be applied to Phase II NOC retrieval exhauster operations.	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.
Relative humidity shall be monitored, at least once a month, downstream of the heater and prior to the HEPA filters to ensure the air stream does not exceed 70% relative humidity.	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.
The annual possession quantity shall be tracked on a WDOH approved log.	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures perform work under ALARACT controls per WDOH approval dated March 05, 2007.
The differential pressure readings for the pre-filters and both stages of HEPA filters shall be monitored, recorded and trended daily. Action levels shall be developed and provided to WDOH for when actions will be taken to assure the pre-filters and HEPA filters will be operated within their design parameters.	Continuous	<b>CDM:</b> Field interviews, operating rounds, work control/planning/documents and procedures.
The emission unit stack monitoring system shall meet the requirements of ANSI/HPS N13.1-1999 including the stack monitoring system inspection requirements.	Continuous	<b>CDM:</b> Field interviews, operating rounds, work control/planning/documents and procedures.
<b>Permit: AIR 06-1040 - C Issue Date:10-05-06 Effective Date:10-05-06</b> <b>NOC: 244-CR Vault Isolation and Interim Stabilization</b> <b>WDOH NOC ID: 685 Date In AOP: 01-01-07 Page in AOP: EU0498-004</b> <b>NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3</b>		
<b>Permit: AIR 07-305 - E Issue Date:03-23-07 Effective Date:03-23-07</b> <b>NOC: Categorical Tank Farm Facility Retrieval and Closure: Phase II Waste Retrieval Operations</b> <b>WDOH NOC ID: 703 Date In AOP: 05-03-07 Page in AOP: EU0498-012</b>		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 1.31E+00 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice	Continuous	<b>CDM:</b> Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for

Requirement	Compliance Status	Compliance Determination Method
<p>of Construction is limited to 1.61E+03 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).</p>		<p>the Hanford Site.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in (WAC 246-247-030(16)), may be conducted.</p> <p>The operation of the waste retrieval system(s) for the removal of radioactive wastes from all 149 Single Shell Tanks (SST) at the Hanford Site.</p> <p><b>SALTCAKE DISSOLUTION WASTE RETRIEVAL SYSTEM</b> The saltcake dissolution waste retrieval system may be used to retrieve soluble saltcake waste. This method retrieves the soluble portion of the waste only, resulting in very few of the solids being pumped from the tank. The saltcake dissolution waste retrieval system deployed in the SSTs is for water, chemical agent, or catalyst liquid to be added to the tank using a variety of spray nozzles or "sprinklers". The approach is to sprinkle the waste surface with water, chemical agent, or catalyst liquid. The added water, chemical agent, or catalyst liquid must stay in contact with the saltcake for a long enough period of time for the brine to become saturated. Once the brine is saturated, it is pumped from the SST to a receiver tank, staging tank, storage DST or other staging/storage vessel associated with the supplemental treatment, packaging or disposal. Salt solution will be removed using the existing saltwell pump or other pump placed into the tank.</p> <p>A tank not equipped with a saltwell pump, a transfer pump (progressive cavity, vertical turbine) can be installed and operated.</p> <p>Remotely directable water distribution devices will be located in risers spaced far apart as practical. A combination of spraying water, chemical agent, or catalyst liquid to dissolve the saltcake can be used in conjunction with directing a flow of water or recirculating water at the waste to move it to the pump suction to allow the pumping of waste from the tank. Recirculated waste from the pump may be sent back to the tank as an alternative to using water to direct dissolution waste to the pump suction.</p> <p><b>MODIFIED SLUCING WASTE RETRIEVAL SYSTEM</b> Modified sluicing can be used for some SST waste retrieval. Modified sluicing is the introduction of liquid at low to moderate pressures, not to exceed 1200 psi, and volumes into the waste. The liquid dissolves and breaks apart solid materials and suspends them in the waste slurry. A transfer pump installed in the tank provides the motive force to transfer the liquid slurry to a receiver tank.</p> <p>Modified sluicing introduces sluice liquid in a controlled fashion using multiple sluicing nozzles at varying pressures and flows, then pumps out the resultant waste slurry. This maintains minimal liquid inventories within the tank at all times. The liquids that could be used in modified sluicing include water, recirculated supernatant/water from the receiving Double Shell Tank, recirculated supernatant/water, chemical agent or catalyst liquid.</p> <p><b>VACUUM WASTE RETRIEVAL SYSTEM</b> A vacuum waste retrieval system can be used for waste retrieval activities in the (SSTs). The vacuum waste retrieval system is introduced into the SSTs by means of an articulating mast system (AMS). The AMS has a horizontal reach and rotational capabilities of 360 degrees. The AMS has a retracted position and can be extended vertically. Air is mixed at the suction end of the AMS enabling the</p>	<p>Continuous</p>	<p>CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures</p>

Requirement	Compliance Status	Compliance Determination Method																																																																																										
<p>required vertical lift for the waste to a topside receiver tank, batch vessel or a staging SST, storage DST, or other staging/storage vessels associated with supplemental treatment, packaging or disposal.</p> <p>The AMS will be deployed through and attached to standard riser flanges that are available on the SSTs. Cameras can also be installed in other risers for in-tank viewing and control of the AMS.</p> <p>For the 200-series tanks in the 241-C, 241-U, 241-B and 241-T Tank Farms a vacuum retrieval process tank, staging tank, staging SST, storage DST or other staging/storage vessel will be deployed. The receiver tank will receive waste in batches from whichever tank is connected into the vacuum retrieval system. The vacuum pressure used to draw up the waste from the tank to the receiver tank is relieved back into the SST being retrieved.</p> <p><b>MOBILE RETRIEVAL SYSTEM</b> A Mobile Retrieval System (MRS) can be used to retrieve waste from some SSTs. The MRS consists of two in-tank systems. The first is a robotic crawler inserted through one riser the second is an AMS inserted through a second riser. The AMS retrieves the sludge from the tank using a vacuum with assisting pneumatic conveyance. The AMS vacuum tube has a horizontal reach and can be extended to the bottom of the tank. The arm rotates 360 degrees. The vacuum will be directed through the AMS in the tank to the end effector, which is in contact with the waste. The pneumatic conveyance-assisted vacuum retrieval system will draw the waste up through the vacuum to the waste vessel in the vessel skid in batches. The AMS is then valved out while the waste vessel is emptied and pumped out through the over ground transfer lines to a DST, a staging SST or other treatment/disposal options. When the waste vessel is nearly empty, the transfer line will be valved out and the AMS will be valved back in and another batch of waste will be removed from the tank. This process will be repeated until waste near the center of the tank is removed. The robotic crawler will be remotely controlled to move and/or wash waste toward the center of the tank.</p> <p>The robotic crawler is equipped with a plow blade at the front for pushing/pulling wastes, a screw pump to jet wastes through a small nozzle towards the center of the tank, the ability to direct hot or cold water through the same nozzle to wash wastes off of in-tank equipment, dissolve waste agglomerations in the tank, and wash waste toward the center of the tank for removal.</p> <p>Any new retrieval methods or changes to processes will need to be provided to WDOH in a revised NOC prior to implementation.</p>																																																																																												
<p>The Annual Possession Quantity is limited to the following radionuclides (Curies/year):</p> <table border="0"> <tr> <td>Ac-227</td> <td>5.99E+00</td> <td> </td> <td>Am-241</td> <td>8.68E+03</td> <td> </td> </tr> <tr> <td>Am-243</td> <td>3.39E-01</td> <td> </td> <td></td> <td></td> <td></td> </tr> <tr> <td>Ba-137 m</td> <td>4.26E+07</td> <td> </td> <td>C-14</td> <td>6.25E+02</td> <td> </td> </tr> <tr> <td>Cd-113 m</td> <td>4.95E+03</td> <td> </td> <td></td> <td></td> <td></td> </tr> <tr> <td>Cm-242</td> <td>1.97E+01</td> <td> </td> <td>Cm-243</td> <td>1.80E+00</td> <td> </td> </tr> <tr> <td>Cm-244</td> <td>1.90E+01</td> <td> </td> <td></td> <td></td> <td></td> </tr> <tr> <td>Co-60</td> <td>2.52E+03</td> <td> </td> <td>Cs-134</td> <td>3.44E+04</td> <td> </td> </tr> <tr> <td>Cs-137</td> <td>4.89E+07</td> <td> </td> <td></td> <td></td> <td></td> </tr> <tr> <td>Eu-152</td> <td>8.49E+02</td> <td> </td> <td>Eu-154</td> <td>1.45E+04</td> <td> </td> </tr> <tr> <td>Eu-155</td> <td>9.54E+03</td> <td> </td> <td></td> <td></td> <td></td> </tr> <tr> <td>H-3</td> <td>5.95E+03</td> <td> </td> <td>I-129</td> <td>2.95E+01</td> <td> </td> </tr> <tr> <td>Nb-93 m</td> <td>1.01E+03</td> <td> </td> <td></td> <td></td> <td></td> </tr> <tr> <td>Ni-59</td> <td>1.05E+02</td> <td> </td> <td>Ni-63</td> <td>9.30E+03</td> <td> </td> </tr> <tr> <td>Np-237</td> <td>9.50E+01</td> <td> </td> <td></td> <td></td> <td></td> </tr> <tr> <td>Pa-231</td> <td>1.25E+01</td> <td> </td> <td>Pu-238</td> <td>1.65E+02</td> <td> </td> </tr> </table>	Ac-227	5.99E+00		Am-241	8.68E+03		Am-243	3.39E-01					Ba-137 m	4.26E+07		C-14	6.25E+02		Cd-113 m	4.95E+03					Cm-242	1.97E+01		Cm-243	1.80E+00		Cm-244	1.90E+01					Co-60	2.52E+03		Cs-134	3.44E+04		Cs-137	4.89E+07					Eu-152	8.49E+02		Eu-154	1.45E+04		Eu-155	9.54E+03					H-3	5.95E+03		I-129	2.95E+01		Nb-93 m	1.01E+03					Ni-59	1.05E+02		Ni-63	9.30E+03		Np-237	9.50E+01					Pa-231	1.25E+01		Pu-238	1.65E+02		<p>Continuous</p>	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures perform work under ALARACT controls per WDOH approval dated March 05, 2007.</p>
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Requirement	Compliance Status	Compliance Determination Method
Pu-239 3.17E+03   Pu-240 5.36E+02   Pu-241 4.80E+03   Pu-242 3.34E-02   Ra-226 1.27E-02   Ra-228 1.15E+01   Ru-106 1.22E-02   Sb-125 1.73E+04   Se-79 6.36E+01   Sm-151 8.93E+05   Sn-126 2.59E+02   Sr-90 2.91E+06   Tc-99 2.24E+04   Th-229 4.20E-01   Th-232 1.26E+00   U-232 3.66E+00   U-233 3.02E+01   U-234 1.07E+01   U-235 4.44E-01   U-236 2.73E-01   U-238 9.86E+00   Y-90 2.91E+06   Zr-93 1.25E+03		
<p>A pre-operational NDA of the exhauster(s) HEPA filters and a post-operational NDA will be performed the first time each of the four waste retrieval methods (mobile retrieval system, vacuum retrieval, supernatant sluicing, and saltcake dissolution with supernatant) when placed into service. The post-operational NDA should occur after one cycle or phase of waste retrieval operation is completed, a method replaces another method during a cycle/phase or six months from the in-service date, whichever occurs first. The facility may opt to replace the exhauster's HEPA filters prior to placing a new waste retrieval method in service and eliminate the pre-operational NDA.</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>
<p>All ductwork connections shall have a radiological survey performed monthly to ensure ductwork connections are not degrading.</p>	Continuous	<p><b>CDM:</b> Annual Radiological Surveillance Task, Radiological Survey Reports, and field interviews.</p>
<p>All ductwork shall be pressure tested in accordance with the requirements of ASME AG-1 Section SA.</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>
<p>All receiver tanks (including waste retrieval process tanks for tank TRU retrieval (staging) SSTs, storage DSTs, or other staging/storage vessels, but not including batch vessel supporting vacuum retrieval) shall have active ventilation during waste receipt, unless alternative controls are documented and approved by WDOH.</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>
<p>All ventilation ductwork from the exit of the tank to the inlet of the exhauster filter housing shall be insulated.</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures</p>
<p>During waste retrieval operations liquid shall be introduced through sluicing and saltcake dissolution nozzles at a pressure not to exceed 1200 psig, and the nozzle shall be at least five inches from the waste surface.</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>
<p>Each HEPA filter shall be in-place tested annually in</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL</p>

Requirement	Compliance Status	Compliance Determination Method
accordance with the requirements of ASME AG-1 Section TA. HEPA filters shall have a minimum efficiency of 99.95%.		work planning/controls/documents, and procedures.
General WAC 246-247 technology standard exemptions justified and documented in RPP-19233, WAC 246-247 technology standard exemption justification for waste tank ventilation systems, may be applied to Phase II NOC retrieval exhauster operations.	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.
Relative humidity shall be monitored, at least once a month, downstream of the heater and prior to the HEPA filters to ensure the air stream does not exceed 70% relative humidity.	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.
The annual possession quantity shall be tracked on a WDOH approved log.	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures perform work under ALARACT controls per WDOH approval dated March 05, 2007.
The differential pressure readings for the pre-filters and both stages of HEPA filters shall be monitored, recorded and trended daily. Action levels shall be developed and provided to WDOH for when actions will be taken to assure the pre-filters and HEPA filters will be operated within their design parameters.	Continuous	CDM: Field interviews, operating rounds, work control/planning/documents and procedures.
The emission unit stack monitoring system shall meet the requirements of ANSI/HPS N13.1-1999 including the stack monitoring system inspection requirements.	Continuous	CDM: Field interviews, operating rounds, work control/planning/documents and procedures.

**P-296Z007 001**

WDOH Emission Unit ID : 503

Page in AOP : EU0503-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 2 <b>Add'l Description:</b> 2 parallel banks with each bank containing a 2-stage HEPA filter; one bank operational. Abatement credit given for one 2-stage HEPA filter in the operating bank.	Continuous	CDM: Facility Walk down, review of essential equipment operations and drawings.
<b>Zone or Area:</b> <b>Abatement Technology:</b> Fan	Continuous	CDM: Facility Walk down, review of essential equipment operations and

Requirement	Compliance Status	Compliance Determination Method
<b>Required Units:</b> 1 <b>Add'l Description:</b> 2 fans in parallel. Only one fan required to be operating.		drawings.  <b>Comment:</b> Timely notification of short disruptions made to WDOH.
<b>Required Sampling:</b> Record Sample. <b>Sampling Frequency:</b> Continuous <b>Radionuclide Requiring Measurement:</b> Each radionuclide that could contribute greater than 10 percent of the potential-to-emit TEDE.	Continuous	<b>CDM:</b> ABCASH data, Fluor Hanford notification procedure and notification logbook.  <b>Comment:</b> ABCASH EDP code Z818.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(2) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114	Continuous	<b>CDM:</b> NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528)

Permit: AIR 06-1020 - E **Issue Date:**10-05-06 **Effective Date:**10-05-06  
**NOC:** Transition of the Plutonium Finishing Plant  
**WDOH NOC ID:** 655 **Date In AOP:** 01-01-07 **Page in AOP:** EU0503-001

Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 2.40E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).	Continuous	<b>CDM:</b> Annual Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The proposed activities involve transitioning the PFP Complex to a state of low-risk, low-cost, long-term surveillance and maintenance pending final disposition. All work would be performed in accordance with the approved radiological control procedures and as low as reasonably achievable (ALARA) program requirements as implemented by the project radiological control manual, as amended. These requirements would be carried out through the activity work packages and associated radiological work permits.</p> <p>This activity includes deactivation of buildings and also includes deactivation of systems no longer necessary once stabilization and storage activities and planned legacy hold-up removal have been concluded; removal/disposition of equipment/components; contamination characterization and reduction/mitigation; packaging plutonium holdup material meeting waste acceptance criteria; maintaining and operating muffle furnaces, as needed, for removed plutonium holdup material; and demolition of radiologically contaminated, non-process ancillary buildings.</p> <p>This activity also includes deactivation activities or activities to prepare and place a facility in a safe and stable condition to minimize the long-term cost of a surveillance and maintenance program while being protective of personnel, the public, and the environment until demolition of former processing and material storage buildings occurs. Deactivation activities would include those actions foreseeable</p>	Continuous	<b>CDM:</b> FH Work Management, and Job Control System.

Requirement	Compliance Status	Compliance Determination Method
<p>necessary for implementation of the proposed action, such as associated transportation activities, waste removal and disposal, and award of grants and contracts. Specific actions could include the following work involving the potential for radioactive contamination:</p> <ul style="list-style-type: none"> <li>-Draining and/or de-energizing systems as appropriate.</li> <li>-Stabilizing contaminated areas (e.g., with fixatives, sealants, paint).</li> <li>-Stabilizing or removing gloveboxes, process equipment, tanks, piping, fume hoods, and support equipment.</li> <li>-Removing fencing and paved parking areas adjacent to facilities.</li> <li>-Installing alternate environmental monitoring, surveillance, and safety components (e.g., lighting, fencing) if necessary.</li> <li>-Removing/packaging radioactive (including equipment calibration sources and laboratory standards) and hazardous materials and waste, including stabilization and/or removal of asbestos, and removal cleanup, and disposition of polychlorinated biphenyls and other regulated materials and transportation to existing waste management facilities.</li> <li>-Removing equipment and system components.</li> <li>-Size-reducing process equipment for disposal as waste.</li> <li>-Performing physical or chemical treatment processes (e.g., neutralization, solidification, filtering) to render a material less hazardous or to reduce the volume (such processes will not increase the potential release rates).</li> <li>-Decontamination to support the excess of surplus equipment.</li> <li>-Removing excess combustible material.</li> <li>-Disconnecting utilities, piping, and communication service systems (if the systems are not necessary to maintain required environmental monitoring or building safety systems), including associated excavation.</li> <li>-Ensuring adequate freeze and heat protection.</li> <li>-Stabilizing, reducing, combining, or removing waste materials at outdoor locations within the PFP Complex (such processes will not increase the potential release rates provided in this NOC).</li> <li>-Sealing cracks, gratings, and openings to the building exterior, and repairing roofs.</li> <li>-Conducting general housekeeping activities (e.g., vacuuming, sweeping, dusting) in areas where radiological contamination is not anticipated (e.g., radiological buffer area) but could be encountered.</li> <li>-Removing or reducing radioactive or hazardous contamination from facilities and equipment by washing, heating, chemical or electrochemical action, mechanical cleaning, or other similar techniques.</li> <li>-Removing residual plutonium holdup material, which might remain throughout the PFP Complex after stabilization activities described in the PFP EIS have been completed; packaging residual plutonium holdup meeting waste acceptance criteria for shipment to an onsite waste management facility, or thermally stabilizing material in muffle furnace operations and packaging for storage in existing PFP Complex vaults.</li> <li>-Designing and executing changes to utility service systems and/or utility structures necessary to place a facility in surveillance and maintenance, pending demolition.</li> <li>-Conducting final process operations to stabilize or eliminate residual operational materials or effluents, such as final process runs; cleaning of vessels, valve pits and pipe trenches; installation and operation of small evaporators; flushing piping systems; removal or replacement of filters; and other similar closeout actions.</li> <li>-Demolishing non-process ancillary buildings.</li> <li>-Deactivation activities will require actions to provide for continued routine maintenance, repair, and replacement-in-kind of operating portions of PFP.</li> </ul> <p>Other actions include:</p> <ul style="list-style-type: none"> <li>-Remove residual plutonium from gloveboxes, filterboxes, equipment, piping, ductwork, and the building surfaces and package for disposition to onsite or offsite disposal facilities.</li> </ul>		

Requirement	Compliance Status	Compliance Determination Method															
<p>-Remove internal equipment from gloveboxes and building equipment/system components and package for disposition to onsite or offsite disposal facilities.</p> <p>-Decontaminate gloveboxes, filterboxes, ductwork, and equipment to less than transuranic levels if possible.</p> <p>-Remove gloveboxes, filterboxes, ductwork, and equipment and packager disposition to onsite or offsite disposal facilities.</p> <p>-Decontaminate or fix contamination on building interior and exterior.</p> <p>-Disconnect utilities and services not necessary for monitoring.</p> <p>-Perform radiological and chemical characterization in preparation for dismantlement.</p> <p>In preparation for the proposed transition activities, housekeeping, assays, preventive maintenance, minor decontamination, and reactivation of glovebox access ports would occur.</p> <p>See additional process description in the following Conditions/Limitations.</p>																	
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 8.90E+02 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Am-241   1.70E+01   Liquid/Particulate Solid   WAC 246-247-030(21)(a)</p> <p>Pu-238   6.00E+00   Liquid/Particulate Solid   WAC 246-247-030(21)(a)</p> <p>Pu-239   9.00E+00   Liquid/Particulate Solid   WAC 246-247-030(21)(a)</p> <p>Pu-240   6.00E+00   Liquid/Particulate Solid   WAC 246-247-030(21)(a)</p> <p>Pu-241   1.70E+02   Liquid/Particulate Solid   WAC 246-247-030(21)(a)</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <table border="0"> <tr> <td>Am-241</td> <td>Np-237</td> <td>Pu-238</td> <td>Pu-239</td> <td>Pu-240</td> </tr> <tr> <td>Pu-241</td> <td>Pu-242</td> <td>U-233</td> <td>U-234</td> <td>U-235</td> </tr> <tr> <td>U-236</td> <td>U-237</td> <td>U-238</td> <td></td> <td></td> </tr> </table> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)) DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents. The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)) DOE must</p>	Am-241	Np-237	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	U-233	U-234	U-235	U-236	U-237	U-238			<p>Continuous</p>	<p>CDM: Verified the basis for the PTE calculation in the NOC application unchanged.</p>
Am-241	Np-237	Pu-238	Pu-239	Pu-240													
Pu-241	Pu-242	U-233	U-234	U-235													
U-236	U-237	U-238															

Requirement	Compliance Status	Compliance Determination Method
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<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The proposed methods for removing residual contamination from equipment/systems and for removing equipment would be similar to methods in use today throughout the industry and the DOE Complex. Both direct contact and remote technologies/techniques could be used. General technologies/techniques include heating, crushing, size reducing, and cutting. These could involve laboratory analyses and nondestructive assay; chemical cleaning, brushing, washing, scrubbing, vacuum cleaning, and abrasive jetting; using nibblers, shears, circular saws; potentially a remote- operated laser; and other similar methods. it is expected that should new technology become available, such technology would be evaluated for application in the PFP deactivation activities, and could be used if no increase in the potential-to-emit described in this NOC would result.</p>	Continuous	<b>CDM:</b> FH Work Management, and Job Control System.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The PFP deactivation activities include the following:</p> <ul style="list-style-type: none"> <li>- Size reduction of equipment will be by mechanical means and may be accomplished by compaction, disassembling by use of wrenches, nibblers, shears, cutters, grinders, saws, or other similar methods. This equipment may be manually, hydraulically, pneumatically or electrically powered.</li> <li>- Decontamination methods include: Scraping, sweeping, chemical cleaning, brushing, washing, scrubbing, scabbling, grinding, vacuum cleaning, strippable coatings, washing using wet rags, spraying, abrasive jetting, low pressure and high pressure wash using water and/or chemicals cleaners, use of fixatives and/or physical removal of contamination by use of mechanical</li> </ul>	Continuous	<b>CDM:</b> FH Work Management, and Job Control System.

Requirement	Compliance Status	Compliance Determination Method
<p>means such as chipping or cutting. The application of fixatives for contamination control would be accomplished via aerosol fogging, paint brush/roller, hand-held spray bottle, or an electric or pneumatic powered sprayer.</p> <ul style="list-style-type: none"> <li>- Containment of waste may be accomplished by coating the material with a fixative or placing the material in containers, bags and/or wrapping in plastic sheeting, utilizing adhesive tape, heat sealing or mechanical closure to prevent release of radiological contamination.</li> <li>- Miscellaneous mechanical processes that could be used to support the proposed activity could include threading of piping, use of hot taps on piping, capping and plugging piping using threaded pipe components and expanding/compressive plugs or caps, drilling of holes in metal and concrete, core drilling concrete surfaces, installation of anchor bolts, installation and removal of bolts, installation of hose and tubing connectors, compression fittings, installation and removal of pumps, agitators and process control filters.</li> </ul>		
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>Excavation will take place in the PFP Complex to support site stabilization, isolating/blanking utilities, fence removal/installation/relocation, and soil sampling/cleanup. Access to underground piping and cable would be gained by use of a bucket-type excavator. Manual digging methods with shovels, picks, and rakes also could be used. Contaminated soil removed and covered during excavation activities would remain covered until replaced into the excavation or otherwise dispositioned (backfill would consist of the original material removed or 'clean' soil).</p> <p>If needed or chosen for use during these activities, the categorical NOCs for sitewide use of the guzzler, a portable temporary radioactive air emissions unit (PTRAEU) exhaustor, or HEPA filtered vacuum radioactive air emission unit could be used.</p> <p>Wastes generated during deactivation would be packaged appropriately. Waste would be generated/packaged throughout the PFP Complex (i.e., in structures with registered stacks, in non-HEPA filtered structures, or outdoors), resulting in filtered releases and/or diffuse and fugitive emissions. Wastes could be</p>	<p>Continuous</p>	<p><b>CDM:</b> FH Work Management, and Job Control System.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>placed in various containers such as plastic bags, metal drums, and standard waste boxes. These wastes could be transferred to other locations within the PFP Complex for interim storage and/or repackaging before subsequent transport to approved locations/facilities pending final disposition.</p> <p>If necessary, personnel decontamination activities would be conducted in the decontamination trailer (DOE/RL-2003-42).</p>		
<p>The total abated emission limit for the 296-Z-7 emission unit is limited to 1.5E-04 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the potential-to-emit for this emission unit is limited to 5.42E+02 mrem/year to the Maximally Exposed Individual (WAC 246- 247-030(21)).</p>	Continuous	<p><b>CDM:</b> Total abated emission is reported in the Annual Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007. Verified that the basis for the PTE calculation in the NOC application did not increase.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>Plutonium and uranium processed in the stabilization and repackaging process under Stabilization and Repackaging Equipment (SPE) will be in the form of oxides (including hold-up material) and metal. Americium, plutonium, and uranium oxides shall be stabilized by heating the material in an oven to meet the DOE Standard 3013. Plutonium oxides with metal chunks might be encountered. The material shall be sieved and the oxides thermally stabilized. The metal chunks shall be brushed and packaged, or thermally stabilized. Hold-up plutonium-bearing material removed from equipment and systems within PFP Complex might be in the form of powder, sweep (such as residue), and/or dried sludge (with small quantities of volatile organics). This material could be mechanically handled (e.g., sieved, brushed) before being thermally stabilized.</p> <p>In-line monitoring equipment shall be provided for determining the moisture/volatile content of the material processed. The material shall be considered thermally stabilized when there is less than 0.5 percent loss on ignition (LOI). Gaseous effluents from moisture determination operations are discharged directly into the glovebox, passed through glovebox HEPA-type filters, and then pass through two stages of HEPA filtration before discharge to the environment via the 296-Z-7 stack.</p> <p>-Stabilization Module. The Stabilization Module consists of the material preparation area, furnace area, and the product fill area. In the material preparation area, canned items containing plutonium-bearing materials shall be received, measured for accountability, and placed into a furnace tray (or boat) for insertion into a furnace in the furnace area. The module may also provide a waste pathway to dispose of the waste cans and plastic. In the furnaces the material in the boats shall be heated to greater than 950 degrees Centigrade (C) for at least two hours, as specified in U.S. Department of Energy Standard 3013 (DOE-STD-3013, Criteria for Safe Storage of Plutonium Metals and Oxides). The material shall be cooled, placed in a convenience can, sampled to verify dryness, and inserted into the Bagless Transfer System (BTS) Module.</p>	Continuous	<p><b>CDM:</b> FH Work Management, and Job Control System.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>-BTS Module. In the BTS Module, the filled convenience cans shall be received from the Stabilization Module and placed into an inner can. The inner can head space will then be backfilled with helium. A plug shall be welded to the inner wall of the container, and the middle of the weld shall be cut (maintaining glove box confinement at all times).</p> <p>-Inner Can Leak Test Module. The Inner Can Leak Test Module will receive an inner welded container [bagless transfer container (BTC)]. Operations in this module will verify the BTC meets or exceeds the leak tightness requirements of DOE Standard 3013.</p>		
<p>The stack monitoring system shall consist of two shrouded probes located in the exhaust stream within the stack at an elevation of approximately 25 feet above grade. Each probe will have a sample line to deliver the sample stream to the stack monitoring equipment located at the base of the stack. One sample line will be connected to a continuous alpha monitor and the other line dedicated to the record air filter. The sample flow will be proportional to the stack flow. A stack mass flow sensor will be located near the shrouded probes. Inspection and test ports shall be provided. The design must include the ability for the department to split stack samples.</p>	Continuous	<b>CDM:</b> Field walkdown and facility drawings.
<p>The alpha stack monitor shall have fail and high radiation alarms. These alarms are tied into an annunciator panel that will be used to notify operations of off normal conditions requiring immediate corrective actions. Sample pumps located downstream from the alpha monitor and the record sampler in the pump skid will thaw representative samples from the stack stream. Exhausts from the pumps will return to the stack above the sample location.</p>	Continuous	<b>CDM:</b> Field walkdown and facility drawings.
<p>Procedures must be developed to leak test and to check for contamination on the outside of the welded containers prior to transporting them to various designated areas of the project. Appropriate staff must be trained on these procedures prior to the start of the project. These procedures will be available for Department of Health review upon request.</p>	Continuous	<b>CDM:</b> Verified procedures in place and active. Verified training on procedures is part of qualifications.
<p>The product fill glove box located in Room 642 must be exhausted through a HEPA type filter before connecting to the Room 642 exhaust HEPA filter.</p>	Continuous	<b>CDM:</b> Verified by field interview, facility records and drawings.
<p>The emergency exhaust line does not have any fire screens or filters. The normal and emergency lines are combined and routed to the process exhaust HEPA filter system. Prior to passing through dual stage testable HEPA filters, the off gas temperature must be below 80 C.</p>	Continuous	<b>CDM:</b> Process did not operate during compliance period therefore the off gas temperature was below 80C.
<p>All filters designated as HEPA filters must be annually</p>	Continuous	<b>CDM:</b> Verified completion of aerosol

Requirement	Compliance Status	Compliance Determination Method
tested to a minimum of 99.95% efficiency.		test in 2007 via work package 2Z-07-04472.
As the required indication device for the Z-7 emission unit, the differential pressure magnehelic gauges associated with the final stage of HEPA filters will have a functional test conducted annually.	Continuous	<b>CDM:</b> Verified completion of functional test in 2007 via work packages 2Z-07-04166 and 2Z-06-08448.
Contaminated clothing, coverings, and/or materials shall be packaged and dispositioned in accordance with applicable facility waste handling procedures.	Continuous	<b>CDM:</b> Facility work planning, controls and documents.
<p><b>Fuel De-Inventory</b> This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>PFM will repack fuel assemblies and/or fuel pins into storage and/or transport containers for staging at PFM. These containers would be loaded via crane operations onto trucks for transport either to storage onsite or to appropriate offsite facilities pending final disposition. Fuel assemblies and/or fuel pins could be mechanically handled by transferring directly to containers (emissions would be considered as diffuse and fugitive if work conducted in locale providing potential for unfiltered emissions). Fuel pins could be transferred to glovebox(es) (emissions discharging through the 291-Z-1 or 296-Z-7 stacks) where they would be size reduced (using bolt cutters or equivalent means) and placed into a container. The pins/containers could be subjected to NDA at any point(s) during repackaging activities.</p> <p>Minor alterations (e.g., removing interior walls, installation of temporary scaffolding) to the 234-5Z Building would be necessary to support fuel de-inventory operations.</p>	Continuous	<b>CDM:</b> FH Work Management, and Job Control System.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in (WAC 246-247-030(16)), may be conducted.</p> <p>Security enhancement program activities include those actions foreseeably necessary for implementation of the proposed action, such as associated transportation activities, waste removal and disposal, and award of grants and contracts. Specific actions include the following work involving the potential for radioactive contamination:</p>	Continuous	<b>CDM:</b> FH Work Management, and Job Control System.

Requirement	Compliance Status	Compliance Determination Method
<p>-Excavations, inside and outside the PFP protected area (PA) to support installation of utilities and security-related devices and structures (e.g. barricades, patrol offices) and relocation of displaced activities. Security enhancement program will require some excavation in areas of potential below grade or surface contamination. In addition to excavations for building and structure foundations, it is estimated that approximately 5,000 linear feet of below grade ducting will be installed, a portion of the water line will require replacement, and connections to sewer and water lines will be required.</p> <p>-Modifications to existing structures (e.g. moving walls, doors, railing, security monitoring equipment, electrical equipment upgrades) and/or construction of new buildings (non-radioactive).</p> <p>-Continued operations a 2736-Z/ZB Buildings for 3013-container packaging systems monitoring and maintenance.</p> <p>No modifications to the existing abatement equipment associated with registered stacks are allowed.</p>		

**J Nonpoint Source**  
WDOH Emission Unit ID : 504  
Page in AOP : EU0504-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
No active Abatement Controls in the AOP for this certification period.		
<p><b>Required Sampling:</b> Per the sitewide ambient monitoring program samples will be collected from the existing near-facility monitoring stations</p> <p><b>Sampling Frequency:</b> Per the sitewide ambient monitoring program</p> <p><b>Radionuclide Requiring Measurement:</b> Each radionuclide that could contribute greater than 10 percent of the potential-to-emit TEDE</p>	Continuous	<p><b>CDM:</b> Review of the data in ABCASH collected from the required near-facility monitoring.</p>
<p><b>Federal and State Regulatory Requirement:</b> WAC 246-247-075(3)</p> <p><b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114</p>	Continuous	<p><b>CDM:</b> Radiological surveys of waste containers and surrounding areas.</p>

Requirement	Compliance Status	Compliance Determination Method
<p align="center">Permit: AIR 06-1029 - C <b>Issue Date:</b>10-05-06 <b>Effective Date:</b>10-05-06  <b>NOC:</b> Use of Portable Tanks and Revised Source Term Description at WSCF  <b>WDOH NOC ID:</b> 669 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0504-001</p>		
<p>The total abated emission limit for this Notice of Construction is limited to 2.80E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).</p>	<p align="center">Continuous</p>	<p><b>CDM:</b> Radiological surveys of waste containers and surrounding areas.  <b>Comment:</b> no detectable radiological contamination has been found.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <ul style="list-style-type: none"> <li>* Analytical Laboratory Building (696-W-1) - Solid, liquid, and vapor samples contaminated with low levels of radioactive material are processed, on a bench-scale basis, in fume hoods or other controlled air spaces in the building. Evaporation and wet chemistry also are used to prepare samples for analysis. Low-level waste drums are filled inside the laboratory building and transferred either to the Solid Waste Storage Building (described as follows) or other approved facilities on the Hanford Site, or the low-level waste drums are moved to various locations with WSCF.</li> <li>* Radiochemistry Laboratory (696-W-2) - This is a below grade counting room in the Analytical Laboratory Building with a separately controlled airspace within the building.</li> <li>* Environmental Data/Computer Center (6270) - This is a non-radiological building and will not be addressed further.</li> <li>* Environmental Sample Archive Building (6267) - This building provides for controlled storage, indexing, categorizing and retrieval of low-level contaminated samples. Storage is provided for up to 2,500 samples requiring refrigerated storage and up to 11,500 samples requiring ambient storage. This building also provides for temporary storage of unvented drums or other low-level waste, packaged in accordance with applicable laboratory procedures. Less than 100 low-level waste packages are stored at any one time.</li> <li>* Mobile Laboratory Storage Facility (6269) - This structure houses up to five mobile laboratories and provides protection from adverse weather conditions for the instrumentation and computers inside the mobile laboratories. This area contains calibration laboratory instrumentation used in the mobile laboratories, and a sample preparation area for adding chemical buffers and preservatives to sample containers. This building provides temporary storage of drums, or other waste packages contained with low-levels of radioactive material. Less than 100 low-level waste packages are stored at any one time.</li> <li>* Solid Waste Storage Building (6265A) - This open-sided building shall provide for temporary storage of drums or other low-level waste packages. Less than 100 low-level waste packages are stored at any one time and will not be addressed further in this license, as these are unvented drums.</li> <li>* Contaminated Liquid Waste Retention Vault (6266A) - Consists of two 3,785 liter polyethylene tanks contained in a common concrete vault. The tanks are designed to receive low-level inorganic and radiologically contaminated liquid waste or sample excess from the</li> </ul>	<p align="center">Continuous</p>	<p><b>CDM:</b> The mission of the WSCF laboratory has not changed since the NOC was issued.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>analytical laboratory. The liquid routinely is transferred to an approved disposal facility on the Hanford Site using the portable tanker described as follows. This building also provides temporary storage of drums, or other waste packages contaminated with low-levels of radioactive material. Less than 100 low-level waste packages are stored at any one time.</p> <p>* Sample Equipment Cleaning Facility - This is a non-radiological building and will not be addressed further.</p> <p>* Portable Tanker(s) used for Wastewater Transport - Wastewater drums containing liquid waste contaminated with low-levels of radioactive material are stored temporarily at various locations within WSCF. In some cases, the contents of these drums are pumped into a portable tanker at the various locations for transport to other facilities. To accomplish the pumping, a small pump has its drop leg inserted into each drum through the bung hole or other opening, and flexible hose transfers the liquid to the tanker.</p>		
<p>The PTE for this project as determined under WAC 246-247-030(21a-e) [as specified in the application] is 1.40E-02 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Alpha-0   1.02E-03   Liquid/Particulate Solid   WAC 246-247-030(21)(a) License PTE limit bounds 1.02E-03 Ci/yr 239Pu and release fraction of 0.001. Any radionuclide on the chart of the nuclides could be encountered during operation of the WSCF. The radionuclides specifically listed in the NOC application were chosen to conservatively represent all radionuclide emissions that may occur in particulate form. A small contribution from the gaseous radionuclides may be encountered. Although any radionuclide could be present, for conservatism all alpha is assumed to be 239Pu and all beta/gamma is assumed to be 90Sr for dose calculation estimates. Other radionuclides may be encountered and are approved so long as they are conservatively represented by the total alpha and total beta/gamma constituents.</p> <p>B/G-0   2.11E-02   Liquid/Particulate Solid   WAC 246-247-030(21)(a) License PTE limit bounds 2.11E-02 Ci/yr 90Sr and release fraction of 0.001. Any radionuclide on the chart of the nuclides could be encountered during operation of the WSCF. The radionuclides specifically listed in the NOC application were chosen to conservatively represent all radionuclide emissions that may occur in particulate form. A small contribution from the gaseous radionuclides may be encountered. Although any radionuclide could be present, for conservatism all alpha is assumed to be 239Pu and all beta/gamma is assumed to be 90Sr for dose calculation estimates. Other radionuclides may be encountered and are approved so long as they are conservatively represented by the total alpha and total beta/gamma constituents.</p> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the AIR Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the</p>	<p>Continuous</p>	<p>CDM: WSCF keeps a running inventory of samples/radionuclides coming into and leaving the laboratory to ensure radionuclide limits are met.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>		
<p>The potential release rates shall not exceed the following limits for the associated buildings:</p> <ul style="list-style-type: none"> <li>* Environmental sample archive building (6267) APQ is limited to 3.3E-04 Ci/yr total Alpha and 6.8E-03 Ci/yr total Beta/Gamma.</li> <li>* Mobile Laboratory Storage Facility (6269) APQ is limited to 3.3E-05 Ci/yr total Alpha and 6.8E-04 Ci/yr total Beta/Gamma.</li> <li>* Contaminated liquid waste retention vault (6266A) APQ is limited to 3.3E-04 Ci/yr total Alpha and 6.8E-03 Ci/yr total Beta/Gamma.</li> <li>* Portable tanker used for wastewater transport APQ is limited to 3.3E-04 Ci/yr total Alpha and 6.8E-03 Ci/yr total Beta/Gamma.</li> </ul>	Continuous	<p><b>CDM:</b> Radiological surveys of waste containers and surrounding areas. <b>Comment:</b> no detectable radiological contamination has been found.</p>
<p>The WSCF must maintain a log in an approved format for this activity or emission unit.</p>	Continuous	<p><b>CDM:</b> Log is maintained and has been approved by WDOH, approval kept on file at facility.</p>
<p>The radiological control technology requirements are as follows:</p> <ul style="list-style-type: none"> <li>* 6267 will control emissions by the structure itself, with no containment efficiency provided by the ventilation system. Packaging of the archived samples and monitored storage of closed (unvented) drums and approved low-level waste packages, combined with minimization of any indoor contamination in accordance with established radiation control procedures, provides for effective control of potential fugitive emissions.</li> <li>* 6269 will control emissions based on the design of the mobile laboratories, combined with minimization of any indoor contamination, in accordance with established radiation control procedures.</li> <li>* 6265A will control emissions by controlling the waste packages. Minimize the external contamination in accordance with established radiation control procedures.</li> <li>* 6266A will control emissions by having a passive vent HEPA type high efficiency filter on each tank.</li> </ul>	Continuous	<p><b>CDM:</b> Facility specific procedures/facility drawings.</p>

Requirement	Compliance Status	Compliance Determination Method
* Portable tanker used for wastewater transport will control emissions by passively venting.		
The U.S. DOE shall monitor this emission units as follows:  Periodic radiological surveys of swipe or surfaces associated with 6265A, 6269, 6267, and 6266A must be conducted to verify compliance.	Continuous	<b>CDM:</b> radiological surveys of swipes or surfaces are done when radioactive materials are present.

**P-Vadose-002**

WDOH Emission Unit ID : 539

Page in AOP : EU0539-001

EMISSION UNIT DID NOT OPERATE DURING CY 2007 SEE TABLE 2

<p>Permit: AIR 06-1003 - B <b>Issue Date:</b>10-05-06 <b>Effective Date:</b>10-05-06  <b>NOC:</b> Tank Waste Remediation System Vadose Zone Characterization  <b>WDOH NOC ID:</b> 635 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0539-001  NOC NOT UTILIZED DURING CY 2007 SEE <u>TABLE 3</u></p>
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**P-Vadose-003**

WDOH Emission Unit ID : 541

Page in AOP : EU0541-001

EMISSION UNIT DID NOT OPERATE DURING CY 2007 SEE TABLE 2

<p>Permit: AIR 06-1003 - C <b>Issue Date:</b>10-05-06 <b>Effective Date:</b>10-05-06  <b>NOC:</b> Tank Waste Remediation System Vadose Zone Characterization  <b>WDOH NOC ID:</b> 635 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0541-001  NOC NOT UTILIZED DURING CY 2007 SEE <u>TABLE 3</u></p>
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**100 Area Diffuse/Fugitive**

WDOH Emission Unit ID : 689

Page in AOP : EU0689-001

EMISSION UNIT DID NOT OPERATE DURING CY 2007 SEE TABLE 2

**P-244CR-002**

WDOH Emission Unit ID : 713

Page in AOP : EU0713-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<p><b>Zone or Area :</b>  <b>Abatement Technology :</b> HEPA  <b>Required Units :</b> 1</p>	Continuous	<p><b>CDM:</b> Field interviews.  <b>Comment:</b> This emission unit was not utilized for construction</p>

<b>Add'l Description:</b> Passive Breather Filter		activities.
<b>Required Sampling:</b> Smear survey on the inside surface of the ducting and downstream of the HEPA filter or on the outside of the screen covering the outlet of the vent. <b>Sampling Frequency:</b> 1 per year <b>Radionuclide Requiring Measurement:</b> Levels below 10,000 dpm/cm <sup>2</sup> beta/gamma and 200 dpm/100cm <sup>2</sup> alpha will verify low emission.	Continuous	<b>CDM:</b> Annual Radiological Surveillance Task, RSRs, and field interviews. <b>Comment:</b> This emission unit was not utilized for construction activities.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 60.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B Method 114(3)	Continuous	<b>CDM:</b> Near Field Monitoring Program. <b>Comment:</b> This emission unit was not utilized for construction activities.

Permit: AIR 06-1040 - D **Issue Date:**10-05-06 **Effective Date:**10-05-06  
**NOC:** 244-CR Vault Isolation and Interim Stabilization  
**WDOH NOC ID:** 685 **Date In AOP:** 01-01-07 **Page in AOP:** EU0713-001  
 NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3

**P-296A044-001**  
 WDOH Emission Unit ID : 735  
 Page in AOP : EU0735-001  
 EMISSION UNIT DID NOT OPERATE DURING CY 2007 SEE TABLE 2

Permit: AIR 06-1060 - A **Issue Date:**10-05-06 **Effective Date:**10-05-06  
**NOC:** Operation of New Ventilation Systems in AN and AW Tank Farms  
**WDOH NOC ID:** 706 **Date In AOP:** 01-01-07 **Page in AOP:** EU0735-001  
 NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3

**P-296A045-001**  
 WDOH Emission Unit ID : 736  
 Page in AOP : EU0736-001  
 EMISSION UNIT DID NOT OPERATE DURING CY 2007 SEE TABLE 2

Permit: AIR 06-1060 - B **Issue Date:**10-05-06 **Effective Date:**10-05-06  
**NOC:** Operation of New Ventilation Systems in AN and AW Tank Farms  
**WDOH NOC ID:** 706 **Date In AOP:** 01-01-07 **Page in AOP:** EU0736-001  
 NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3

**P-244A-002**  
WDOH Emission Unit ID : 738  
Page in AOP : EU0738-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b> Passive Breather Filter	Continuous	<b>CDM:</b> Field interviews.
<b>Required Sampling:</b> Smear survey on the inside surface of the ducting and downstream of the HEPA filter or on the outside of the screen covering the outlet of the vent. <b>Sampling Frequency:</b> 1 per year. <b>Radionuclide Requiring Measurement:</b> Levels below 10,000 dpm/100cm <sup>2</sup> beta/gamma and 200 dpm/100cm <sup>2</sup> alpha will verify low emissions.	Continuous	<b>CDM:</b> Annual Radiological Surveillance Task, RSRs, and field interviews.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B Method 114(3)	Continuous	<b>CDM:</b> Near Field Monitoring Program.
Permit: AIR 06-1051 - B <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>NOC:</b> Isolation and Closure of Exhaust Stacks 296-A-25, 296-B-28, 296-S-22, and 296-T-18 <b>WDOH NOC ID:</b> 697 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0738-001 NOC NOT UTILIZED DURING CY 2007 SEE <u>TABLE 3</u>		

**P-244BX-002**  
WDOH Emission Unit ID : 740  
Page in AOP : EU0740-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b> Passive Breather Filter	Continuous	<b>CDM:</b> Field interviews.
<b>Required Sampling:</b> Smear survey on the inside surface of the ducting and downstream of the HEPA filter or on the outside of the screen covering the outlet of the vent. <b>Sampling Frequency:</b> 1 per year <b>Radionuclide Requiring Measurement:</b> Levels below	Continuous	<b>CDM:</b> Annual Radiological Surveillance Task, RSRs, and field interviews.

Requirement	Compliance Status	Compliance Determination Method
10,000 dpm/cm2 beta/gamma and 200 dpm/100cm2 alpha will verify low emission.		
<b>Federal and State Regulatory Requirement:</b> 40 CFR 60.93(b)(4)(i) & WAC 246-247-075(3)	Continuous	<b>CDM:</b> Near Field Monitoring Program.
Permit: AIR 06-1051 - C <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>NOC:</b> Isolation and Closure of Exhaust Stacks 296-A-25, 296-B-28, 296-S-22, and 296-T-18 <b>WDOH NOC ID:</b> 697 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0740-001 <b>NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3</b>		

**P-244S-002**

WDOH Emission Unit ID : 742  
Page in AOP : EU0742-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b> Passive Breather Filter	Continuous	<b>CDM:</b> Field interviews.
<b>Required Sampling:</b> Smear survey on the inside surface of the ducting and downstream of the HEPA filter or on the outside of the screen covering the outlet of the vent. <b>Sampling Frequency:</b> 1 per year <b>Radionuclide Requiring Measurement:</b> Levels below 10,000 dpm/cm2 beta/gamma and 200 dpm/100cm2 alpha will verify low emission.	Continuous	<b>CDM:</b> Annual Radiological Surveillance Task, RSRs, and field interviews.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 60.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61 Appendix B Method 114(3)	Continuous	<b>CDM:</b> Near Field Monitoring Program.
Permit: AIR 06-1051 - D <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>NOC:</b> Isolation and Closure of Exhaust Stacks 296-A-25, 296-B-28, 296-S-22, and 296-T-18 <b>WDOH NOC ID:</b> 697 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0742-001 <b>NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3</b>		

**P-244TX-002**  
WDOH Emission Unit ID : 744  
Page in AOP : EU0744-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b> Passive Breather Filter	Continuous	<b>CDM:</b> Field interviews.
<b>Required Sampling:</b> Smear survey on the inside surface of the ducting and downstream of the HEPA filter or on the outside of the screen covering the outlet of the vent. <b>Sampling Frequency:</b> 1 per year <b>Radionuclide Requiring Measurement:</b> Levels below 10,000 dpm/cm <sup>2</sup> beta/gamma and 200 dpm/100cm <sup>2</sup> alpha will verify low emission.	Continuous	<b>CDM:</b> Annual Radiological Surveillance Task, RSRs, and field interviews.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 60.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B Method 114(3)	Continuous	<b>CDM:</b> Near Field Monitoring Program.
Permit: AIR 06-1051 - E <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>NOC:</b> Isolation and Closure of Exhaust Stacks 296-A-25, 296-B-28, 296-S-22, and 296-T-18 <b>WDOH NOC ID:</b> 697 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0744-001 <b>NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3</b>		

**W-296P048-001**  
WDOH Emission Unit ID : 749  
Page in AOP : EU0749-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> Demister <b>Required Units:</b> 1 <b>Add'l Description:</b>	Continuous	<b>CDM:</b> Field interviews. <b>Comment:</b> Portable exhauster 296-P-48 (EU ID 749) operated under the 241-C-200 Series Tanks Retrieval NOC. 296-P-48 was not utilized under the Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations NOC.

Requirement	Compliance Status	Compliance Determination Method
<p><b>Zone or Area:</b>  <b>Abatement Technology:</b> Heater  <b>Required Units:</b> 1  <b>Add'l Description:</b></p>	Continuous	<p><b>CDM:</b> Field interviews.  <b>Comment:</b> Portable exhauster 296-P-48 (EU ID 749) operated under the 241-C-200 Series Tanks Retrieval NOC. 296-P-48 was not utilized under the Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations NOC.</p>
<p><b>Zone or Area:</b>  <b>Abatement Technology:</b> Prefilter  <b>Required Units:</b> 1  <b>Add'l Description:</b></p>	Continuous	<p><b>CDM:</b> Field interviews.  <b>Comment:</b> Portable exhauster 296-P-48 (EU ID 749) operated under the 241-C-200 Series Tanks Retrieval NOC. 296-P-48 was not utilized under the Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations NOC.</p>
<p><b>Zone or Area:</b>  <b>Abatement Technology:</b> HEPA  <b>Required Units:</b> 2  <b>Add'l Description:</b> 2 HEPAs in a series.</p>	Continuous	<p><b>CDM:</b> Field interviews.  <b>Comment:</b> Portable exhauster 296-P-48 (EU ID 749) operated under the 241-C-200 Series Tanks Retrieval NOC. 296-P-48 was not utilized under the Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations NOC.</p>
<p><b>Zone or Area:</b>  <b>Abatement Technology:</b> Fan  <b>Required Units:</b> 1  <b>Add'l Description:</b></p>	Continuous	<p><b>CDM:</b> Field interviews.  <b>Comment:</b> Portable exhauster 296-P-48 (EU ID 749) operated under the 241-C-200 Series Tanks Retrieval NOC. 296-P-48 was not utilized under the Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations NOC.</p>
<p><b>Required Sampling:</b> Record sample collected biweekly.  <b>Sampling Frequency:</b> Continuous  <b>Radionuclide Requiring Measurement:</b> Each radionuclide that could contribute greater than 10 percent of the potential TEDE.</p>	Continuous	<p><b>CDM:</b> ABCASH program.  <b>Comment:</b> ABCASH Program, EDP code number E098. Portable exhauster 296-P-48 (EU ID 749) operated under the 241-C-200 Series Tanks Retrieval NOC. 296-P-48 was not utilized under the Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations NOC.</p>
<p><b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) &amp; WAC 246-247-075(2)  <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114</p>	Continuous	<p><b>CDM:</b> CH2M HILL NESHAP quality assurance program.  <b>Comment:</b> Portable exhauster 296-P-48 (EU ID 749) operated under the 241-C-200 Series Tanks Retrieval NOC. 296-P-48 was not utilized under the Categorical Tank Farm Facility Waste</p>

Requirement	Compliance Status	Compliance Determination Method
		Retrieval and Closure: Phase II Waste Retrieval Operations NOC.
<p style="text-align: center;">Permit: AIR 06-1052 - B <b>Issue Date:</b>10-05-06 <b>Effective Date:</b>10-05-06  <b>NOC:</b> 241-C-200 Series Tanks Retrieval  <b>WDOH NOC ID:</b> 698 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0749-001</p>		
Requirement	Compliance Status	Compliance Determination Method
<p>The total abated emission limit for this Notice of Construction is limited to 1.72E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice of Construction is limited to 2.18E+00 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).</p>	Continuous	<p><b>CDM:</b> Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The activities listed below are approved for the C-200 Series Waste Retrieval effort:</p> <p><b>Retrieval Activities (Stack):</b></p> <ol style="list-style-type: none"> <li>i. Operation of the new portable exhauster and ventilation system.</li> <li>ii. Retrieve wastes from C-201, C-202, C-203, and C-204 using the AMS to vacuum wastes to the central vessel skid.</li> <li>iii. Pump waste from central vessel skid to the double shell tank system using OGT lines</li> </ol> <p><b>Diffuse and Fugitive:</b></p> <p>a. Proposed Actions for Tanks C-201 through C-204:</p> <ol style="list-style-type: none"> <li>i. Remove the thermocouple trees from the top of the pump pit (no pit access is necessary) using ALARACTs 13, 14, and 15.</li> <li>ii. Access pump pit to remove pump in C-204 (no removal of sluice eductors will be performed)(using ALARACTs 1, 4, 6, 13, 14 and 15) and general access may be needed for the other pump pits and have been calculated in a pit access potential-to-emit.</li> <li>iii. Remove the breather filters and reinstall with an inlet filter on each tank.</li> <li>iv. Lift the ventilation hatchway cover (condenser pit hatchway) which is 1/4-inch steel thickness and may be potentially attached to an old fiberglass filter assembly (using ALARACTs 1, 4, 6, 13, 14 and 15 as guidance for contamination level and controls) which will be withdrawn in a large sleeve (fully enclosed) from the pit, lifted, pig-tailed, and sealed. The filter will not be exposed to the environment while lifting. The filter will then be placed in a mixed waste disposal box and will not be left out in the environment. Smearable contamination levels on the outside of the bag will not exceed 50,000 dpm beta/gamma and 20 dpm alpha.</li> <li>v. Remove condenser pit filter assembly and replace tank breather filter with a Y-duct assembly (ALARACTs 1, 4, 12, 15, and 16) vi. Remove liquid level reels and thermocouple trees, 1 each per tank (ALARACTs 1, 4, 6, 12, 13, 14, and 15)</li> <li>vii. Remove sluice eductor pump from Tank C-204, if necessary</li> </ol>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>

Requirement	Compliance Status	Compliance Determination Method																		
<p>(ALARACTs 1, 4, 6, 12, 13, 14, and 15)</p> <p>b. Tank Equipment Installations:</p> <ul style="list-style-type: none"> <li>i. AMS with connected hydraulic power pack, one per tank (ALARACTs 1, 4, 6, 12, 13, and 14)</li> <li>ii. Install ventilation inlet filter assembly to existing inlet filter on each tank. (using ALARACTs 13 and 16).</li> <li>iii. Remove the ventilation hatchway (condenser pit) cover with the presumed attached fiberglass filter using a crane and lifting hook and placed immediately into a mixed waste disposal box. ALARACT 13 controls will be used for contamination guidance and controls (less than 50,000 dpm beta/gamma and 20 dpm alpha).</li> <li>iv. The asbestos gasket for the ventilation hatchway (condenser pit) if present will be removed using fixative while a bag is in place over the ventilation hatchway (condenser pit). The plastic will be slowly removed to minimize hatchway access while concurrently a new ventilation hatchway cover (condenser pit) will be slid onto the pit access next to the plastic and rebolted to the pit. ALARACT 13 controls will be used for contamination guidance and controls (less than 50,000 dpm beta/gamma and 20 dpm alpha). The ventilation hatchway will have a connection so that the 296-P-48 exhauster will be connected when active retrieval occurs.</li> <li>v. A single set of return and suction lines shall be placed at each tank to the central skid vacuum vessel during retrieval. After each tank is retrieved a small amount of water will be flushed through the line and checked for smearable contamination and dose readings by a Health Physics Technician to ensure minimal contamination is in place in the line. A valve will be closed at the tank surface manifold box, the end of each hose wrapped in plastic, and then moved to the next tank for retrieval. Contamination remaining in the lines when moved has been accounted for by including all of the current tank contents in the total retrieval potential-to-emit calculations.</li> <li>vi. Ventilation exhaust ducting, one per tank (ALARACTs 1, 4, 12, and 16)</li> <li>vii. Closed circuit TV s, one per tank (ALARACT 1, 4, 12,13, and 16)</li> <li>viii. Master camera control system skid, and connects to in-tank cameras (ALARACT 6, 13, and 16)</li> <li>ix. Central vessel skid, connect to individual AMS units, connect to the double shell tank via OGT lines (using hand digging or Guzzler, latest approved revision) (ALARACT 1, 4, 5, 6, 13, and 14)</li> <li>x. Pump skid with connected hydraulic power pack, and OGT lines (ALARACT 1, 4, 6, 12, 13, and 14)</li> <li>xi. Vacuum skid with connected hydraulic power pack (ALARACT 1, 4, 6, 12, 13, and 14)</li> <li>xii. Portable exhauster skid, connect via HVAC ducting to individual tank ventilation exhaust ducts (ALARACTs 1,4,6, 12, 13, and 14)</li> <li>xiii. Electrical cable and electric supply to hydraulic power packs, vessel skid, pump skid, vacuum skid, portable exhauster skid, inlet filter, in-tank cameras, and generator, control instrumentation (ALARACT 5)</li> <li>xiv. Air compressor and associated air supply lines to AMS, vessel skid, vacuum skid (ALARACT 5)</li> <li>xv. Instrumentation control room, water distribution sled, instrument electrical skid, diesel generator</li> </ul> <p>c. Remove tank equipment installed under this NOC for maintenance, repair, disposal, or re-use for future tank retrievals. (ALARACTs 1, 4, 6, 12, 13, 14, 15 and 16)</p>																				
<p>The Annual Possession Quantity is limited to the following radionuclides (Curies/year):</p> <table border="0"> <tr> <td>Ac-227</td> <td>1.36E-03</td> <td> </td> <td>Am-241</td> <td>4.07E+01</td> <td> </td> </tr> <tr> <td>Am-243</td> <td>9.41E-04</td> <td> </td> <td></td> <td></td> <td></td> </tr> <tr> <td>Ba-137 m</td> <td>3.96E+02</td> <td> </td> <td>C-14</td> <td>1.07E-02</td> <td> </td> </tr> </table>	Ac-227	1.36E-03		Am-241	4.07E+01		Am-243	9.41E-04					Ba-137 m	3.96E+02		C-14	1.07E-02		<p>Continuous</p>	<p>CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures perform work under ALARACT controls per WDOH approval dated March 05, 2007.</p>
Ac-227	1.36E-03		Am-241	4.07E+01																
Am-243	9.41E-04																			
Ba-137 m	3.96E+02		C-14	1.07E-02																

Requirement	Compliance Status	Compliance Determination Method
<p>Cd-113 m 3.83E-01              Cm-242 6.10E-02   Cm-243 2.92E-03              Cm-244 1.29E-03              Co-60 4.48E-03   Cs-134 3.97E-06            Cs-137 4.19E+02              Eu-152 2.16E+00   Eu-154 1.02E+00              Eu-155 7.55E+01            H-3 5.21E-03   I-129 1.46E-04            Nb-93 m 1.84E-01            Ni-59 4.00E+00   Ni-63 3.73E+02              Np-237 2.28E-04            Pa-231 4.61E-05   Pu-238 2.60E+00              Pu-239 1.16E+02            Pu-240 1.91E+01   Pu-241 1.42E+02              Pu-242 9.77E-04            Ra-226 3.47E-04   Ra-228 9.45E-10              Ru-106 7.24E-07            Sb-125 7.50E-03   Se-79 4.68E-03              Sm-151 1.66E+02            Sn-126 2.99E-02   Sr-90 2.20E+03              Tc-99 7.51E-02            Th-229 3.53E-07   Th-232 2.54E-12            U-232 4.38E-08            U-233 1.87E-09   U-234 2.00E-03              U-235 8.90E-05            U-236 1.95E-05   U-238 2.02E-03              Y-90 2.20E+03            Zr-93 2.06E-01  </p>		
<p>A daily radiological survey of all the ductwork flange connections shall be performed to verify there is no leakage of radiological contamination from the exhaust ductwork.</p>	Intermittent	<p><b>CDM:</b> Field interviews, radiological surveys, RSRs, CH2M HILL work planning/controls/documents, and procedures.  <b>Comment:</b> As of June 30, 2006, CH2M HILL understood that WDOH agreed to reduce the requirement for performing a daily radiological survey to weekly. The AOP was not modified to reflect this change in operations. As a result the compliance status is being reported as intermittent. The exhauster operated from January 1, 2007 through January 4, 2007 with no active retrieval ongoing at 241-C-204 tank.</p>
<p>At least once a shift a visual inspection of the ductwork, HEPA filter housing, fan, and flex connections shall be performed to verify the integrity of the ventilation system. Any deficiencies shall be reported to WDOH.</p>	Continuous	<p><b>CDM:</b> Field interviews, operating rounds, work control/planning/documents and procedures.</p>
<p>The batch holding vessel and associated piping shall be contained in a Conex-type container. That container shall be equipped with a single passive HEPA filter and leak detection devices. The leak detection shall be maintained and monitored in the two manifold boxes while in use [WAC 246-247-040(5)].</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>

Requirement	Compliance Status	Compliance Determination Method
The differential pressure across the pre-filter, primary HEPA filter, secondary HEPA filter and total differential pressure across the pre-filter, primary HEPA filter and secondary HEPA filter shall be measured and recorded at least once each shift. The differential pressure readings shall be trended and any unexpected fluctuations in the differential pressure shall be reported to WDOH.	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.
The new portable exhauster shall operate continuously when the AMS are operating in the tanks. Waste retrieval activities shall cease if the exhauster is not operating [WAC 246-247-040(5)].	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.
The heater trip set point shall be set below 200 F. [WAC 246-247-040(5)].	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.
The number of gallons of waste retrieved from each C-200 series tank shall be documented and reported to WDOH on completion [WAC 246-247-040(5)].	Continuous	<b>CDM:</b> Field interviews.
The total abated emission limit for 296-P-48 under this Notice of Construction is limited to 1.12E-03 to the Maximally Exposed Individual, comprised of 2.62E-04 mrem/year offsite and 8.53 E-04 mrem/year onsite. The total unabated emission limit on the potential-to-emit for 296-P-48 under this Notice of Construction is limited to 2.17 mrem/year to the Maximally Exposed Individual, comprised of 4.62E-01 offsite and 1.7E+00 mrem/year onsite to the Maximally Exposed Individual [WAC 246-247-040(5)].	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.
Vacuum exhaust drawn from the batch holding vessel shall be routed back to tanks. The tanks shall be maintained under a negative pressure during tank retrieval activities [WAC 246-247-040(5)].	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.
Each HEPA shall be in-place tested annually in accordance with the requirements of ASME AG-1 and shall have a minimum efficiency of 99.95%. [WAC 246-247-040(5)]	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.
<p align="center"> <b>Permit: AIR 06-1057 - F Issue Date:10-05-06 Effective Date:10-05-06 Obsolete Date: 03-23-07</b>  <b>NOC: Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations</b>  <b>WDOH NOC ID: 703 Date In AOP: 01-01-07 Page in AOP: EU0749-005</b>  <b>NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3</b> </p>		
<p align="center"> <b>Permit: AIR 07-305 - F Issue Date:03-23-07 Effective Date:03-23-07</b>  <b>NOC: Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations</b>  <b>WDOH NOC ID: 703 Date In AOP: 05-03-07 Page in AOP: EU0749-005</b>  <b>NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3</b> </p>		

**P-241AZ301-001**  
WDOH Emission Unit ID : 751  
Page in AOP : EU0751-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b> Passive Breather Filter	Continuous	<b>CDM:</b> Field interviews.
<b>Required Sampling:</b> Smear survey on the inside surface of the ducting and downstream of the HEPA filter or on the outside of the screen covering the outlet of the vent. <b>Sampling Frequency:</b> 1 per year. <b>Radionuclide Requiring Measurement:</b> Levels below 10,000 dpm/100cm <sup>2</sup> alpha will verify low emissions.	Continuous	<b>CDM:</b> Annual Radiological Surveillance Task, RSRs, and field interviews.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114	Continuous	<b>CDM:</b> Near Field Monitoring Program.
Permit: AIR 06-1043 - B <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>NOC:</b> E-525 Double-Shell Tank (DST) Transfer System Modifications Project <b>WDOH NOC ID:</b> 688 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0751-001 <b>NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3</b>		

**DVS - Active**  
WDOH Emission Unit ID : 755  
Page in AOP : EU0755-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA Type Filter <b>Required Units:</b> 1 <b>Add'l Description:</b> Shall be a NucFil Model IHF-004 or other with prior approval by the department.	Continuous	<b>CDM:</b> Scheduled maintenance activity records.
<b>Required Sampling:</b> Smears of the exhaust vent at the end of each shift of operation. <b>Sampling Frequency:</b> End of each shift of operation <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA TOTAL GAMMA	Continuous	<b>CDM:</b> Facility operations and radiological control procedures.

Requirement	Compliance Status	Compliance Determination Method
<p><b>Federal and State Regulatory Requirement:</b> 40CFR 61.93(b)(4)(i) &amp; WAC 246-247-075(3)</p>	<p>Continuous</p>	<p><b>CDM:</b> HESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528) specifies the hardware and methods used to sample and the analytical methods used in the laboratory.</p>
<p align="center"> <b>Permit:</b> AIR 06-1054 - C    <b>Issue Date:</b>10-05-06    <b>Effective Date:</b>10-05-06    <b>Obsolete Date:</b> 03-15-07  <b>NOC:</b> Operation of the Transuranic Waste Retrieval Project  <b>WDOH NOC ID:</b> 700    <b>Date In AOP:</b> 01-01-07    <b>Page in AOP:</b> EU0755-001         </p>		
Requirement	Compliance Status	Compliance Determination Method
<p>The total abated emission limit for this Notice of Construction is limited to 4.30E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).</p>	<p>Continuous</p>	<p><b>CDM:</b> Annual evaluation of retrieval rates, containers/curies handled.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>Approved is the retrieval (unearth) and inspection of containers of suspect-transuranic (TRU) and TRU waste from trenches in the Low Level Burial Grounds (LLBG) and install NucFil ® filters or equivalent (as approved by the department) in the unvented (or inadequately vented) TRU containers. Venting and headspace gas sampling (HSGS) may be performed at the LLBG (in place with engineering controls or within venting enclosure) or at the following facilities licensed for such work (CWC, WRAP, or T Plant Complex). In addition, LLW containers posing a safety hazard (e.g., potential for pressurization, bulging, or similar abnormal condition) may also be vented.</p> <p>The venting of fiberglass reinforced polyester plywood (FRP) boxes is also approved. Two FRP venting systems will be used. Both systems will be capable of mating to various size FRP boxes.</p> <p>The first vent system uses a steel plate held against the side of an FRP box by a forklift as a blast shield for personnel protection in the event the container is pressurized. A gasket will provide a seal between the steel plate and the FRP box. A glove bag will be attached to the steel and the FRP box to provide for contamination control during the drilling of the FRP box. The glove bag contains a HEPA-type filter for passive control of contaminated particulates that may escape from the FRP box during the drilling operation.</p> <p>After the steel plate and glove bag are in place personnel will drill a pilot hole in the FRP box, monitor for the presence of contamination and hazardous gases, and install a Nucfil ® filter. A time weighted release of 30 minutes per box is allowed for drilling and filter installation. These activities will be conducted through glove ports that are an integral part of the glove bag. The drilling will be done with non-sparking and cold drilling techniques. A static dissipating cleaner manufactured by Statico ® or equivalent will be used to decay electrostatic build up in the fiberglass during drilling.</p> <p>A second vent system may be used that is similar to the portable Drum</p>	<p>Continuous</p>	<p><b>CDM:</b> Facility operations and radiological control procedures.</p>

Requirement	Compliance Status	Compliance Determination Method																				
<p>Venting System operating at T-Plant. A glove bog with HEPA-type filter is used without the steel plate and drilling will be done remotely. The drill assembly and motor and bit type will remain the same as the T-Plant system. The system uses a pneumatic cold drilling technique that utilizes remote activation. The venting system is placed on the top or side of the FRP box and held in place with a strap or clamps throughout the drilling and filter installation operation. A static dissipating cleaner manufactured by Statco® or equivalent will be used to decay electrostatic build up in the fiberglass during drilling. A time weighted release of 30 minutes per box is allowed for drilling and filter installation. After holes are drilled, Nucfil® filters will be hand installed in the FRP box using glove ports in the glove bag.</p> <p>Additional approval of the process for this activity is contained in the following Conditions/Limitations.</p>																						
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 5.40E-02 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Alpha-0   4.30E-04   Liquid/Particulate Solid   WAC 246-247-030(21)(e) Alpha release rate based on Am-241. See condition 4.</p> <p>B/G-0   6.40E-03   Liquid/Particulate Solid   WAC 246-247-030(21)(e) Beta/Gamma release rate based on Cs-137. See condition 4.</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <table border="0"> <tr> <td>Am-241</td> <td>Am-243</td> <td>Cf-252</td> <td>Cm-244</td> <td>Cs-134</td> </tr> <tr> <td>Cs-137</td> <td>Eu-152</td> <td>Eu-154</td> <td>Pu-238</td> <td>Pu-239/240</td> </tr> <tr> <td>Pu-241</td> <td>Sr-90</td> <td>U-234</td> <td>U-235</td> <td>U-236</td> </tr> <tr> <td>U-238</td> <td></td> <td></td> <td></td> <td></td> </tr> </table> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. WAC 246-247-110(9). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>	Am-241	Am-243	Cf-252	Cm-244	Cs-134	Cs-137	Eu-152	Eu-154	Pu-238	Pu-239/240	Pu-241	Sr-90	U-234	U-235	U-236	U-238					<p>Continuous</p>	<p><b>CDM:</b> Annual evaluation of retrieval rates, containers/curies handled.</p>
Am-241	Am-243	Cf-252	Cm-244	Cs-134																		
Cs-137	Eu-152	Eu-154	Pu-238	Pu-239/240																		
Pu-241	Sr-90	U-234	U-235	U-236																		
U-238																						
<p>A maximum of 9,000 containers of TRU waste are approved to be processed per year using the DVS. The processing rate is designed to be 3 to 6 drums per hour, or a maximum of 20 minutes per drum. Only one drum shall be process at a time per DVS unit (If a second DVS is acquired, it shall be registered and licensed by the department prior to use). Using the release fraction of 1.0E-3 for particulates and a time factor of 1.9E-1 (20 minutes per container multiplied by 9, 000 containers and divided by 526,000 minutes per year) the potential unabated release rates using the DVS is 4.3E-4 Ci/yr americium 241 and 3.2E-6 Ci/yr cesium 137. This</p>	<p>Continuous</p>	<p><b>CDM:</b> Facility operations and radiological control procedures.</p>																				

Requirement	Compliance Status	Compliance Determination Method
alternative release fraction is approved for this emission unit.		
It is recognized that other radionuclides may be present in very limited quantities.	Not Applicable	<b>CDM:</b> This is a statement of fact. There is no action to be taken by the Permittee.
The department shall be notified within 24 hours of all drum vents that fail to be installed properly when using the drum venting system. (An example of a "failure" is a pressure release that blows past the seat of the boot or a deflagration)."	Continuous	<b>CDM:</b> Facility operations and radiological control procedures.
The system shall be built to meet NQA-1 requirements and shall be aerosol tested annually using ANSI N-510 as guidance for non-ANSI N-509 systems. If in-field aerosol testing is not feasible, an approved alternative is given to replace the filters on an annual basis with the manufacturer tested and certification of HEPA filter with a tested rating of 99.97% efficiency. Records of this testing shall be maintained on file.	Continuous	<b>CDM:</b> Scheduled maintenance activity records.
<p>This approval applies to these additional activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p><b>TRU Waste Retrieval</b> The area to be excavated is managed as a 'clean' area, free of surface contamination measurable with field survey instruments. Because of the possibility of encountering previously undetected subsurface contamination, or future contamination from windblown sources, all work will be performed in accordance with as low as reasonably achievable (ALARA) requirements as determined by the Radiological Control organization. These requirements shall be carried out through the activity work packages and associated radiological work permits (RWP) which will be managed as required retrievable records for this activity.</p> <p>The overburden soil will be removed to expose the waste containers. Excavation equipment will be chosen to effectively remove soil and retrieve the waste containers while minimizing damage to the containers. Excavation activities will be monitored to identify contamination that might be present and to minimize emissions. Any contaminated soils will be managed in accordance with applicable requirements and regulations.</p> <p>The most efficient methodology for removing the uncontaminated overburden from the containers will include the maximum use of conventional methods such as backhoes, front-end loaders, mechanical brooms (boom mounted), or manual digging with shovels and similar hand tools. Only manual methods shall be used to excavate contaminated soil. High-efficiency particulate air (HEPA) filtered vacuums are allowed for use for spot contamination in accordance with the HEPA-filtered vacuum unit (HVU) NOC (DOE/RL-97-50, as amended).</p> <p>The specific steps or approach to uncovering the containers will vary according to the configuration of the trench to be uncovered, the nearby trenches or fences, the designated location of the spoils pile, the planned extent of the soil removal, etc. Therefore, excavation activities</p>	Continuous	<b>CDM:</b> Facility operations and radiological control procedures.

Requirement	Compliance Status	Compliance Determination Method
<p>will be planned before arriving at the job site. Excavation activities will be controlled closely. When the quantity of soil removed with heavy equipment has reached the logical end, hand tools or HVUs could be used to complete the uncontaminated soil removal operations to access and remove the plastic and plywood materials (to be set aside for reuse or disposal) covering the containers.</p> <p>The exposed containers will be visually inspected and surveyed for contamination. Abnormal drum conditions will be managed as follow: Contaminated containers will be decontaminated or over packed. Bulging or potentially pressurized containers will be vented as described in the Venting Containers Section. Retrieval activities will include appropriate disposition of small amounts of incidental contaminated soil (e.g., containerized or fixed in place). Larger areas of contamination shall be fixed and the area posted as required by the Radiological Control organization for later disposition. Bulk transfer of contaminated soils for disposal in another trench also could occur.</p> <p>All containers will be inspected to verify integrity. The container inspection will consist of a visual examination to determine if there are significant corrosion, holes, dents or other visual deformities. All containers may be moved, turned, or otherwise relocated (manually or with powered equipment, slings, clamps, or appropriate rigging) to facilitate an adequate visual inspection.</p> <p>Over packing containers with minor defects (pinholes, corrosion) is routinely performed at the LLBG and CWC and is expected for up to 10 to 50 percent of the retrieved containers. Precautions will be provided to safely retrieve containers of questionable integrity. The process description for management of abnormal containers will be maintained in written procedures. Operating procedures will be established to safely deal with these containers. Containers that obviously are reached or deformed also will be safely removed. Removal methods will be determined on a case-by-case basis. A breached container that can provide secure confinement will be relocated to an area for repackaging or over packing. If the container cannot provide adequate confinement for the contents, the container and contents will be over packed before being relocated. The over packed containers will be managed according to the LLW (including mixed waste) or TRU waste designation (TRU containers are those with TRU content greater than 100 nCi/g), established by records or assay.</p> <p>After a container is inspected visually and the structural integrity established, the container (if shown by assay or records to be designated as TRU) will be staged for venting, if necessary, or moved to another TSD unit for venting. Retrieved TRU waste containers in their staged configuration at the LLBG will be inspected for outwardly visible signs of corrosion or degradation (over packing as needed).</p>		
<p>This approval applies to these additional activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p><b>Venting of Containers</b> All work shall be performed in accordance with the LLBG radiological control procedures and ALARA requirements. These requirements are carried out through the procedures, activity work packages, and associated RWP's.</p> <p>The vent filters will be installed in designated containers by using the Drum Venting System (DVS) and/or Dart System that ensures personnel and environmental protection. The methodology will require penetrating the container and inserting a vent. Penetration of the lid will be accomplished by either drilling through the lid with a filter assembly fitted with a short hollow drill bit (using DVS) or puncturing</p>	<p>Continuous</p>	<p><b>CDM:</b> Facility operations and radiological control procedures.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>the lid with a filter dart (using Dart system). Either method will result in emissions being routed through a filter during the venting process.</p> <p>Most drums slated for venting will be vented with the DVS, consisting of a trailer with a chamber allowing an operator to sample the drum (screening HSGS for hydrogen content) and install a NucFil filter. Potential emissions from these operations are point source emissions.</p> <p>Bulging or potentially pressurized drums will be evaluated to determine best method and location to vent (Dart-in place, Dart-relocate, or move to the DVS). The Dart System is a portable unit that straps directly onto a drum, using a pneumatic driver remotely activated by wire or radio transmitter. This system penetrates the drum lid to install a NucFil filter with an aluminum bronze housing to prevent the possibility of sparking. Potential emissions from these operations will be considered diffuse and fugitive. The same Dart System will be used to install sample ports, consisting of a closure set screw covering a septum for withdrawing a sample for HSGS, in containers with existing vents at the LLBG, CWC, WRAP, or T Plant Complex, without creating a new pathway for potential emissions.</p>		

**Permit: AIR 07-307 - C Issue Date:03-23-07 Effective Date:03-15-07 Obsolete Date: 10-19-07**  
**NOC: Operation of the Transuranic Waste Retrieval Project**  
**WDOH NOC ID: 719 Date In AOP: 05-03-07 Page in AOP: EU0755-001**

Requirement	Compliance Status	Compliance Determination Method
<p>The total abated emission limit for this Notice of Construction is limited to 3.44E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).</p>	<p>Continuous</p>	<p><b>CDM: Annual evaluation of retrieval rates, containers/curies handled.</b></p>
<p>Excavation and Retrieval of Containers (drums or boxes) Work will be performed in accordance with as low as reasonably achievable (ALARA).</p> <p>The specific steps or approach to uncovering the containers will vary according to the configuration of the trench to be uncovered, the proximity of nearby trenches or fences, the designated location of the spoils pile, the planned extent of the soil removal, and other similar considerations.</p> <p>Work to be performed within the V notched trenches is similar to the ongoing TRU retrieval project, but much of it may be performed within a weather resistant structure(s) that will be relocatable along the trench. Weather enclosures are effectively used for similar remediation activities at other U.S. Department of Energy (DOE) sites and in general industrial use. The use of a weather resistant enclosure could allow a more effective recovery from events involving degraded containers and potential contamination spreads.</p> <p>The overburden soil will be removed to expose the waste containers. Excavation equipment will be chosen to effectively remove soil and retrieve the waste containers while minimizing damage to the containers. Excavation activities will be monitored to identify contamination that might be present and to minimize emissions.</p> <p>The most efficient methodology for removing the uncontaminated overburden from the containers will include the maximum use of conventional methods such as backhoes, front end loaders, mechanical brooms (boom mounted), or manual digging with shovels and similar</p>	<p>Continuous</p>	<p><b>CDM: Facility operations and radiological control procedures.</b></p>

Requirement	Compliance Status	Compliance Determination Method
<p>hand tools. Hand tools predominantly may be used to excavate contaminated soil. High efficiency particulate air (HEPA) filtered vacuums may be used for soil excavation, and spot contamination in accordance with the HEPA filtered vacuum unit (HVU) NOC (DOE/RL 97 50, as amended). Within the V Notched trenches, it is more likely that the use of a vacuum to remove larger quantities of soil from the top surface of buried containers and soil materials in the interstices surrounding containers will be employed. Any use of the sitewide Guzzler® will be performed under the NOC applicable to the unit.</p> <p>Excavation activities will be controlled closely. When the quantity of soil removed with heavy equipment has reached the logical end, hand tools, light equipment, or HVUs may be used to complete the soil removal operations and to access and remove the plastic and plywood materials (to be set aside for reuse or disposal) covering the containers.</p> <p>The exposed containers will be visually inspected and surveyed for contamination. Abnormal drum conditions will be managed as follows: Contaminated containers will be decontaminated or overpacked as needed. Bulging or potentially pressurized containers will be vented. Retrieval activities will include appropriate disposition of small amounts of incidental contaminated soil (e.g., containerized or fixed in place). Larger areas of contamination could be fixed and the area posted as required by the Radiological Control organization for later disposition. Bulk transfer of contaminated soils for disposal in another trench also could occur. All containers will be inspected to verify integrity. The container inspection will consist of a visual examination to determine if there are significant corrosion, holes, dents or other visual deformities. All containers could be moved, turned, or otherwise relocated (manually or with powered equipment, slings, clamps, or appropriate rigging) to facilitate an adequate visual inspection.</p> <p>Overpacking containers with minor defects (pinholes, corrosion) is routinely performed at the LLBG and CWC. Precautions will be provided to safely retrieve containers of questionable integrity. It is expected that 10 to 100 percent of the newly retrieved containers will require overpacking or some other form of confinement. Breached and heavily corroded containers will usually be overpacked before being relocated. However, if a breached or heavily corroded container can provide adequate confinement, it may be relocated to an area for overpacking. The overpacked containers will be managed according to the LLW (including mixed waste) or TRU waste designation (TRU containers are those with TRU content greater than 100 nCi/g), established by records or assay.</p> <p>After a container is inspected visually and the structural integrity established, the container, if unvented, will be staged for venting, or moved to another TSD unit for venting. Retrieved TRU waste containers in their staged configuration at the LLBG will be inspected for outwardly visible signs of corrosion or degradation (overpacking as needed).</p> <p><b>Venting of Containers</b> All work will be performed in accordance with the applicable operating procedures, radiological control procedures, radiological work permit (RWPs) and ALARA requirements.</p> <p>Experience at other DOE sites has shown a potential for flammable gases to be present in some containers. Therefore all containers will be evaluated and vented if needed even if not specifically designated as TRU containers.</p> <p>The vent filters will continue to be installed in designated containers via one of the drum venting systems that ensures personnel and</p>		

Requirement	Compliance Status	Compliance Determination Method
<p>environmental protection. The methodology will require penetrating the container and inserting a vent. Penetration of the lid will be accomplished by either drilling through the lid or puncturing the lid with a filter dart (using Dart System). Container venting systems are described in the following text. Designated drums slated for venting will be vented with the MDVS, Catagorical DVS, or other venting methods (with prior approval of WDOH).</p> <p><b>MDVS (Mobile Drum Venting System)</b> The MDVS is enclosed in a trailer containing system equipment allowing an operator to sample and/or vent the drum and install a NucFil® filter or equivalent. Potential emissions from MDVS operations are point source emissions. Bulging or potentially pressurized drums may be overpacked, placed in restraints and then vented.</p> <p>The MDVS trailer may be equipped with a HEPA vacuum system to prevent contamination from exiting through any incidental gaps and to clean room air in the event of airborne contamination. These emissions will be accounted for with the sitewide HEPA Vacuum NOC. The system could be automatically activated when the continuous air monitor (CAM) alarms or it could be manually activated. The CAM and/or air sample results will be used to verify the PTE is within the limits of the sitewide HEPA vacuum NOC.</p> <p><b>Dart System</b> The Dart System is a portable unit that clamps directly onto a drum, using a pneumatic driver remotely activated by wire or radio transmitter. This system penetrates the drum lid with minimal risk of contamination release to install a NucFil® filter with an aluminum bronze housing to prevent the possibility of sparking. Potential emissions from these operations will be considered diffuse and fugitive.</p> <p><b>Catagorical DVS2 (Drum Venting System 2)</b> A vent system utilizing a pneumatic drill DVS2 is remotely actuated to vent the drum. After the drum is vented, a filter is hand-installed, the head-space of the drum is sampled and the drum is staged in a designated area for diffusion.</p> <p>Glove bags may be used to contain potential contamination. A portable HEPA vacuum with variable speed is connected to the HEPA filter on the glovebag and will be used for exhausting the glovebag. The vacuum will be operated during venting and for a short time following venting at a low flow. Glovebags will also have ports to check for contamination or hazardous gases.</p> <p>As many as three venting assemblies will be installed in a weather enclosure such as a Conex box. Connections for the third assembly may be used with the TRU Retrieval Drum Restraint in the event of a bulged or high DE-Ci drum.</p> <p><b>Other Venting Methods</b> The venting of other containers, the majority being fiberglass reinforced plywood (FRP) boxes but could also be metal containers - hereafter referred to collectively as boxes, located in CWC and the LLBG may be done. Two venting systems for the boxes will be used. Both systems will be capable of mating to various sized boxes and will be capable of installing a Nucfil® filter or equivalent into the box headspace.</p> <p>One type of vent system uses a steel plate held in place against the side of a box by a forklift as a blast shield for personnel protection in the event the container is pressurized. A rubber gasket will provide a seal between the steel plate and the box. A glove bag will then be attached</p>		

Requirement	Compliance Status	Compliance Determination Method																				
<p>to the steel plate and the box to provide for contamination control during the drilling of the box. The glove bag contains a HEPA-type filter for passive control of contaminated particulates that may escape from the box during the drilling operation. In the event contamination is encountered during filter installation, a HEPA vacuum would be connected for use only after the filter is installed. The HEPA vacuum would be subject to the sitewide HEPA vacuum NOC.</p> <p>After the steel plate and glove bag are in place personnel will drill a pilot hole in the box, monitor for the presence of contamination and hazardous gases, and install a Nucfil® filter or equivalent. A time weighted release of 60 minutes per box is allowed for drilling and filter installation. These activities will be conducted through glove ports that are an integral part of the glove bag. The drilling will be done with non-sparking and cold drilling techniques. A static dissipating cleaner manufactured by STATICO™ or equivalent will be used to decay electrostatic build up in the fiberglass during drilling.</p> <p>A second type of vent system for FRP boxes may be used that is similar to the portable DVS operating at T Plant. There could be several of these units in use within the LLBG. A glove bag with HEPA-type filter is used but without the steel plate and the drilling will be done remotely. The drill assembly and motor and bit type will remain the same. The system uses a pneumatic cold drilling technique that utilizes remote activation. The FRP venting system is placed on the top or side of the box and held in place with straps or clamps throughout the drilling and filter installation operation. A static dissipating cleaner manufactured by STATICO™ or an equivalent will be used to decay electrostatic build up in the fiberglass during drilling. A time weighted release of 60 minutes per box is allowed for drilling and filter installation. After holes are drilled, Nucfil® filters or equivalent will be hand installed in the box using glove ports in the glovebag.</p> <p>In the event contamination is encountered during the installation of a Nucfil® a HEPA vacuum would be connected for use only after the Nucfil® is installed. The HEPA vacuum would be subject to the sitewide HEPA vacuum NOC.</p>																						
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 9.01E-02 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Alpha-0   4.30E-04   Liquid/Particulate Solid   WAC 246-247-030(21)(e) Alpha release rate based on Am-241. See condition 4.</p> <p>B/G-0   1.02E-02   Liquid/Particulate Solid   WAC 246-247-030(21)(e) Beta/Gamma release rate based on Cs-137. See condition 4.</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <table border="0"> <tr> <td>Am-241</td> <td>Am-243</td> <td>Cf-252</td> <td>Cm-244</td> <td>Cs-134</td> </tr> <tr> <td>Cs-137</td> <td>Eu-152</td> <td>Eu-154</td> <td>Pu-238</td> <td>Pu-239/240</td> </tr> <tr> <td>Pu-241</td> <td>Sr-90</td> <td>U-234</td> <td>U-235</td> <td>U-236</td> </tr> <tr> <td>U-238</td> <td></td> <td></td> <td></td> <td></td> </tr> </table> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. WAC 246-247-110(9). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would</p>	Am-241	Am-243	Cf-252	Cm-244	Cs-134	Cs-137	Eu-152	Eu-154	Pu-238	Pu-239/240	Pu-241	Sr-90	U-234	U-235	U-236	U-238					<p>Continuous</p>	<p>CDM: Annual evaluation of retrieval rates, containers/curies handled.</p>
Am-241	Am-243	Cf-252	Cm-244	Cs-134																		
Cs-137	Eu-152	Eu-154	Pu-238	Pu-239/240																		
Pu-241	Sr-90	U-234	U-235	U-236																		
U-238																						

Requirement	Compliance Status	Compliance Determination Method
<p>constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>		
<p>A maximum of 9,000 containers of waste are approved to be processed per year using the DVS or the Catagorical DVS2. The processing rate is designed to be 60 minutes per container. Only one drum shall be processed at a time per DVS unit (If a second DVS is acquired, it shall be licensed by the department prior to use). Using the release fraction of 1.0E-3 for particulates and a time factor of 1.03 (60 minutes per container multiplied by 9,000 containers and divided by 526,000 minutes per year) the potential unabated release rates using the DVS is 1.28 E-3 Ci/yr americium 241 and 1.92 E-2 Ci/yr cesium 137. This alternative release fraction is approved for this emission unit. An average of 53 DE-Ci is assumed with a maximum of 1.27 E-03 DE-Ci/yr unabated released from the staging and handling of vented containers.</p>	Continuous	<p><b>CDM:</b> Facility operations and radiological control procedures.</p>
<p>It is recognized that other radionuclides may be present in very limited quantities.</p>	Not Applicable	<p><b>CDM:</b> This is a statement of fact. There is no action to be taken by the Permittee.</p>
<p>The department shall be notified within 24 hours of all drum vents that fail to be installed properly and smears show &gt;2,000 dpm/100 cm<sup>2</sup> alpha or &gt;100,000 dpm/100 cm<sup>2</sup> beta/gamma removable contamination (an example of a "failure" is a pressure release that blows past the seat of the boot or a deflagration).</p>	Continuous	<p><b>CDM:</b> Facility operations and radiological control procedures.</p>
<p>The system shall be built to meet NQA-1 requirements and shall be aerosol tested annually using ANSI N-510 as guidance for non-ANSI N-509 systems. If in-field aerosol testing is not feasible, an approved alternative is given to replace the filters on an annual basis with the manufacturer tested and certification of HEPA filter with a tested rating of 99.97% efficiency. Records of this testing shall be maintained on file.</p>	Continuous	<p><b>CDM:</b> Scheduled maintenance activity records.</p>
<p>This approval applies to these additional activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>TRU Waste Retrieval</p> <p>Encountering contamination is expected during excavation; therefore, to determine a potential to emit if contamination is encountered, the administrative control points for contamination, as monitored by standard radiological field instrumentation, will be used to bound emissions based on current efficiencies of typical SWSD field</p>	Continuous	<p><b>CDM:</b> Facility operations and radiological control procedures.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>contamination instruments. To determine the corresponding soil concentration in picocuries per grams of individual radionuclides, conversion factors, as developed in Soil Contamination Standards for Protection of Personnel (HNF 2418) were used. The average soil density was assumed to be 98 pounds per cubic foot. The beta gamma contributing radionuclides were assumed to be represented by cesium 137 and the alpha contributing radionuclides were assumed to be represented by americium 241 (predominant alpha contributing radionuclide in the soil is unknown; therefore, assumption of americium 241 will produce the most conservative dose consequence). The respective volumes of contaminated soil (i.e., 300 m<sup>3</sup>, 3 m<sup>3</sup>, and 0.3 m<sup>3</sup>) at the three contamination levels are considered as released from manual excavation, using a release fraction of 1.0 E-3.</p> <p>The potential unabated dose rate from manual excavation is 2.79 E-03 mrem/year. No credit is taken for abatement; therefore, the abated emissions are assumed as the unabated emissions. Although fixatives and similar controls would be employed for the higher contamination level and notification level contamination, no credit is being taken for abatement; therefore, the abated dose rate is the unabated dose rate.</p>		
<p>This approval applies to these additional activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p><b>Venting of Containers</b> All work shall be performed in accordance with the LLBG radiological control procedures and ALARA requirements. These requirements are carried out through the procedures, activity work packages, and associated RWPs.</p> <p>The vent filters will be installed in designated containers by using the Drum Venting System (DVS) and/or Dart System that ensures personnel and environmental protection. The methodology will require penetrating the container and inserting a vent. Penetration of the lid will be accomplished by either drilling through the lid with a filter assembly fitted with a short hollow drill bit (using DVS) or puncturing the lid with a filter dart (using Dart system). Either method will result in emissions being routed through a filter during the venting process.</p> <p>Most drums slated for venting will be vented with the DVS, consisting of a trailer with a chamber allowing an operator to sample the drum (screening HSGS for hydrogen content) and install a NucFil filter. Potential emissions from these operations are point source emissions.</p> <p>Bulging or potentially pressurized drums will be evaluated to determine best method and location to vent (Dart-in place, Dart-relocate, or move to the DVS). The Dart System is a portable unit that straps directly onto a drum, using a pneumatic driver remotely activated by wire or radio transmitter. This system penetrates the drum lid to install a NucFil ® filter with an aluminum bronze housing to prevent the possibility of sparking. Potential emissions from these operations will be considered diffuse and fugitive. The same Dart System will be used to install sample ports, consisting of a closure set screw covering a septum for withdrawing a sample for HSGS, in containers with existing vents at the LLBG, CWC, WRAP, or T Plant Complex, without creating a new pathway for potential emissions.</p>	Continuous	CDM: Facility operations and radiological control procedures.

Requirement	Compliance Status	Compliance Determination Method
<p>Permit: AIR 07-1012 - C Issue Date:10-22-07 Effective Date:10-19-07            NOC: Operation of the Transuranic Waste Retrieval Project            WDOH NOC ID: 719 Date In AOP: 12-05-07 Page in AOP: EU0755-001</p>		
<p>The total abated emission limit for this Notice of Construction is limited to 3.44E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).</p>	<p>Continuous</p>	<p>CDM: Annual evaluation of retrieval rates, containers/curies handled.</p>
<p>Excavation and Retrieval of Containers (drums or boxes)            Work will be performed in accordance with as low as reasonably achievable (ALARA).</p> <p>The specific steps or approach to uncovering the containers will vary according to the configuration of the trench to be uncovered, the proximity of nearby trenches or fences, the designated location of the spoils pile, the planned extent of the soil removal, and other similar considerations.</p> <p>Work to be performed within the V notched trenches is similar to the ongoing TRU retrieval project, but much of it may be performed within a weather resistant structure(s) that will be relocatable along the trench. Weather enclosures are effectively used for similar remediation activities at other U.S. Department of Energy (DOE) sites and in general industrial use. The use of a weather resistant enclosure could allow a more effective recovery from events involving degraded containers and potential contamination spreads.</p> <p>The overburden soil will be removed to expose the waste containers. Excavation equipment will be chosen to effectively remove soil and retrieve the waste containers while minimizing damage to the containers. Excavation activities will be monitored to identify contamination that might be present and to minimize emissions.</p> <p>The most efficient methodology for removing the uncontaminated overburden from the containers will include the maximum use of conventional methods such as backhoes, front end loaders, mechanical brooms (boom mounted), or manual digging with shovels and similar hand tools. Hand tools predominantly may be used to excavate contaminated soil. High efficiency particulate air (HEPA) filtered vacuums may be used for soil excavation, and spot contamination in accordance with the HEPA filtered vacuum unit (HVU) NOC (DOE/RL 97 50, as amended). Within the V Notched trenches, it is more likely that the use of a vacuum to remove larger quantities of soil from the top surface of buried containers and soil materials in the interstices surrounding containers will be employed. Any use of the sitewide Guzzler® will be performed under the NOC applicable to the unit.</p> <p>Excavation activities will be controlled closely. When the quantity of soil removed with heavy equipment has reached the logical end, hand tools, light equipment, or HVUs may be used to complete the soil removal operations and to access and remove the plastic and plywood materials (to be set aside for reuse or disposal) covering the containers.</p> <p>The exposed containers will be visually inspected and surveyed for contamination. Abnormal drum conditions will be managed as follows: Contaminated containers will be decontaminated or overpacked as needed. Bulging or potentially pressurized containers will be vented. Retrieval activities will include appropriate disposition of small amounts of incidental contaminated soil (e.g., containerized or fixed in place). Larger areas of contamination could be fixed and the area posted as required by the Radiological Control organization for later disposition. Bulk transfer of contaminated soils for disposal in another</p>	<p>Continuous</p>	<p>CDM: Facility operations and radiological control procedures.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>trench also could occur. All containers will be inspected to verify integrity. The container inspection will consist of a visual examination to determine if there are significant corrosion, holes, dents or other visual deformities. All containers could be moved, turned, or otherwise relocated (manually or with powered equipment, slings, clamps, or appropriate rigging) to facilitate an adequate visual inspection.</p> <p>Overpacking containers with minor defects (pinholes, corrosion) is routinely performed at the LLBG and CWC. Precautions will be provided to safely retrieve containers of questionable integrity. It is expected that 10 to 100 percent of the newly retrieved containers will require overpacking or some other form of confinement. Breached and heavily corroded containers will usually be overpacked before being relocated. However, if a breached or heavily corroded container can provide adequate confinement, it may be relocated to an area for overpacking. The overpacked containers will be managed according to the LLW (including mixed waste) or TRU waste designation (TRU containers are those with TRU content greater than 100 nCi/g), established by records or assay.</p> <p>After a container is inspected visually and the structural integrity established, the container, if unvented, will be staged for venting, or moved to another TSD unit for venting. Retrieved TRU waste containers in their staged configuration at the LLBG will be inspected for outwardly visible signs of corrosion or degradation (overpacking as needed).</p> <p><b>Venting of Containers</b> All work will be performed in accordance with the applicable operating procedures, radiological control procedures, radiological work permit (RWPs) and ALARA requirements.</p> <p>Experience at other DOE sites has shown a potential for flammable gases to be present in some containers. Therefore all containers will be evaluated and vented if needed even if not specifically designated as TRU containers.</p> <p>The vent filters will continue to be installed in designated containers via one of the drum venting systems that ensures personnel and environmental protection. The methodology will require penetrating the container and inserting a vent. Penetration of the lid will be accomplished by either drilling through the lid or puncturing the lid with a filter dart (using Dart System). Container venting systems are described in the following text. Designated drums slated for venting will be vented with the MDVS, Catagorical DVS, or other venting methods (with prior approval of WDOH).</p> <p><b>MDVS (Mobile Drum Venting System)</b> The MDVS is enclosed in a trailer containing system equipment allowing an operator to sample and/or vent the drum and install a NucFil® filter or equivalent. Potential emissions from MDVS operations are point source emissions. Bulging or potentially pressurized drums may be overpacked, placed in restraints and then vented.</p> <p>The MDVS trailer may be equipped with a HEPA vacuum system to prevent contamination from exiting through any incidental gaps and to clean room air in the event of airborne contamination. These emissions will be accounted for with the sitewide HEPA Vacuum NOC. The system could be automatically activated when the continuous air monitor (CAM) alarms or it could be manually activated. The CAM and/or air sample results will be used to verify the PTE is within the limits of the sitewide HEPA vacuum NOC.</p> <p>Dart System</p>		

Requirement	Compliance Status	Compliance Determination Method
<p>The Dart System is a portable unit that clamps directly onto a drum, using a pneumatic driver remotely activated by wire or radio transmitter. This system penetrates the drum lid with minimal risk of contamination release to install a NucFil® filter with an aluminum bronze housing to prevent the possibility of sparking. Potential emissions from these operations will be considered diffuse and fugitive.</p> <p>Catagorical DVS2 (Drum Venting System 2) The DVS2 vent system, utilizing a pneumatic drill, is remotely actuated to vent the drum. After the drum is vented, a filter is hand-installed; the headspace of the drum is sampled and analyzed in the DVS2 via a sample port on the filter. The analysis process involves withdrawing a sample directly from the container head space through flexible tubing to a gas chromatograph (GC) for analysis. During analysis, the sample is heated up to 212°F (100°C) within the GC and subsequently allowed to cool to 70°F (21°C) or below before it is emitted to the atmosphere. Up to 150 of these samples are planned to be done per week per GC. No more than 9,000 drums per year will be analyzed by the combined HSGS units. Upon completion of analysis, the drum is staged in a designated area for diffusion. Glove bags may be used to contain potential contamination. A portable HEPA vacuum with a variable speed is connected to the HEPA filter on the glovebag and will be used for exhausting the glovebag. The vacuum will be operated during venting and for a short time following venting at a low flow. The vacuum may or may not be operated during the headspace analyses activities. Glovebags will also have ports to check for contamination or hazardous gases. As many as three venting assemblies will be installed in a weather enclosure such as a Conex box. Connections for the third assembly may be used with the TRU Retrieval Drum Restraint in the event of a bulged or high DE-Ci drum.</p> <p>The DVS2 unit will be installed within an enclosure such as a Conex box or trailer, and within the CWC complex, with side doors that will open to accommodate loading and unloading the drums.</p> <p>The HSGS analysis unit in the DVS2 will exhaust through the HEPA vacuum, although the vacuum may or may not be operating when the analysis is performed. A small percentage (0.5%) of the sample stream will be released as diffuse and fugitive.</p> <p>Other Venting Methods The venting of other containers, the majority being fiberglass reinforced plywood (FRP) boxes but could also be metal containers - hereafter referred to collectively as boxes, located in CWC and the LLBG may be done. Two venting systems for the boxes will be used. Both systems will be capable of mating to various sized boxes and will be capable of installing a Nucfil® filter or equivalent into the box headspace.</p> <p>One type of vent system uses a steel plate held in place against the side of a box by a forklift as a blast shield for personnel protection in the event the container is pressurized. A rubber gasket will provide a seal between the steel plate and the box. A glove bag will then be attached to the steel plate and the box to provide for contamination control during the drilling of the box. The glove bag contains a HEPA-type filter for passive control of contaminated particulates that may escape from the box during the drilling operation. In the event contamination is encountered during filter installation, a HEPA vacuum would be connected for use only after the filter is installed. The HEPA vacuum would be subject to the sitewide HEPA vacuum NOC.</p> <p>After the steel plate and glove bag are in place personnel will drill a pilot hole in the box, monitor for the presence of contamination and hazardous gases, and install a Nucfil® filter or equivalent. A time</p>		

Requirement	Compliance Status	Compliance Determination Method																				
<p>weighted release of 60 minutes per box is allowed for drilling and filter installation. These activities will be conducted through glove ports that are an integral part of the glove bag. The drilling will be done with non-sparking and cold drilling techniques. A static dissipating cleaner manufactured by STATICO™ or equivalent will be used to decay electrostatic build up in the fiberglass during drilling.</p> <p>A second type of vent system for FRP boxes may be used that is similar to the portable DVS operating at T Plant. There could be several of these units in use within the LLBG. A glove bag with HEPA-type filter is used but without the steel plate and the drilling will be done remotely. The drill assembly and motor and bit type will remain the same. The system uses a pneumatic cold drilling technique that utilizes remote activation. The FRP venting system is placed on the top or side of the box and held in place with straps or clamps throughout the drilling and filter installation operation. A static dissipating cleaner manufactured by STATICO™ or an equivalent will be used to decay electrostatic build up in the fiberglass during drilling. A time weighted release of 60 minutes per box is allowed for drilling and filter installation. After holes are drilled, Nucfil® filters or equivalent will be hand installed in the box using glove ports in the glovebag.</p> <p>In the event contamination is encountered during the installation of a Nucfil® a HEPA vacuum would be connected for use only after the Nucfil® is installed. The HEPA vacuum would be subject to the sitewide HEPA vacuum NOC.</p>																						
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 9.01E-02 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Alpha-0    4.30E-04    Liquid/Particulate Solid WAC 246-247-030 (21) (e) Alpha release rate based on Am-241. See condition 4.</p> <p>B/G-0        1.02E-02    Liquid/Particulate Solid WAC 246-247-030 (21) (e) Beta/Gamma release rate based on Cs-137. See condition 4.</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <table border="0"> <tr> <td>Am-241</td> <td>Am-243</td> <td>Cf-252</td> <td>Cm-244</td> <td>Cs-134</td> </tr> <tr> <td>Cs-137</td> <td>Eu-152</td> <td>Eu-154</td> <td>Pu-238</td> <td>Pu-239/240</td> </tr> <tr> <td>Pu-241</td> <td>Sr-90</td> <td>U-234</td> <td>U-235</td> <td>U-236</td> </tr> <tr> <td>U-238</td> <td></td> <td></td> <td></td> <td></td> </tr> </table> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. WAC 246-247-110(9). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>	Am-241	Am-243	Cf-252	Cm-244	Cs-134	Cs-137	Eu-152	Eu-154	Pu-238	Pu-239/240	Pu-241	Sr-90	U-234	U-235	U-236	U-238					<p>Continuous</p>	<p>CIDM: Annual evaluation of retrieval rates, containers/curies handled.</p>
Am-241	Am-243	Cf-252	Cm-244	Cs-134																		
Cs-137	Eu-152	Eu-154	Pu-238	Pu-239/240																		
Pu-241	Sr-90	U-234	U-235	U-236																		
U-238																						

Requirement	Compliance Status	Compliance Determination Method
<p>A maximum of 9,000 containers of waste are approved to be processed per year using the DVS or the Catagorical DVS2. The processing rate is designed to be 60 minutes per container. Only one drum shall be processed at a time per DVS unit (If a second DVS is acquired, it shall be licensed by the department prior to use). Using the release fraction of 1.0E-3 for particulates and a time factor of 1.03 (60 minutes per container multiplied by 9,000 containers and divided by 526,000 minutes per year) the potential unabated release rates using the DVS is 1.28 E-3 Ci/yr americium 241 and 1.92 E-2 Ci/yr cesium 137. This alternative release fraction is approved for this emission unit. An average of 53 DE-Ci is assumed with a maximum of 1.27 E-03 DE-Ci/yr unabated released from the staging and handling of vented containers.</p>	Continuous	CDM: Facility operations and radiological control procedures.
<p>It is recognized that other radionuclides may be present in very limited quantities.</p>	Not Applicable	CDM: This is a statement of fact. There is no action to be taken by the Permittee.
<p>The department shall be notified within 24 hours of all drum vents that fail to be installed properly and smears show &gt;2,000 dpm/100 cm<sup>2</sup> alpha or &gt;100,000 dpm/100 cm<sup>2</sup> beta/gamma removable contamination (an example of a "failure" is a pressure release that blows past the seat of the boot or a deflagration).</p>	Continuous	CDM: Facility operations and radiological control procedures.
<p>The system shall be built to meet NQA-1 requirements and shall be aerosol tested annually using ANSI N-510 as guidance for non-ANSI N-509 systems. If in-field aerosol testing is not feasible, an approved alternative is given to replace the filters on an annual basis with the manufacturer tested and certification of HEPA filter with a tested rating of 99.97% efficiency. Records of this testing shall be maintained on file.</p>	Continuous	CDM: Scheduled maintenance activity records.
<p>This approval applies to these additional activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p><b>TRU Waste Retrieval</b> Encountering contamination is expected during excavation; therefore, to determine a potential to emit if contamination is encountered, the administrative control points for contamination, as monitored by standard radiological field instrumentation, will be used to bound emissions based on current efficiencies of typical SWSD field contamination instruments. To determine the corresponding soil concentration in picocuries per grams of individual radionuclides, conversion factors, as developed in Soil Contamination Standards for Protection of Personnel (HNF 2418) were used. The average soil density was assumed to be 98 pounds per cubic foot. The beta gamma contributing radionuclides were assumed to be represented by cesium 137 and the alpha contributing radionuclides were assumed to be</p>	Continuous	CDM: Facility operations and radiological control procedures.

Requirement	Compliance Status	Compliance Determination Method
<p>represented by americium 241 (predominant alpha contributing radionuclide in the soil is unknown; therefore, assumption of americium 241 will produce the most conservative dose consequence). The respective volumes of contaminated soil (i.e., 300 m<sup>3</sup>, 3 m<sup>3</sup>, and 0.3 m<sup>3</sup>) at the three contamination levels are considered as released from manual excavation, using a release fraction of 1.0 E-3.</p> <p>The potential unabated dose rate from manual excavation is 2.79 E-03 mrem/year. No credit is taken for abatement; therefore, the abated emissions are assumed as the unabated emissions. Although fixatives and similar controls would be employed for the higher contamination level and notification level contamination, no credit is being taken for abatement; therefore, the abated dose rate is the unabated dose rate.</p>		
<p>This approval applies to these additional activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p><b>Venting of Containers</b> All work shall be performed in accordance with the LLBG radiological control procedures and ALARA requirements. These requirements are carried out through the procedures, activity work packages, and associated RWPs.</p> <p>The vent filters will be installed in designated containers by using the Drum Venting System (DVS) and/or Dart System that ensures personnel and environmental protection. The methodology will require penetrating the container and inserting a vent. Penetration of the lid will be accomplished by either drilling through the lid with a filter assembly fitted with a short hollow drill bit (using DVS) or puncturing the lid with a filter dart (using Dart system). Either method will result in emissions being routed through a filter during the venting process.</p> <p>Most drums slated for venting will be vented with the DVS, consisting of a trailer with a chamber allowing an operator to sample the drum (screening HSGS for hydrogen content) and install a NucFil filter. Potential emissions from these operations are point source emissions.</p> <p>Bulging or potentially pressurized drums will be evaluated to determine best method and location to vent (Dart-in place, Dart-relocate, or move to the DVS). The Dart System is a portable unit that straps directly onto a drum, using a pneumatic driver remotely activated by wire or radio transmitter. This system penetrates the drum lid to install a NucFil ® filter with an aluminum bronze housing to prevent the possibility of sparking. Potential emissions from these operations will be considered diffuse and fugitive. The same Dart System will be used to install sample ports, consisting of a closure set screw covering a septum for withdrawing a sample for HSGS, in containers with existing vents at the LLBG, CWC, WRAP, or T Plant Complex, without creating a new pathway for potential emissions.</p>	<p>Continuous</p>	<p>CDM: Facility operations and radiological control procedures.</p>

**DVS - Passive**  
WDOH Emission Unit ID : 756  
Page in AOP : EU0756-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA Type Filter <b>Required Units:</b> 1 <b>Add'l Description:</b> Shall be a Pall® Model Ultramet or other with prior approval by the department.	Continuous	<b>CDM:</b> Scheduled maintenance activity records.
<b>Required Sampling:</b> Smears of the exhaust vent at the end of each shift of operation. <b>Sampling Frequency:</b> End of each shift of operation. <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA TOTAL GAMMA	Continuous	<b>CDM:</b> Facility operations and radiological control procedures.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3)	Continuous	<b>CDM:</b> NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528) specifies the hardware and methods used to sample and the analytical methods used in the laboratory.
Permit: AIR 06-1054 - D <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>Obsolete Date:</b> 03-15-07 <b>NOC:</b> Operation of the Transuranic Waste Retrieval Project <b>WDOH NOC ID:</b> 700 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0756-001		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 4.30E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).	Continuous	<b>CDM:</b> Annual evaluation of retrieval rates, containers/curies handled.
This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.  Approved is the retrieval (unearth) and inspection of containers of suspect-transuranic (TRU) and TRU waste from trenches in the Low Level Burial Grounds (LLBG) and install NucFil® filters or equivalent (as approved by the department) in the unvented (or inadequately vented) TRU containers. Venting and headspace gas sampling (HSGS) may be performed at the LLBG (in place with engineering controls or within venting enclosure) or at the following facilities licensed for such work (CWC, WRAP, or T Plant Complex). In addition, LLW containers posing a safety hazard (e.g., potential for pressurization, bulging, or similar abnormal condition) may also be vented.	Continuous	<b>CDM:</b> Facility operations and radiological control procedures.

Requirement	Compliance Status	Compliance Determination Method																				
<p>The venting of fiberglass reinforced polyester plywood (FRP) boxes is also approved. Two FRP venting systems will be used. Both systems will be capable of mating to various size FRP boxes.</p> <p>The first vent system uses a steel plate held against the side of an FRP box by a forklift as a blast shield for personnel protection in the event the container is pressurized. A gasket will provide a seal between the steel plate and the FRP box. A glove bag will be attached to the steel and the FRP box to provide for contamination control during the drilling of the FRP box. The glove bag contains a HEPA-type filter for passive control of contaminated particulates that may escape from the FRP box during the drilling operation.</p> <p>After the steel plate and glove bag are in place personnel will drill a pilot hole in the FRP box, monitor for the presence of contamination and hazardous gases, and install a Nucfil® filter. A time weighted release of 30 minutes per box is allowed for drilling and filter installation. These activities will be conducted through glove ports that are an integral part of the glove bag. The drilling will be done with non-sparking and cold drilling techniques. A static dissipating cleaner manufactured by Statco® or equivalent will be used to decay electrostatic build up in the fiberglass during drilling.</p> <p>A second vent system may be used that is similar to the portable Drum Venting System operating at T-Plant. A glove bog with HEPA-type filter is used without the steel plate and drilling will be done remotely. The drill assembly and motor and bit type will remain the same as the T-Plant system. The system uses a pneumatic cold drilling technique that utilizes remote activation. The venting system is placed on the top or side of the FRP box and held in place with a strap or clamps throughout the drilling and filter installation operation. A static dissipating cleaner manufactured by Statco® or equivalent will be used to decay electrostatic build up in the fiberglass during drilling. A time weighted release of 30 minutes per box is allowed for drilling and filter installation. After holes are drilled, Nucfil® filters will be hand installed in the FRP box using glove ports in the glove bag.</p> <p>Additional approval of the process for this activity is contained in the following Conditions/Limitations.</p>																						
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 5.40E-02 mrem/year.</p> <p>Approved are the associated potential release rates (Curies/year) of:</p> <p>Alpha-0   4.30E-07   Liquid/Particulate Solid   WAC 246-247-030(21)(e) Alpha release rate based on Am-241. See condition 6.</p> <p>B/G-0   2.20E-05   Liquid/Particulate Solid WAC 246-247-030(21)(e) Beta/Gamma release rate based on Cs-137. See condition 6.</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <table border="0"> <tr> <td>Am-241</td> <td>Am-243</td> <td>Cf-252</td> <td>Cm-244</td> <td>Cs-134</td> </tr> <tr> <td>Cs-137</td> <td>Eu-152</td> <td>Eu-154</td> <td>Pu-238</td> <td>Pu-239/240</td> </tr> <tr> <td>Pu-241</td> <td>Sr-90</td> <td>U-234</td> <td>U-235</td> <td>U-236</td> </tr> <tr> <td>U-238</td> <td></td> <td></td> <td></td> <td></td> </tr> </table> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the</p>	Am-241	Am-243	Cf-252	Cm-244	Cs-134	Cs-137	Eu-152	Eu-154	Pu-238	Pu-239/240	Pu-241	Sr-90	U-234	U-235	U-236	U-238					<p>Continuous</p>	<p>CDM: Annual evaluation of retrieval rates, containers/curies handled.</p>
Am-241	Am-243	Cf-252	Cm-244	Cs-134																		
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Pu-241	Sr-90	U-234	U-235	U-236																		
U-238																						

Requirement	Compliance Status	Compliance Determination Method
<p>TEDE to the MEI after controls. WAC 246-247-110(9). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>		
<p>It is recognized that other radionuclides may be present in very limited quantities.</p>	<p>Not Applicable</p>	<p><b>CDM:</b> This is a statement of fact. There is no action to be taken by the Permittee.</p>
<p>The department shall be notified within 24 hours of all drum vents that fail to be installed properly when using the drum venting system (An example of a "failure" is a pressure release that blows past the seal of the boot or a deflagration).</p>	<p>Continuous</p>	<p><b>CDM:</b> Facility operations and radiological control procedures.</p>
<p>The passive vent of the DVS exhausts potential emissions from the use of the HEPA Vacuum mounted in the test chamber to collect metal filings after installation of a NucFil filter. Release rates are calculated by multiplying surface area vacuumed by the contamination level. An estimate of the release rate is calculated by assuming the surface area of the boot that covers the drum lid during the filter installation process (8.3 square inches) multiplied by 9,000 drums with an average contamination level of 10,000 dpm/100 cm<sup>2</sup> beta/gamma and 200 dpm/100 cm<sup>2</sup> alpha. Using a release fraction of 1.0 for the HEPA vacuum use, the potential release rates from using the DVS is 4.3E-7 Ci/yr americium-241 and 2.2E-05 Ci/yr cesium-137. This alternative release fraction is approved for this emission unit.</p>	<p>Continuous</p>	<p><b>CDM:</b> Facility operations and radiological control procedures.</p>
<p>The system shall be built to meet NQA-1 requirements and shall be aerosol tested annually using ANSI N-510 as guidance for non-ANSI N-509 systems. If in-field aerosol testing is not feasible, an approved alternative is given to replace the filters on an annual basis with the manufacturer tested and certification of HEPA filter with a tested rating of 99.97% efficiency. Records of this testing shall be maintained on file.</p>	<p>Continuous</p>	<p><b>CDM:</b> Scheduled maintenance activity records.</p>
<p>The test compartment is passively ventilated with a HEPA-type filter and is designed to withstand a deflagration as described in the performance specification for this venting system. If deflagration occurs, all activities associated with this license shall cease and the department shall be notified.</p>	<p>Not Applicable</p>	<p><b>CDM:</b> Deflagration did not occur therefore, the requirement to cease activities and notify the department was not triggered.</p>
<p>The top of the drum shall be surveyed while inside the</p>	<p>Continuous</p>	<p><b>CDM:</b> Facility operations and</p>

Requirement	Compliance Status	Compliance Determination Method
<p>DVS, after installation of the NucFil filter. If removable contamination is found, the drum lid shall be decontaminated before removal from the DVS. The drum shall be surveyed immediately after removal from the DVS. Once removed from the DVS, the drum must be immediately decontaminated or contained such that the drum is free of removable contamination (i.e., less than 20 dpm/ 100 cm<sup>2</sup> alpha and less than 1000 dpm/100 cm<sup>2</sup> beta/gamma). Decontamination at the LLBG is attempted in a graded approach (dry rags, wet rags, decontamination solutions, fixatives, or over packing if other methods prove unsuccessful).</p>		<p>radiological control procedures.</p>
<p>This approval applies to these additional activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p><b>TRU Waste Retrieval</b> The area to be excavated is managed as a 'clean' area, free of surface contamination measurable with field survey instruments. Because of the possibility of encountering previously undetected subsurface contamination, or future contamination from windblown sources, all work will be performed in accordance with as low as reasonably achievable (ALARA) requirements as determined by the Radiological Control organization. These requirements shall be carried out through the activity work packages and associated radiological work permits (RWP) which will be managed as required retrievable records for this activity.</p> <p>The overburden soil will be removed to expose the waste containers. Excavation equipment will be chosen to effectively remove soil and retrieve the waste containers while minimizing damage to the containers. Excavation activities will be monitored to identify contamination that might be present and to minimize emissions. Any contaminated soils will be managed in accordance with applicable requirements and regulations.</p> <p>The most efficient methodology for removing the uncontaminated overburden from the containers will include the maximum use of conventional methods such as backhoes, front-end loaders, mechanical brooms (boom mounted), or manual digging with shovels and similar hand tools. Only manual methods shall be used to excavate contaminated soil. High-efficiency particulate air (HEPA) filtered vacuums are allowed for use for spot contamination in accordance with the HEPA-filtered vacuum unit (HVU) NOC (DOE/RL-97-50, as amended).</p> <p>The specific steps or approach to uncovering the containers will vary according to the configuration of the trench to be uncovered, the nearby trenches or fences, the designated location of the spoils pile, the planned extent of the soil removal, etc. Therefore, excavation activities will be planned before arriving at the job site. Excavation activities will be controlled closely. When the quantity of soil removed with heavy equipment has reached the logical end, hand tools or HVUs could be used to complete the uncontaminated soil removal operations to access and remove the plastic and plywood materials (to be set aside for reuse or disposal) covering the containers.</p> <p>The exposed containers will be visually inspected and surveyed for contamination. Abnormal drum conditions will be managed as follow: Contaminated containers will be decontaminated or over packed.</p>	<p>Continuous</p>	<p>CDM: Facility operations and radiological control procedures.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>Bulging or potentially pressurized containers will be vented as described in the Venting Containers Section. Retrieval activities will include appropriate disposition of small amounts of incidental contaminated soil (e.g., containerized or fixed in place). Larger areas of contamination shall be fixed and the area posted as required by the Radiological Control organization for later disposition. Bulk transfer of contaminated soils for disposal in another trench also could occur.</p> <p>All containers will be inspected to verify integrity. The container inspection will consist of a visual examination to determine if there are significant corrosion, holes, dents or other visual deformities. All containers may be moved, turned, or otherwise relocated (manually or with powered equipment, slings, clamps, or appropriate rigging) to facilitate an adequate visual inspection.</p> <p>Over packing containers with minor defects (pinholes, corrosion) is routinely performed at the LLBG and CWC and is expected for up to 10 to 50 percent of the retrieved containers. Precautions will be provided to safely retrieve containers of questionable integrity. The process description for management of abnormal containers will be maintained in written procedures. Operating procedures will be established to safely deal with these containers. Containers that obviously are reached or deformed also will be safely removed. Removal methods will be determined on a case-by-case basis. A breached container that can provide secure confinement will be relocated to an area for repackaging or over packing. If the container cannot provide adequate confinement for the contents, the container and contents will be over packed before being relocated. The over packed containers will be managed according to the LLW (including mixed waste) or TRU waste designation (TRU containers are those with TRU content greater than 100 nCi/g), established by records or assay.</p> <p>After a container is inspected visually and the structural integrity established, the container (if shown by assay or records to be designated as TRU) will be staged for venting, if necessary, or moved to another TSD unit for venting. Retrieved TRU waste containers in their staged configuration at the LLBG will be inspected for outwardly visible signs of corrosion or degradation (over packing as needed).</p>		
<p>This approval applies to these additional activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p><b>Venting of Containers</b> All work shall be performed in accordance with the LLBG radiological control procedures and ALARA requirements. These requirements are carried out through the procedures, activity work packages, and associated RWPs.</p> <p>The vent filters will be installed in designated containers by using the Drum Venting System (DVS) and/or Dart System that ensures personnel and environmental protection. The methodology will require penetrating the container and inserting a vent. Penetration of the lid will be accomplished by either drilling through the lid with a filter assembly fitted with a short hollow drill bit (using DVS) or puncturing the lid with a filter dart (using Dart system). Either method will result in emissions being routed through a filter during the venting process.</p> <p>Most drums slated for venting will be vented with the DVS, consisting of a trailer with a chamber allowing an operator to sample the drum (screening HSGS for hydrogen content) and install a NucFil filter. Potential emissions from these operations are point source emissions.</p>	<p>Continuous</p>	<p><b>CDM:</b> Facility operations and radiological control procedures.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>Bulging or potentially pressurized drums will be evaluated to determine best method and location to vent (Dart-in place, Dart-relocate, or move to the DVS). The Dart System is a portable unit that straps directly onto a drum, using a pneumatic driver remotely activated by wire or radio transmitter. This system penetrates the drum lid to install a NucFil filter with an aluminum bronze housing to prevent the possibility of sparking. Potential emissions from these operations will be considered diffuse and fugitive. The same Dart System will be used to install sample ports, consisting of a closure set screw covering a septum for withdrawing a sample for HSGS, in containers with existing vents at the LLBG, CWC, WRAP, or T Plant Complex, without creating a new pathway for potential emissions.</p>		
<p>Permit: AIR 07-307 - D <b>Issue Date:</b>03-23-07 <b>Effective Date:</b>03-15-07 <b>Obsolete Date:</b> 10-19-07  <b>NOC:</b> Operation of the Transuranic Waste Retrieval Project  <b>WDOH NOC ID:</b> 719 <b>Date In AOP:</b> 05-03-07 <b>Page in AOP:</b> EU0756-001</p>		
Requirement	Compliance Status	Compliance Determination Method
<p>The total abated emission limit for this Notice of Construction is limited to 3.44E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).</p>	Continuous	<p><b>CDM:</b> Annual evaluation of retrieval rates, containers/curies handled.</p>
<p>Excavation and Retrieval of Containers (drums or boxes) Work will be performed in accordance with as low as reasonably achievable (ALARA).</p> <p>The specific steps or approach to uncovering the containers will vary according to the configuration of the trench to be uncovered, the proximity of nearby trenches or fences, the designated location of the spoils pile, the planned extent of the soil removal, and other similar considerations.</p> <p>Work to be performed within the V notched trenches is similar to the ongoing TRU retrieval project, but much of it may be performed within a weather resistant structure(s) that will be relocatable along the trench. Weather enclosures are effectively used for similar remediation activities at other U.S. Department of Energy (DOE) sites and in general industrial use. The use of a weather resistant enclosure could allow a more effective recovery from events involving degraded containers and potential contamination spreads.</p> <p>The overburden soil will be removed to expose the waste containers. Excavation equipment will be chosen to effectively remove soil and retrieve the waste containers while minimizing damage to the containers. Excavation activities will be monitored to identify contamination that might be present and to minimize emissions.</p> <p>The most efficient methodology for removing the uncontaminated overburden from the containers will include the maximum use of conventional methods such as backhoes, front end loaders, mechanical brooms (boom mounted), or manual digging with shovels and similar hand tools. Hand tools predominantly may be used to excavate contaminated soil. High efficiency particulate air (HEPA) filtered vacuums may be used for soil excavation, and spot contamination in accordance with the HEPA filtered vacuum unit (HVU) NOC (DOE/RL 97 50, as amended). Within the V Notched trenches, it is more likely that the use of a vacuum to remove larger quantities of soil from the top surface of buried containers and soil materials in the interstices surrounding containers will be employed. Any use of the</p>	Continuous	<p><b>CDM:</b> Facility operations and radiological control procedures.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>sitewide Guzzler® will be performed under the NOC applicable to the unit.</p> <p>Excavation activities will be controlled closely. When the quantity of soil removed with heavy equipment has reached the logical end, hand tools, light equipment, or HVUs may be used to complete the soil removal operations and to access and remove the plastic and plywood materials (to be set aside for reuse or disposal) covering the containers.</p> <p>The exposed containers will be visually inspected and surveyed for contamination. Abnormal drum conditions will be managed as follows: Contaminated containers will be decontaminated or overpacked as needed. Bulging or potentially pressurized containers will be vented. Retrieval activities will include appropriate disposition of small amounts of incidental contaminated soil (e.g., containerized or fixed in place). Larger areas of contamination could be fixed and the area posted as required by the Radiological Control organization for later disposition. Bulk transfer of contaminated soils for disposal in another trench also could occur. All containers will be inspected to verify integrity. The container inspection will consist of a visual examination to determine if there are significant corrosion, holes, dents or other visual deformities. All containers could be moved, turned, or otherwise relocated (manually or with powered equipment, slings, clamps, or appropriate rigging) to facilitate an adequate visual inspection.</p> <p>Overpacking containers with minor defects (pinholes, corrosion) is routinely performed at the LLBG and CWC. Precautions will be provided to safely retrieve containers of questionable integrity. It is expected that 10 to 100 percent of the newly retrieved containers will require overpacking or some other form of confinement. Breached and heavily corroded containers will usually be overpacked before being relocated. However, if a breached or heavily corroded container can provide adequate confinement, it may be relocated to an area for overpacking. The overpacked containers will be managed according to the LLW (including mixed waste) or TRU waste designation (TRU containers are those with TRU content greater than 100 nCi/g), established by records or assay.</p> <p>After a container is inspected visually and the structural integrity established, the container, if unvented, will be staged for venting, or moved to another TSD unit for venting. Retrieved TRU waste containers in their staged configuration at the LLBG will be inspected for outwardly visible signs of corrosion or degradation (overpacking as needed).</p> <p><b>Venting of Containers</b> All work will be performed in accordance with the applicable operating procedures, radiological control procedures, radiological work permit (RWPs) and ALARA requirements.</p> <p>Experience at other DOE sites has shown a potential for flammable gases to be present in some containers. Therefore all containers will be evaluated and vented if needed even if not specifically designated as TRU containers.</p> <p>The vent filters will continue to be installed in designated containers via one of the drum venting systems that ensures personnel and environmental protection. The methodology will require penetrating the container and inserting a vent. Penetration of the lid will be accomplished by either drilling through the lid or puncturing the lid with a filter dart (using Dart System). Container venting systems are described in the following text. Designated drums slated for venting will be vented with the MDVS, Catagorical DVS, or other venting methods (with prior approval of WDOH).</p>		

Requirement	Compliance Status	Compliance Determination Method
<p><b>MDVS (Mobile Drum Venting System)</b> The MDVS is enclosed in a trailer containing system equipment allowing an operator to sample and/or vent the drum and install a NucFil® filter or equivalent. Potential emissions from MDVS operations are point source emissions. Bulging or potentially pressurized drums may be overpacked, placed in restraints and then vented.</p> <p>The MDVS trailer may be equipped with a HEPA vacuum system to prevent contamination from exiting through any incidental gaps and to clean room air in the event of airborne contamination. These emissions will be accounted for with the sitewide HEPA Vacuum NOC. The system could be automatically activated when the continuous air monitor (CAM) alarms or it could be manually activated. The CAM and/or air sample results will be used to verify the PTE is within the limits of the sitewide HEPA vacuum NOC.</p> <p><b>Dart System</b> The Dart System is a portable unit that clamps directly onto a drum, using a pneumatic driver remotely activated by wire or radio transmitter. This system penetrates the drum lid with minimal risk of contamination release to install a NucFil® filter with an aluminum bronze housing to prevent the possibility of sparking. Potential emissions from these operations will be considered diffuse and fugitive.</p> <p><b>Catagorical DVS2 (Drum Venting System 2)</b> A vent system utilizing a pneumatic drill DVS2 is remotely actuated to vent the drum. After the drum is vented, a filter is hand-installed, the head-space of the drum is sampled and the drum is staged in a designated area for diffusion.</p> <p>Glove bags may be used to contain potential contamination. A portable HEPA vacuum with variable speed is connected to the HEPA filter on the glovebag and will be used for exhausting the glovebag. The vacuum will be operated during venting and for a short time following venting at a low flow. Glovebags will also have ports to check for contamination or hazardous gases.</p> <p>As many as three venting assemblies will be installed in a weather enclosure such as a Conex box. Connections for the third assembly may be used with the TRU Retrieval Drum Restraint in the event of a bulged or high DE-Ci drum.</p> <p><b>Other Venting Methods</b> The venting of other containers, the majority being fiberglass reinforced plywood (FRP) boxes but could also be metal containers - hereafter referred to collectively as boxes, located in CWC and the LLBG may be done. Two venting systems for the boxes will be used. Both systems will be capable of mating to various sized boxes and will be capable of installing a Nucfil® filter or equivalent into the box headspace.</p> <p>One type of vent system uses a steel plate held in place against the side of a box by a forklift as a blast shield for personnel protection in the event the container is pressurized. A rubber gasket will provide a seal between the steel plate and the box. A glove bag will then be attached to the steel plate and the box to provide for contamination control during the drilling of the box. The glove bag contains a HEPA-type filter for passive control of contaminated particulates that may escape from the box during the drilling operation. In the event contamination is encountered during filter installation, a HEPA vacuum would be connected for use only after the filter is installed. The HEPA vacuum would be subject to the sitewide HEPA vacuum NOC.</p>		

Requirement	Compliance Status	Compliance Determination Method																				
<p>After the steel plate and glove bag are in place personnel will drill a pilot hole in the box, monitor for the presence of contamination and hazardous gases, and install a Nucfil® filter or equivalent. A time weighted release of 60 minutes per box is allowed for drilling and filter installation. These activities will be conducted through glove ports that are an integral part of the glove bag. The drilling will be done with non-sparking and cold drilling techniques. A static dissipating cleaner manufactured by STATICO™ or equivalent will be used to decay electrostatic build up in the fiberglass during drilling.</p> <p>A second type of vent system for FRP boxes may be used that is similar to the portable DVS operating at T Plant. There could be several of these units in use within the LLBG. A glove bag with HEPA-type filter is used but without the steel plate and the drilling will be done remotely. The drill assembly and motor and bit type will remain the same. The system uses a pneumatic cold drilling technique that utilizes remote activation. The FRP venting system is placed on the top or side of the box and held in place with straps or clamps throughout the drilling and filter installation operation. A static dissipating cleaner manufactured by STATICO™ or an equivalent will be used to decay electrostatic build up in the fiberglass during drilling. A time weighted release of 60 minutes per box is allowed for drilling and filter installation. After holes are drilled, Nucfil® filters or equivalent will be hand installed in the box using glove ports in the glovebag.</p> <p>In the event contamination is encountered during the installation of a Nucfil® a HEPA vacuum would be connected for use only after the Nucfil® is installed. The HEPA vacuum would be subject to the sitewide HEPA vacuum NOC.</p>																						
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 9.01E-02 mrem/year.</p> <p>Approved are the associated potential release rates (Curies/year) of: Alpha-0   4.32E-07   Liquid/Particulate Solid   WAC 246-247-030(21)(c) Alpha release rate based on Am-241. See condition 6.</p> <p>B/G-0   2.16E-05   Liquid/Particulate Solid   WAC 246-247-030(21)(e) Beta/Gamma release rate based on Cs-137. See condition 6.</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <table border="0"> <tr> <td>Am-241</td> <td>Am-243</td> <td>Cf-252</td> <td>Cm-244</td> <td>Cs-134</td> </tr> <tr> <td>Cs-137</td> <td>Eu-152</td> <td>Eu-154</td> <td>Pu-238</td> <td>Pu-239/240</td> </tr> <tr> <td>Pu-241</td> <td>Sr-90</td> <td>U-234</td> <td>U-235</td> <td>U-236</td> </tr> <tr> <td>U-238</td> <td></td> <td></td> <td></td> <td></td> </tr> </table> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. WAC 246-247-110(9). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>	Am-241	Am-243	Cf-252	Cm-244	Cs-134	Cs-137	Eu-152	Eu-154	Pu-238	Pu-239/240	Pu-241	Sr-90	U-234	U-235	U-236	U-238					<p>Continuous</p>	<p>CDM: Annual evaluation of retrieval rates, containers/curies handled.</p>
Am-241	Am-243	Cf-252	Cm-244	Cs-134																		
Cs-137	Eu-152	Eu-154	Pu-238	Pu-239/240																		
Pu-241	Sr-90	U-234	U-235	U-236																		
U-238																						

Requirement	Compliance Status	Compliance Determination Method
It is recognized that other radionuclides may be present in very limited quantities.	Not Applicable	<b>CDM:</b> This is a statement of fact. There is no action to be taken by the Permittee.
The department shall be notified within 24 hours of all drum vents that fail to be installed properly and smears show >2,000 dpm/100 cm <sup>2</sup> alpha or >100,000 dpm/100 cm <sup>2</sup> beta/gamma removable contamination (an example of a "failure" is a pressure release that blows past the seat of the boot or a deflagration).	Continuous	<b>CDM:</b> Facility operations and radiological control procedures.
The passive vent of the DVS exhausts potential emissions from the use of the HEPA Vacuum mounted in the test chamber to collect metal filings after installation of a NucFil filter. Release rates are calculated by multiplying surface area vacuumed by the contamination level. An estimate of the release rate is calculated by assuming the surface area of the boot that covers the drum lid during the filter installation process (8.3 square inches) multiplied by 9,000 drums with an average contamination level of 10,000 dpm/100 cm <sup>2</sup> beta/gamma and 200 dpm/100 cm <sup>2</sup> alpha. Using a release fraction of 1.0 for the HEPA vacuum use, the potential release rates from using the DVS is 4.3E-7 Ci/yr americium-241 and 2.2E-05 Ci/yr cesium-137. These alternative release fractions are approved for this emission unit.	Continuous	<b>CDM:</b> Facility operations and radiological control procedures.
The system shall be built to meet NQA-1 requirements and shall be aerosol tested annually using ANSI N-510 as guidance for non-ANSI N-509 systems. If in-field aerosol testing is not feasible, an approved alternative is given to replace the filters on an annual basis with the manufacturer tested and certification of HEPA filter with a tested rating of 99.97% efficiency. Records of this testing shall be maintained on file.	Continuous	<b>CDM:</b> Scheduled maintenance activity records.
The test compartment is passively ventilated with a HEPA-type filter and is designed to withstand a deflagration as described in the performance specification for this venting system. If deflagration occurs, all activities associated with this license shall cease and the department shall be notified.	Continuous	<b>CDM:</b> Facility operations and radiological control procedures.
The top of the drum shall be surveyed while inside the DVS, after installation of the NucFil filter. If removable contamination is found, the drum lid shall be decontaminated before removal from the DVS. The drum shall be surveyed immediately after removal from the DVS. Once removed from the DVS, the drum must be immediately decontaminated or contained such that the drum is free of removable contamination (i.e., less than 20 dpm/ 100 cm <sup>2</sup> alpha and less than 1000 dpm/100	Continuous	<b>CDM:</b> Facility operations and radiological control procedures.

Requirement	Compliance Status	Compliance Determination Method
<p>cm2 beta/gamma). Decontamination at the LLBG is attempted in a graded approach (dry rags, wet rags, decontamination solutions, fixatives, or overpacking if other methods prove unsuccessful).</p>		
<p>This approval applies to these additional activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p><b>TRU Waste Retrieval</b> Encountering contamination is expected during excavation; therefore, to determine a potential to emit if contamination is encountered, the administrative control points for contamination, as monitored by standard radiological field instrumentation, will be used to bound emissions based on current efficiencies of typical SWSD field contamination instruments. To determine the corresponding soil concentration in picocuries per grams of individual radionuclides, conversion factors, as developed in Soil Contamination Standards for Protection of Personnel (HNF 2418) were used. The average soil density was assumed to be 98 pounds per cubic foot. The beta gamma contributing radionuclides were assumed to be represented by cesium 137 and the alpha contributing radionuclides were assumed to be represented by americium 241 (predominant alpha contributing radionuclide in the soil is unknown; therefore, assumption of americium 241 will produce the most conservative dose consequence). The respective volumes of contaminated soil (i.e., 300 m<sup>3</sup>, 3 m<sup>3</sup>, and 0.3 m<sup>3</sup>) at the three contamination levels are considered as released from manual excavation, using a release fraction of 1.0 E-3.</p> <p>The potential unabated dose rate from manual excavation is 2.79 E-03 mrem/year. No credit is taken for abatement; therefore, the abated emissions are assumed as the unabated emissions. Although fixatives and similar controls would be employed for the higher contamination level and notification level contamination, no credit is being taken for abatement; therefore, the abated dose rate is the unabated dose rate.</p>	<p>Continuous</p>	<p><b>CDM: Facility operations and radiological control procedures.</b></p>
<p>This approval applies to these additional activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p><b>Venting of Containers</b> All work shall be performed in accordance with the LLBG radiological control procedures and ALARA requirements. These requirements are carried out through the procedures, activity work packages, and associated RWPs.</p> <p>The vent filters will be installed in designated containers by using the Drum Venting System (DVS) and/or Dart System that ensures personnel and environmental protection. The methodology will require penetrating the container and inserting a vent. Penetration of the lid will be accomplished by either drilling through the lid with a filter assembly fitted with a short hollow drill bit (using DVS) or puncturing the lid with a filter dart (using Dart system). Either method will result in emissions being routed through a filter during the venting process.</p> <p>Most drums slated for venting will be vented with the DVS, consisting of a trailer with a chamber allowing an operator to sample the drum (screening HSGS for hydrogen content) and install a NucFil filter. Potential emissions from these operations are point source emissions.</p> <p>Bulging or potentially pressurized drums will be evaluated to determine best method and location to vent (Dart-in place, Dart-</p>	<p>Continuous</p>	<p><b>CDM: Facility operations and radiological control procedures.</b></p>

Requirement	Compliance Status	Compliance Determination Method
<p>relocate, or move to the DVS). The Dart System is a portable unit that straps directly onto a drum, using a pneumatic driver remotely activated by wire or radio transmitter. This system penetrates the drum lid to install a NucFil filter with an aluminum bronze housing to prevent the possibility of sparking. Potential emissions from these operations will be considered diffuse and fugitive. The same Dart System will be used to install sample ports, consisting of a closure set screw covering a septum for withdrawing a sample for HSGS, in containers with existing vents at the LLBG, CWC, WRAP, or T Plant Complex, without creating a new pathway for potential emissions.</p>		
<p><b>Permit: AIR 07-1012 - D Issue Date:10-22-07 Effective Date:10-19-07</b>  <b>NOC: Operation of the Transuranic Waste Retrieval Project</b>  <b>WDOH NOC ID: 719 Date In AOP: 12-05-07 Page in AOP: EU0756-001</b></p>		
Requirement	Compliance Status	Compliance Determination Method
<p>The total abated emission limit for this Notice of Construction is limited to 3.44E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).</p>	Continuous	<b>CDM:</b> Annual evaluation of retrieval rates, containers/curies handled.
<p>Excavation and Retrieval of Containers (drums or boxes) Work will be performed in accordance with as low as reasonably achievable (ALARA).</p> <p>The specific steps or approach to uncovering the containers will vary according to the configuration of the trench to be uncovered, the proximity of nearby trenches or fences, the designated location of the spoils pile, the planned extent of the soil removal, and other similar considerations.</p> <p>Work to be performed within the V notched trenches is similar to the ongoing TRU retrieval project, but much of it may be performed within a weather resistant structure(s) that will be relocatable along the trench. Weather enclosures are effectively used for similar remediation activities at other U.S. Department of Energy (DOE) sites and in general industrial use. The use of a weather resistant enclosure could allow a more effective recovery from events involving degraded containers and potential contamination spreads.</p> <p>The overburden soil will be removed to expose the waste containers. Excavation equipment will be chosen to effectively remove soil and retrieve the waste containers while minimizing damage to the containers. Excavation activities will be monitored to identify contamination that might be present and to minimize emissions.</p> <p>The most efficient methodology for removing the uncontaminated overburden from the containers will include the maximum use of conventional methods such as backhoes, front end loaders, mechanical brooms (boom mounted), or manual digging with shovels and similar hand tools. Hand tools predominantly may be used to excavate contaminated soil. High efficiency particulate air (HEPA) filtered vacuums may be used for soil excavation, and spot contamination in accordance with the HEPA filtered vacuum unit (HVU) NOC (DOE/RL 97 50, as amended). Within the V Notched trenches, it is more likely that the use of a vacuum to remove larger quantities of soil from the top surface of buried containers and soil materials in the interstices surrounding containers will be employed. Any use of the sitewide Guzzler® will be performed under the NOC applicable to the unit.</p>	Continuous	<b>CDM:</b> Facility operations and radiological control procedures.

Requirement	Compliance Status	Compliance Determination Method
<p>Excavation activities will be controlled closely. When the quantity of soil removed with heavy equipment has reached the logical end, hand tools, light equipment, or HVUs may be used to complete the soil removal operations and to access and remove the plastic and plywood materials (to be set aside for reuse or disposal) covering the containers.</p> <p>The exposed containers will be visually inspected and surveyed for contamination. Abnormal drum conditions will be managed as follows: Contaminated containers will be decontaminated or overpacked as needed. Bulging or potentially pressurized containers will be vented. Retrieval activities will include appropriate disposition of small amounts of incidental contaminated soil (e.g., containerized or fixed in place). Larger areas of contamination could be fixed and the area posted as required by the Radiological Control organization for later disposition. Bulk transfer of contaminated soils for disposal in another trench also could occur. All containers will be inspected to verify integrity. The container inspection will consist of a visual examination to determine if there are significant corrosion, holes, dents or other visual deformities. All containers could be moved, turned, or otherwise relocated (manually or with powered equipment, slings, clamps, or appropriate rigging) to facilitate an adequate visual inspection.</p> <p>Overpacking containers with minor defects (pinholes, corrosion) is routinely performed at the LLBG and CWC. Precautions will be provided to safely retrieve containers of questionable integrity. It is expected that 10 to 100 percent of the newly retrieved containers will require overpacking or some other form of confinement. Breached and heavily corroded containers will usually be overpacked before being relocated. However, if a breached or heavily corroded container can provide adequate confinement, it may be relocated to an area for overpacking. The overpacked containers will be managed according to the LLW (including mixed waste) or TRU waste designation (TRU containers are those with TRU content greater than 100 nCi/g), established by records or assay.</p> <p>After a container is inspected visually and the structural integrity established, the container, if unvented, will be staged for venting, or moved to another TSD unit for venting. Retrieved TRU waste containers in their staged configuration at the LLBG will be inspected for outwardly visible signs of corrosion or degradation (overpacking as needed).</p> <p><b>Venting of Containers</b> All work will be performed in accordance with the applicable operating procedures, radiological control procedures, radiological work permit (RWPs) and ALARA requirements.</p> <p>Experience at other DOE sites has shown a potential for flammable gases to be present in some containers. Therefore all containers will be evaluated and vented if needed even if not specifically designated as TRU containers.</p> <p>The vent filters will continue to be installed in designated containers via one of the drum venting systems that ensures personnel and environmental protection. The methodology will require penetrating the container and inserting a vent. Penetration of the lid will be accomplished by either drilling through the lid or puncturing the lid with a filter dart (using Dart System). Container venting systems are described in the following text. Designated drums slated for venting will be vented with the MDVS, Categorical DVS, or other venting methods (with prior approval of WDOH).</p> <p><b>MDVS (Mobile Drum Venting System)</b> The MDVS is enclosed in a trailer containing system equipment</p>		

Requirement	Compliance Status	Compliance Determination Method
<p>allowing an operator to sample and/or vent the drum and install a NucFil® filter or equivalent. Potential emissions from MDVS operations are point source emissions. Bulging or potentially pressurized drums may be overpacked, placed in restraints and then vented.</p> <p>The MDVS trailer may be equipped with a HEPA vacuum system to prevent contamination from exiting through any incidental gaps and to clean room air in the event of airborne contamination. These emissions will be accounted for with the sitewide HEPA Vacuum NOC. The system could be automatically activated when the continuous air monitor (CAM) alarms or it could be manually activated. The CAM and/or air sample results will be used to verify the PTE is within the limits of the sitewide HEPA vacuum NOC.</p> <p><b>Dart System</b> The Dart System is a portable unit that clamps directly onto a drum, using a pneumatic driver remotely activated by wire or radio transmitter. This system penetrates the drum lid with minimal risk of contamination release to install a NucFil® filter with an aluminum bronze housing to prevent the possibility of sparking. Potential emissions from these operations will be considered diffuse and fugitive.</p> <p><b>Catagorical DVS2 (Drum Venting System 2)</b> The DVS2 vent system, utilizing a pneumatic drill, is remotely actuated to vent the drum. After the drum is vented, a filter is hand-installed; the headspace of the drum is sampled and analyzed in the DVS2 via a sample port on the filter. The analysis process involves withdrawing a sample directly from the container head space through flexible tubing to a gas chromatograph (GC) for analysis. During analysis, the sample is heated up to 212°F (100°C) within the GC and subsequently allowed to cool to 70°F (21°C) or below before it is emitted to the atmosphere. Up to 150 of these samples are planned to be done per week per GC. No more than 9,000 drums per year will be analyzed by the combined HSGS units. Upon completion of analysis, the drum is staged in a designated area for diffusion. Glove bags may be used to contain potential contamination. A portable HEPA vacuum with a variable speed is connected to the HEPA filter on the glovebag and will be used for exhausting the glovebag. The vacuum will be operated during venting and for a short time following venting at a low flow. The vacuum may or may not be operated during the headspace analyses activities. Glovebags will also have ports to check for contamination or hazardous gases. As many as three venting assemblies will be installed in a weather enclosure such as a Conex box. Connections for the third assembly may be used with the TRU Retrieval Drum Restraint in the event of a bulged or high DE-Ci drum.</p> <p>The DVS2 unit will be installed within an enclosure such as a Conex box or trailer, and within the CWC complex, with side doors that will open to accommodate loading and unloading the drums.</p> <p>The HSGS analysis unit in the DVS2 will exhaust through the HEPA vacuum, although the vacuum may or may not be operating when the analysis is performed. A small percentage (0.5%) of the sample stream will be released as diffuse and fugitive.</p> <p><b>Other Venting Methods</b> The venting of other containers, the majority being fiberglass reinforced plywood (FRP) boxes but could also be metal containers - hereafter referred to collectively as boxes, located in CWC and the LLBG may be done. Two venting systems for the boxes will be used. Both systems will be capable of mating to various sized boxes and will be capable of installing a Nucfil® filter or equivalent into the box headspace.</p>		

Requirement	Compliance Status	Compliance Determination Method															
<p>One type of vent system uses a steel plate held in place against the side of a box by a forklift as a blast shield for personnel protection in the event the container is pressurized. A rubber gasket will provide a seal between the steel plate and the box. A glove bag will then be attached to the steel plate and the box to provide for contamination control during the drilling of the box. The glove bag contains a HEPA-type filter for passive control of contaminated particulates that may escape from the box during the drilling operation. In the event contamination is encountered during filter installation, a HEPA vacuum would be connected for use only after the filter is installed. The HEPA vacuum would be subject to the sitewide HEPA vacuum NOC.</p> <p>After the steel plate and glove bag are in place personnel will drill a pilot hole in the box, monitor for the presence of contamination and hazardous gases, and install a Nucfil® filter or equivalent. A time weighted release of 60 minutes per box is allowed for drilling and filter installation. These activities will be conducted through glove ports that are an integral part of the glove bag. The drilling will be done with non-sparking and cold drilling techniques. A static dissipating cleaner manufactured by STATICO™ or equivalent will be used to decay electrostatic build up in the fiberglass during drilling.</p> <p>A second type of vent system for FRP boxes may be used that is similar to the portable DVS operating at T Plant. There could be several of these units in use within the LLBG. A glove bag with HEPA-type filter is used but without the steel plate and the drilling will be done remotely. The drill assembly and motor and bit type will remain the same. The system uses a pneumatic cold drilling technique that utilizes remote activation. The FRP venting system is placed on the top or side of the box and held in place with straps or clamps throughout the drilling and filter installation operation. A static dissipating cleaner manufactured by STATICO™ or an equivalent will be used to decay electrostatic build up in the fiberglass during drilling. A time weighted release of 60 minutes per box is allowed for drilling and filter installation. After holes are drilled, Nucfil® filters or equivalent will be hand installed in the box using glove ports in the glovebag.</p> <p>In the event contamination is encountered during the installation of a Nucfil® a HEPA vacuum would be connected for use only after the Nucfil® is installed. The HEPA vacuum would be subject to the sitewide HEPA vacuum NOC.</p>																	
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 9.01E-02 mrem/year.</p> <p>Approved are the associated potential release rates (Curies/year) of:</p> <p>Alpha-0 4.32E-07 Liquid/Particulate Solid WAC 246-247-030 (21) (e) Alpha release rate based on Am-241. See condition 6.</p> <p>B/G-0 2.16E-05 Liquid/Particulate Solid WAC 246-247-030 (21) (e) Beta/Gamma release rate based on Cs-137. See condition 6.</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <table border="0"> <tr> <td>Am-241</td> <td>Am-243</td> <td>Cf-252</td> <td>Cm-244</td> <td>Cs-134</td> </tr> <tr> <td>Cs-137</td> <td>Eu-152</td> <td>Eu-154</td> <td>Pu-238</td> <td>Pu-239/240</td> </tr> <tr> <td>Pu-241</td> <td>Sr-90</td> <td>U-234</td> <td>U-235</td> <td>U-236</td> </tr> </table>	Am-241	Am-243	Cf-252	Cm-244	Cs-134	Cs-137	Eu-152	Eu-154	Pu-238	Pu-239/240	Pu-241	Sr-90	U-234	U-235	U-236	<p>Continuous</p>	<p>CDM: Annual evaluation of retrieval rates, containers/curies handled.</p>
Am-241	Am-243	Cf-252	Cm-244	Cs-134													
Cs-137	Eu-152	Eu-154	Pu-238	Pu-239/240													
Pu-241	Sr-90	U-234	U-235	U-236													

Requirement	Compliance Status	Compliance Determination Method
<p>U-238 The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. WAC 246-247-110(9). DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>		
<p>It is recognized that other radionuclides may be present in very limited quantities.</p>	<p>Not Applicable</p>	<p><b>CDM:</b> This is a statement of fact. There is no action to be taken by the permittee.</p>
<p>The department shall be notified within 24 hours of all drum vents that fail to be installed properly and smears show &gt;2,000 dpm/100 cm<sup>2</sup> alpha or &gt;100,000 dpm/100 cm<sup>2</sup> beta/gamma removable contamination (an example of a "failure" is a pressure release that blows past the seat of the boot or a deflagration).</p>	<p>Continuous</p>	<p><b>CDM:</b> Facility operations and radiological control procedures.</p>
<p>The passive vent of the MDVS exhausts potential emissions from the use of the HEPA Vacuum mounted in the test chamber to collect metal filings after installation of a NucFil filter. Release rates are calculated by multiplying surface area vacuumed by the contamination level. An estimate of the release rate is calculated by assuming the surface area of the boot that covers the drum lid during the filter installation process (8.3 square inches) multiplied by 9,000 drums with an average contamination level of 10,000 dpm/100 cm<sup>2</sup> beta/gamma and 200 dpm/100 cm<sup>2</sup> alpha. Using a release fraction of 1.0 for the HEPA vacuum use, the potential release rates from using the DVS is 4.3E-7 Ci/yr americium-241 and 2.2E-05 Ci/yr cesium-137. These alternative release fractions are approved for this emission unit.</p>	<p>Not Applicable</p>	<p><b>CDM:</b> This is a statement of fact. There is no action to be taken by the Permittee.</p>
<p>The system shall be built to meet NQA-1 requirements and shall be aerosol tested annually using ANSI N-510 as guidance for non-ANSI N-509 systems. If in-field aerosol testing is not feasible, an approved alternative is given to replace the filters on an annual basis with the manufacturer tested and certification of HEPA filter with a tested rating of 99.97% efficiency. Records of this testing shall be maintained on file.</p>	<p>Continuous</p>	<p><b>CDM:</b> Scheduled maintenance activity records.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>The test compartment is passively ventilated with a HEPA-type filter and is designed to withstand a deflagration as described in the performance specification for this venting system. If deflagration occurs, all activities associated with this license shall cease and the department shall be notified.</p>	<p>Not Applicable</p>	<p><b>CDM:</b> Deflagration did not occur therefore, the requirement to cease activities and notify the department was not triggered.</p>
<p>The top of the drum shall be surveyed while inside the DVS, after installation of the NucFil filter. If removable contamination is found, the drum lid shall be decontaminated before removal from the DVS. The drum shall be surveyed prior to leaving or immediately after removal from the DVS. Once removed from the DVS, the drum must be immediately decontaminated or contained such that the drum is free of removable contamination (i.e., less than 20 dpm/ 100 cm<sup>2</sup> alpha and less than 1000 dpm/100 cm<sup>2</sup> beta/gamma). Decontamination at the LLBG is attempted in a graded approach (dry rags, wet rags, decontamination solutions, fixatives, or over packing if other methods prove unsuccessful).</p>	<p>Continuous</p>	<p><b>CDM:</b> Facility operations and radiological control procedures.</p>
<p>This approval applies to these additional activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>TRU Waste Retrieval Encountering contamination is expected during excavation; therefore, to determine a potential to emit if contamination is encountered, the administrative control points for contamination, as monitored by standard radiological field instrumentation, will be used to bound emissions based on current efficiencies of typical SWSD field contamination instruments. To determine the corresponding soil concentration in picocuries per grams of individual radionuclides, conversion factors, as developed in Soil Contamination Standards for Protection of Personnel (HNF 2418) were used. The average soil density was assumed to be 98 pounds per cubic foot. The beta gamma contributing radionuclides were assumed to be represented by cesium 137 and the alpha contributing radionuclides were assumed to be represented by americium 241 (predominant alpha contributing radionuclide in the soil is unknown; therefore, assumption of americium 241 will produce the most conservative dose consequence). The respective volumes of contaminated soil (i.e., 300 m<sup>3</sup>, 3 m<sup>3</sup>, and 0.3 m<sup>3</sup>) at the three contamination levels are considered as released from manual excavation, using a release fraction of 1.0 E-3.</p> <p>The potential unabated dose rate from manual excavation is 2.79 E-03 mrem/year. No credit is taken for abatement; therefore, the abated emissions are assumed as the unabated emissions. Although fixatives and similar controls would be employed for the higher contamination level and notification level contamination, no credit is being taken for abatement; therefore, the abated dose rate is the unabated dose rate.</p>	<p>Continuous</p>	<p><b>CDM:</b> Facility operations and radiological control procedures.</p>
<p>This approval applies to these additional activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>Venting of Containers</p>	<p>Continuous</p>	<p><b>CDM:</b> Facility operations and radiological control procedures.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>All work shall be performed in accordance with the applicable radiological control procedures and ALARA requirements. These requirements are carried out through the procedures, activity work packages, and associated RWPs.</p> <p>The vent filters will be installed in designated containers by using the Drum Venting System (DVS) and/or Dart System that ensures personnel and environmental protection. The methodology will require penetrating the container and inserting a vent. Penetration of the lid will be accomplished by either drilling through the lid with a filter assembly fitted with a short hollow drill bit (using DVS) or puncturing the lid with a filter dart (using Dart system). Either method will result in emissions being routed through a filter during the venting process.</p> <p>Most drums slated for venting will be vented with the DVS, consisting of a trailer with a chamber allowing an operator to sample the drum and install a NucFil ® filter. Potential emissions from these operations are point source emissions.</p> <p>Bulging or potentially pressurized drums will be evaluated to determine best method and location to vent (Dart-in place, Dart-relocate, or move to the DVS). The Dart System is a portable unit that straps directly onto a drum, using a pneumatic driver remotely activated by wire or radio transmitter. This system penetrates the drum lid to install a NucFil ® filter with an aluminum bronze housing to prevent the possibility of sparking. Potential emissions from these operations will be considered diffuse and fugitive. The same Dart System will be used to install sample ports, consisting of a closure set screw covering a septum for withdrawing a sample for HSGS, in containers with existing vents at the LLBG, CWC, WRAP, or T Plant Complex, without creating a new pathway for potential emissions.</p>		

**P-296A046-001**

WDOH Emission Unit ID : 855

Page in AOP : EU0855-001

EMISSION UNIT DID NOT OPERATE DURING CY 2007 SEE TABLE 2

Permit: AIR 06-1060 - C **Issue Date:**10-05-06 **Effective Date:**10-05-06

**NOC:** Operation of New Ventilation Systems in AN and AW Tank Farms

**WDOH NOC ID:** 706 **Date In AOP:** 01-01-07 **Page in AOP:** EU0855-001

NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3

**P-296A047-001**

WDOH Emission Unit ID : 856

Page in AOP : EU0856-001

EMISSION UNIT DID NOT OPERATE DURING CY 2007 SEE TABLE 2

Permit: AIR 06-1060 - D **Issue Date:**10-05-06 **Effective Date:**10-05-06

**NOC:** Operation of New Ventilation Systems in AN and AW Tank Farms

**WDOH NOC ID:** 706 **Date In AOP:** 01-01-07 **Page in AOP:** EU0856-001

NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3

**Concrete Containers**  
WDOH Emission Unit ID : 874  
Page in AOP : EU0874-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
No active Abatement Controls in the AOP for this certification period.		
<b>Required Sampling:</b> Radiological surveys to include smears of vents and seal area <b>Sampling Frequency:</b> Annually at a minimum. <b>Radionuclide Requiring Measurement:</b> TOTAL ALPHA TOTAL BETA	Continuous	<b>CDM:</b> Reviewed data sheets from annual inspection.  <b>Comment:</b> Inspections per ZSP-011
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3) <b>Permit Monitoring and Testing Procedure:</b> WAC 246-247-040(3) & (5)	Continuous	<b>CDM:</b> NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528).
Permit: AIR 06-1020 - F <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 NOC: Transition of the Plutonium Finishing Plant <b>WDOH NOC ID:</b> 655 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0874-001		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 2.40E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).	Continuous	<b>CDM:</b> Annual Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The proposed activities involve transitioning the PFP Complex to a state of low-risk, low-cost, long-term surveillance and maintenance pending final disposition. All work would be performed in accordance with the approved radiological control procedures and as low as reasonably achievable (ALARA) program requirements as implemented by the project radiological control manual, as amended. These requirements would be carried out through the activity work packages and associated radiological work permits.</p> <p>This activity includes deactivation of buildings and also includes deactivation of systems no longer necessary once stabilization and storage activities and planned legacy hold-up removal have been concluded; removal/disposition of equipment/components; contamination characterization and reduction/mitigation; packaging plutonium holdup material meeting waste acceptance criteria; maintaining and operating muffle furnaces, as needed, for removed plutonium holdup material; and demolition of radiologically contaminated, non-process ancillary buildings.</p>	Continuous	<b>CDM:</b> FH work Management, and Job Control System.

Requirement	Compliance Status	Compliance Determination Method
<p>This activity also includes deactivation activities or activities to prepare and place a facility in a safe and stable condition to minimize the long-term cost of a surveillance and maintenance program while being protective of personnel, the public, and the environment until demolition of former processing and material storage buildings occurs. Deactivation activities would include those actions foreseeable necessary for implementation of the proposed action, such as associated transportation activities, waste removal and disposal, and award of grants and contracts. Specific actions could include the following work involving the potential for radioactive contamination:</p> <ul style="list-style-type: none"> <li>-Draining and/or de-energizing systems as appropriate.</li> <li>-Stabilizing contaminated areas (e.g., with fixatives, sealants, paint).</li> <li>-Stabilizing or removing gloveboxes, process equipment, tanks, piping, fume hoods, and support equipment.</li> <li>-Removing fencing and paved parking areas adjacent to facilities.</li> <li>-Installing alternate environmental monitoring, surveillance, and safety components (e.g., lighting, fencing) if required.</li> <li>-Removing/packaging radioactive (including equipment calibration sources and laboratory standards) and hazardous materials and waste, including stabilization and/or removal of asbestos, and removal cleanup, and disposition of polychlorinated biphenyls and other regulated materials and transportation to existing waste management facilities.</li> <li>-Removing equipment and system components.</li> <li>-Size-reducing process equipment for disposal as waste.</li> <li>-Performing physical or chemical treatment processes (e.g., neutralization, solidification, filtering) to render a material less hazardous or to reduce the volume (such processes will not increase the potential release rates).</li> <li>-Decontamination to support the excess of surplus equipment.</li> <li>-Removing excess combustible material.</li> <li>-Disconnecting utilities, piping, and communication service systems (if the systems are not necessary to maintain required environmental monitoring or building safety systems), including associated excavation.</li> <li>-Ensuring adequate freeze and heat protection.</li> <li>-Stabilizing, reducing, combining, or removing waste materials at outdoor locations within the PFP Complex (such processes will not increase the potential release rates provided in this NOC).</li> <li>-Sealing cracks, gratings, and openings to the building exterior, and repairing roofs.</li> <li>-Conducting general housekeeping activities (e.g., vacuuming, sweeping, dusting) in areas where radiological contamination is not anticipated (e.g., radiological buffer area) but could be encountered.</li> <li>-Removing or reducing radioactive or hazardous contamination from facilities and equipment by washing, heating, chemical or electrochemical action, mechanical cleaning, or other similar techniques.</li> <li>-Removing residual plutonium holdup material, which might remain throughout the PFP Complex after stabilization activities described in the PFP EIS have been completed; packaging residual plutonium holdup meeting waste acceptance criteria for shipment to an onsite waste management facility, or thermally stabilizing material in muffle furnace operations and packaging for storage in existing PFP Complex vaults.</li> <li>-Designing and executing changes to utility service systems and/or utility structures necessary to place a facility in surveillance and maintenance, pending demolition.</li> <li>-Conducting final process operations to stabilize or eliminate residual operational materials or effluents, such as final process runs; cleaning of vessels, valve pits and pipe trenches; installation and operation of small evaporators; flushing piping systems; removal or replacement of filters; and other similar closeout actions.</li> <li>-Demolishing non-process ancillary buildings.</li> </ul>		

Requirement	Compliance Status	Compliance Determination Method
<p>-Deactivation activities will require actions to provide for continued routine maintenance, repair, and replacement-in-kind of operating portions of PFP. Other actions include: -Remove residual plutonium from gloveboxes, filterboxes, equipment, piping, ductwork, and the building surfaces and package for disposition to onsite or offsite disposal facilities. -Remove internal equipment from gloveboxes and building equipment/system components and package for disposition to onsite or offsite disposal facilities. -Decontaminate gloveboxes, filterboxes, ductwork, and equipment to less than transuranic levels if possible. -Remove gloveboxes, filterboxes, ductwork, and equipment and packager disposition to onsite or offsite disposal facilities. -Decontaminate or fix contamination on building interior and exterior. -Disconnect utilities and services not necessary for monitoring. -Perform radiological and chemical characterization in preparation for dismantlement. In preparation for the proposed transition activities, housekeeping, assays, preventive maintenance, minor decontamination, and reactivation of glovebox access ports would occur.</p> <p>See additional process description in the following Conditions/Limitations.</p>		
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 8.90E+02 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Alpha-0   3.20E-06   Liquid/Particulate Solid   WAC 246-247-030(20(a) Based on Am -241. Isotopes of plutonium and americium may be present based on process knowledge of PFP operations.</p> <p>Beta-0   3.20E-06   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Based on Sr-90.</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified): Am-241      Co-60      Cs-137      Sr-90</p> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)) DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under 'which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department. with advance written notice by letter or electronic: mail but not solely by copies of documents.</p>	Continuous	CDM: Verified the basis for the PTE calculation in the NOC application unchanged.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the</p>	Continuous	CDM: FH work Management, and Job Control System.

Requirement	Compliance Status	Compliance Determination Method
<p>emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>Concrete containers shall be installed as an array of fourteen containers. Existing fuel packages shall be transferred to an area immediately adjacent to the concrete container prepared to receive the fuel. After loading the fuel (via crane), each concrete container shall be closed and managed as a point source. The concrete containers shall be either closed with a seal or vented passively through a NucFil or equivalent filter.</p> <p>Fuel assemblies/pins repackaging and storage activities shall be conducted outdoors. All work shall be performed in accordance with approved radiological control methods and as low as reasonably achievable (ALARA) program requirements. These requirements shall be carried out through activity work packages and associated radiological work permits.</p> <p>Presently, at the PFP Complex, there are closed interim storage casks (ISCs) that each contain a core component container (CCC). A CCC contains fuel received from the Fast Flux Test Facility (located in the 400 Area of the Hanford Site). Five (5) of the CCCs have residual surface contamination associated with them due to handling at FFTF.</p> <p>The lids of each ISC shall be removed and the CCCs transferred via crane to a new concrete container. After loading the CCC (via crane), each concrete container would be closed and managed as a point source. The emptied ISCs shall be closed and returned to FFTF.</p>		
<p>The total abated emission limit for the Concrete Containers emission unit is limited to 5.5E-05 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the potential-to-emit for this emission unit is limited to 5.5E-05 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).</p>	Continuous	<p><b>CDM:</b> Total abated emission is reported in the Annual Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007. Verified that the basis for the PTE calculation in the NOC application did not increase.</p>

**P-BULKVIT - 001**

WDOH Emission Unit ID : 878

Page in AOP : EU0878-001

EMISSION UNIT DID NOT OPERATE DURING CY 2007 SEE TABLE 2

Permit: AIR 06-1059 - B **Issue Date:**10-05-06 **Effective Date:**10-05-06

**NOC:** Supplemental Treatment Test and Demonstration Facility

**WDOH NOC ID:** 705 **Date In AOP:** 01-01-07 **Page in AOP:** EU0878-001

NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3

**W-296P049-001**

WDOH Emission Unit ID : 885

Page in AOP : EU0885-001

EMISSION UNIT DID NOT OPERATE DURING CY 2007 SEE TABLE 2

Permit: AIR 06-1057 - G <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>Obsolete Date:</b> 03-23-07 <b>NOC:</b> Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations <b>WDOH NOC ID:</b> 703 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0885-001 NOC NOT UTILIZED DURING CY 2007 SEE <u>TABLE 3</u>
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Permit: AIR 07-305 - G <b>Issue Date:</b> 03-23-07 <b>Effective Date:</b> 03-23-07 <b>NOC:</b> Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations <b>WDOH NOC ID:</b> 703 <b>Date In AOP:</b> 05-03-07 <b>Page in AOP:</b> EU0885-001 NOC NOT UTILIZED DURING CY 2007 SEE <u>TABLE 3</u>
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**W-296P050-001**

WDOH Emission Unit ID : 886

Page in AOP : EU0886-001

EMISSION UNIT DID NOT OPERATE DURING CY 2007 SEE TABLE 2

Permit: AIR 06-1057 - H <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>Obsolete Date:</b> 03-23-07 <b>NOC:</b> Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations <b>WDOH NOC ID:</b> 703 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0886-001 NOC NOT UTILIZED DURING CY 2007 SEE <u>TABLE 3</u>
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Permit: AIR 07-305 - H <b>Issue Date:</b> 03-23-07 <b>Effective Date:</b> 03-23-07 <b>NOC:</b> Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations <b>WDOH NOC ID:</b> 703 <b>Date In AOP:</b> 05-03-07 <b>Page in AOP:</b> EU0886-001 NOC NOT UTILIZED DURING CY 2007 SEE <u>TABLE 3</u>
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**Tanker Loading of Contaminated Waste Water**

WDOH Emission Unit ID : 888

Page in AOP : EU0888-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
No active Abatement Controls in the AOP for this certification period.		
<b>Required Sampling:</b> As listed in the following Conditions and Limitations. <b>Sampling Frequency:</b> As listed in the following Conditions and Limitations. <b>Radionuclide Requiring Measurement:</b> Total alpha, total beta	Continuous	CDM: Same as condition 5(d)

Requirement	Compliance Status	Compliance Determination Method
<p><b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) &amp; WAC 246-247-075(3)  <b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114</p>	Continuous	<p><b>CDM:</b> NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528, latest revision)</p>
<p>Permit: AIR 06-1050 <b>Issue Date:</b>10-05-06 <b>Effective Date:</b>10-05-06  <b>NOC:</b> Tanker Truck Loading of Radioactively Contaminated Waste Water  <b>WDOH NOC ID:</b> 696 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0888-001</p>		
Requirement	Compliance Status	Compliance Determination Method
<p>The total abated emission limit for this Notice of Construction is limited to 6.00E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).</p>	Continuous	<p><b>CDM:</b> The Annual Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007.</p>
<p>The approved activities are limited to: transfer radioactive waste water (e.g., purgewater, pool cell water, decontamination solutions) from various locations on the Hanford site to mobile tanker trucks, and transport the wastewater to the Liquid Effluent Retention Facility (LERF) and/or 200 Areas Effluent Treatment Facility (ETF). The proposed action includes isolated instances where small quantities of wastewater might be transferred to 55 gallon drums or smaller containers, for transport to LERF and/or ETF. The license is a categorical license under WAC 246-247-060(8). In the text of the license conditions, it should be understood that the term "tanker" or "tanker/drum" or variants of these terms includes small containers, so that the license shall apply to loading of tanker, drums, or smaller containers.</p> <p>The physical and chemical processes associated with tanker truck loading activities are:</p> <ul style="list-style-type: none"> <li>Isotopic analysis of wastewater.</li> <li>Tanker truck or truck deployment.</li> <li>Hookup of transfer equipment for transfer of wastewater into tanker, drums, or smaller container.</li> <li>Wastewater transfer to the tanker truck, drums, or smaller containers via pumping or vacuum transfer.</li> <li>Associated surveys, spill prevention, other radcon activities.</li> <li>Decontamination of tanker/drums/smaller containers.</li> <li>Decontamination or packaging of transfer equipment for transport.</li> <li>Decontamination or packaging of spillage and resulting contamination.</li> </ul> <p>Unloading of the tanker trucks, drums, or smaller containers is not licensed under this approval.</p>	Continuous	<p><b>CDM:</b> Review of facility and procedure change documents as specified in administrative procedures.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e)[as specified in the application] is 6.00E-02 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Alpha-0   3.60E-07   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Any radionuclide on the chart of the nuclides could be encountered during tanker loading operations. The radionuclides specifically listed in the NOC application were chosen to conservatively represent all radionuclide emissions that may occur in particulate form. A small contribution from the gaseous radionuclides may be encountered. Although any radionuclide could be present, for conservatism all beta/gamma is assumed to be Cs-137 and all alpha is assumed to be Am-241 for dose calculation estimates. Other radionuclides may be encountered and are approved so long as they are conservatively represented by the total alpha and total beta-gamma constituents.</p> <p>Beta-0   1.10E-02   Liquid/Particulate Solid   WAC 246-247-030(21)(a) Any radionuclide on the chart of the nuclides could be encountered during tanker loading operations. The radionuclides specifically listed in the NOC application were chosen to conservatively represent all radionuclide emissions that may occur in particulate form. A small contribution from the gaseous radionuclides may be encountered. Although any radionuclide could be present, for conservatism all beta/gamma is assumed to be Cs-137 and all alpha is assumed to be Am-241 for dose calculation estimates. Other radionuclides may be encountered and are approved so long as they are conservatively represented by the total alpha and total beta-gamma constituents.</p> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)) DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725( 4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>	<p>Continuous</p>	<p><b>CDM:</b> In accordance with administrative procedures, the quantities of individual radionuclides are tracked based on sample results, flow rates, and process knowledge. The MEI dose and potential-to-emit are calculated and the results are placed in the facility record.</p>
<p>At all times, activities shall conform to procedures for prior characterization and handling of radioactive liquid approved in accord with applicable QA program. Prior to commencing liquid transfer into tanker/drum/smaller container:</p> <p>a) Waste liquid shall be characterized, and acceptability at the ETF and/or LERF shall be verified. b) All transfer line hookups shall be inspected to verify leak-tight connections. c) Spill prevention measures shall be verified to be in place. d) Volume of tanker/drum/smaller container contents shall be verified and documented. e) Seals separating tanker/drum/smaller container contents from environment shall be verified fully functional.</p> <p>During the loading operation: f) Surveys shall be performed according to radiation control procedures approved via applicable QA program. g) Fill rates shall be controlled below 50 cfm.</p> <p>On completion of the loading operation: h) All tanker/drum fittings shall be disconnected and closed. i) All liquid/gas release points on the tanker/drum shall be closed and shall remain closed until commencement of unloading operations at the LERF or</p>	<p>Continuous</p>	<p><b>CDM:</b> Review of facility and procedure change documents as specified in administrative procedures.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>ETF.</p> <p>j) Spill prevention measures shall remain in place until the tanker/drum is closed.</p> <p>k) The tanker/drum shall be surveyed and if necessary decontaminated before release for transport.</p> <p>l) Transfer equipment shall be surveyed and if necessary decontaminated or packaged for transport subject to radcon procedures approved in accord with applicable QA program.</p> <p>m) Spillage shall be surveyed and if necessary decontaminated or packaged or transport and disposal subject to radcon procedures approved in accord with applicable QA program.</p> <p>n) Volume of tanker/drum contents shall be verified and documented.</p> <p>The surface contamination release criteria for the vehicle, tanker, drums, and transport equipment shall be documented and approved in accord with an applicable QA program.</p> <p>(WAC 246-247-040(5))</p>		
<p>Log, Monitoring, and Demonstration of Compliance to Licensed Emission Limit:</p> <p>a) A single log shall be maintained, reflect each individual loading operation, and be updated after each individual tanker/drum/container is offloaded, so long as the emissions associated with the transferred but un-logged quantity (material residing in partially filled tankers) remain less than 10% of licensed limit, as estimated using the method described in this condition.</p> <p>b) The log shall record the sum to date of the calendar year's emissions estimated using the method described in this condition for activities herein licensed.</p> <p>c) The log shall include monthly confirmation that licensed annual emission limits have not been exceeded, that transfer low rates remain below the limit specified in this license, and identify the radiological work package under which each loading is accomplished.</p> <p>d) The estimated emissions for each loading operation shall be determined using one of the following methods:</p> <p>Method 1: From the characterization of the liquid being loaded, gross alpha and gross beta/gamma activities shall be determined. The emission shall be determined using the volume of liquid transferred, and assumed release fraction of 0.001, location-specific dose conversion factors from the latest revision of HNF-3602, assuming gross alpha is 241-AM and gross beta/gamma is 137-Cs.</p> <p>Method 2: From the characterization of the liquid being loaded, a complete isotopic distribution of radionuclides shall be determined. The emission shall be determined using the volume of liquid transferred and assumed release fraction of 0.001, and location-specific dose conversion factor from the latest revision of HNF-3602 for known isotopes.</p> <p>(WAC 246-247-040(5) WAC 246-247-080(7), WAC 246-247-075(3)).</p>	<p>Continuous</p>	<p>CDM: Review of facility and procedure change documents as specified in administrative procedures.</p>

**P-241UX302A-001**  
WDOH Emission Unit ID : 894  
Page in AOP : EU0894-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b> Passive Breather Filter (Radial breather filter installed on January 17, 2007)	Continuous	CDM: Field interviews.
<b>Required Sampling:</b> Smear survey on the inside surface of the ducting and downstream of the HEPA filter or on the outside of the screen covering the outlet of the vent. <b>Sampling Frequency:</b> 1 per year. <b>Radionuclide Requiring Measurement:</b> Levels below 10,000 dpm/100cm <sup>2</sup> beta/gamma and 200 dpm/100cm <sup>2</sup> alpha will verify low emissions.	Continuous	CDM: Annual Radiological Surveillance Task, RSRs, and field interviews.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3)	Continuous	CDM: Near Field Monitoring Program.
Permit: AIR 06-1022 - A <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>NOC:</b> Installation and Operation of Breather Filter on Tank 241-UX-302A, 241-AZ-154, and 241-U-301B <b>WDOH NOC ID:</b> 659 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0894-001		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 2.73E-06 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice of Construction is limited to 2.73E-04 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).	Continuous	CDM: Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.
This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.  Installation of a passive breather filter on tanks 241-UX-302A, 241-AZ-154, and 241-U-301B. The breather filter will be a radial HEPA filter with a removal efficiency of 99.97% and a rated capacity of 40 cfm. The filter will be replaced on an annual basis,	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.

Requirement	Compliance Status	Compliance Determination Method								
<p>eliminating the need for annual aerosol testing. The breather filter shall minimize the amount of radioactive particulates emitted as a consequence of tank breathing due to barometric pressure changes. The catch tank will breath at a rate of approximately 0.007 cfm with a flow rate less than 1 cfm.</p> <p>The 241-UX-302A catch tank is a 17,760 gallon capacity catch tank which has been isolated and currently contains 1,736 gallons of waste.</p> <p>The 241-AZ-154 catch tank is a 869 gallon capacity catch tank designed to receive condensate from the 241-AZ and 241-AY double shell tank heating coils. The steam coils have sense been blanked off. Current data indicates the tank is empty. Periodically water intrusion is seen in this tank from rain and snow.</p> <p>The 241-U-301B catch tank is a 36,000 gallon capacity catch tank designed to support waste transfers from 244-TX via 241-U-152. Current data indicates that 1,467 gallons of waste remain in this tank.</p>										
<p>The Annual Possession Quantity is limited to the following radionuclides (Curies/year):</p> <table border="0"> <tr> <td>Alpha-0</td> <td>8.48E-05</td> <td>Beta-0</td> <td>3.02E+00</td> </tr> <tr> <td>Gamma-0</td> <td>3.14E-01</td> <td></td> <td></td> </tr> </table>	Alpha-0	8.48E-05	Beta-0	3.02E+00	Gamma-0	3.14E-01			Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents/procedures, and/or database.
Alpha-0	8.48E-05	Beta-0	3.02E+00							
Gamma-0	3.14E-01									
<p>The breather filter must be replaced annually. The new filter must be a Type 1 (radial flow filter) with a Type C filter pack, as defined by AG-1 Code on Nuclear Air and Gas Treatment Section FK, Special HEPA Filters. The filter frames, end-caps, flanges, and grilles must be made of 304/304L stainless steel. The filter must use UL-586 compliant resin to provide the sealing of the filter media to the frame. The filter must have a minimum removal efficiency of 99.97% and a rated flow of 40 cfm.</p>	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures								
<p>All removal and installation operation, of the breather filter, must follow the requirements outlined in ALARACT 1 "Demonstration for Riser Preparation/Opening", and ALARACT 16 "Demonstration for Work on Potentially Contaminated Ventilation System Components".</p>	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.								
<p>The breather filter must meet all of the requirements as described in the "AG-1 COMPLIANCE MATRIX FOR FLANDERS FILTER MODEL 0-007-1-12-RF-NU-00-E3-Z04059B", of the DOE letter 06-ED-001, dated January 18, 2006 titled RADIOACTIVE AIR EMISSIONS NOTICE OF CONSTRUCTION APPLICATION FOR INSTALLATION OF A</p>	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.								

Requirement	Compliance Status	Compliance Determination Method
<p>BREATHER FILTER ON TANK 241-UX-302A.</p> <p>Should a change to the Compliance Matrix be required, WDOH approval of the deviation shall be obtained prior to installation of the new breather filter.</p>		

**P-241ER311-001**

WDOH Emission Unit ID : 910

Page in AOP : EU0910-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<p><b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b> Passive Breather Filter (Radial breather filter installed on October 30, 2007)</p>	Continuous	CDM: Field interviews.
<p><b>Required Sampling:</b> Smear survey on the inside surface of the ducting and downstream of the HEPA filter or on the outside of the screen covering the outlet of the vent. <b>Sampling Frequency:</b> 1 per year <b>Radionuclide Requiring Measurement:</b> Levels below 10,000 dpm/100cm<sup>2</sup> beta/gamma and 200 dpm/100cm<sup>2</sup> alpha will verify low emissions.</p>	Continuous	CDM: Annual Radiological Surveillance Task, RSRs, and field interviews.
<p><b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) &amp; WAC 246-247-075(3)</p>	Continuous	CDM: Near Field Monitoring Program.

Permit: AIR 06-1066 - C Issue Date:10-05-06 Effective Date:10-05-06 Obsolete Date: 10-30-07

NOC: Removal of Liquid from Catch Tank 241-ER-331

WDOH NOC ID: 718 Date In AOP: 01-01-07 Page in AOP: EU0910-001

Requirement	Compliance Status	Compliance Determination Method
<p>The total abated emission limit for this Notice of Construction is limited to 1.47E-05 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice of Construction is limited to 1.47E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).</p>	Continuous	CDM: Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC</p>	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and

Requirement	Compliance Status	Compliance Determination Method								
<p>246-247-030(16), may be conducted.</p> <p>The action will include the operation of a 500 cfm portable exhauster connected to a riser in conjunction with a inlet HEPA filter to remove evaporate liquid in the 241-ER-311 Catch Tank. A small volume of the liquid may be pumped out during this activity. There may also be an insertion of a sleeve inside the existing risers to direct air flow closer to the liquid surface.</p> <p>During riser preparation controls will be established using as low as reasonably achievable control technology (ALARACT 1) "Demonstration for riser preparation/opening", ALARACT 4 "Demonstration for packaging and transportation of waste", ALARACT 6 "Demonstration for pit access", ALARACT 13 "Demonstration for installation, operation, and removal of tank equipment", ALARACT 14 "Demonstration for pit work", ALARACT 15 "Demonstration for size reduction of waste equipment or disposal", and ALARACT 16 "Demonstration for work on potentially contaminated ventilation system components".</p> <p>A portable, 500 cfm ventilation system will be installed on a riser on the 241-ER-311 Catch Tank. The portable exhauster consists of a skid mounted air clean-up train, which includes a heater, a pre-filter, two HEPA filters in series, and a fan, prior to the stack. During exhauster operation air from the tank will be heated before passing through the pre-filter and two HEPA filters to ensure that condensation of air stream moisture is minimized through this section. Drains in each of the filter and heater housings allow entry condensed liquid to flow away from the components and to be collected in a seal pot for removal.</p> <p>Ductwork will be used to connect the exhauster inlet to the tank riser. Ductwork will essentially be fabricated in conformance with ASME B31.3 Process Piping, and it will meet the requirements of ASME AG-1, Section SA, with the exceptions noted in RPP-1923, "General WAC 246-247- Technology Standards Exemption Justification for Waste Tank Ventilation Systems."</p> <p>A 500 cfm inlet HEPA filter in an ASME AG-1 compliant housing will be installed on a second riser on the 241-ER-311 to accommodate the inlet air stream created by the use of the portable exhauster. When the exhauster is not running, the inlet HEPA filter will serve as a tank barometric breather filter to provide abatement of particulate emissions from the tank.</p>		<p>procedures.</p>								
<p>The Annual Possession Quantity is limited dot the following radionuclides (Curies/year):</p> <table border="0"> <tr> <td>Am-241</td> <td>4.79E-04</td> </tr> <tr> <td>Cs-137</td> <td>9.36+00</td> </tr> <tr> <td>Pu-239/240</td> <td>3.36E-04</td> </tr> <tr> <td>Sr-89/90</td> <td>2.88E+00</td> </tr> </table>	Am-241	4.79E-04	Cs-137	9.36+00	Pu-239/240	3.36E-04	Sr-89/90	2.88E+00	<p>Continuous</p>	<p>CDM: Field interviews, CH2M HILL work planning/controls/documents/ procedures, and/or database.</p>
Am-241	4.79E-04									
Cs-137	9.36+00									
Pu-239/240	3.36E-04									
Sr-89/90	2.88E+00									
<p>Each HEPA filter shall be in-place tested annually in accordance with the requirements of ASME AG-1 Section TA. HEPA filters shall have a minimum efficiency of 99.95%.</p>	<p>Continuous</p>	<p>CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>								
<p>The 500 CFM HEPA filter shall comply with the requirements of ASME/ANSI AG-1 Section FC, and the housing shall comply with the requirements of Section HA.</p>	<p>Continuous</p>	<p>CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>								

Requirement	Compliance Status	Compliance Determination Method
Permit: AIR 07-1020 - C Issue Date:10-31-07 Effective Date:10-31-07 NOC: Removal of Liquid from Catch Tank 241-ER-331 WDOH NOC ID: 718 Date In AOP: 12-05-07 Page in AOP: EU0910-001		
<p>The total abated emission limit for this Notice of Construction is limited to 1.47E-05 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice of Construction is limited to 1.47E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).</p>	Continuous	<p>CDM: Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The action will include the operation of a 500 cfm portable exhauster connected to a riser in conjunction with a inlet HEPA filter to remove evaporate liquid in the 241-ER-311 Catch Tank. A small volume of the liquid may be pumped out during this activity. There may also be an insertion of a sleeve inside the existing risers to direct air flow closer to the liquid surface.</p> <p>During riser preparation controls will be established using as low as reasonably achievable control technology (ALARACT 1) "Demonstration for riser preparation/opening", ALARACT 4 "Demonstration for packaging and transportation of waste", ALARACT 6 "Demonstration for pit access", ALARACT 13 "Demonstration for installation, operation, and removal of tank equipment", ALARACT 14 "Demonstration for pit work", ALARACT 15 "Demonstration for size reduction of waste equipment or disposal", and ALARACT 16 "Demonstration for work on potentially contaminated ventilation system components".</p> <p>A portable, 500 cfm ventilation system will be installed on a riser on the 241-ER-311 Catch Tank. The portable exhauster consists of a skid mounted air clean-up train, which includes a heater, a pre-filter, two HEPA filters in series, and a fan, prior to the stack. During exhauster operation air from the tank will be heated before passing through the pre-filter and two HEPA filters to ensure that condensation of air stream moisture is minimized through this section. Drains in each of the filter and heater housings allow entry condensed liquid to flow away from the components and to be collected in a seal pot for removal.</p> <p>Ductwork will be used to connect the exhauster inlet to the tank riser. Ductwork will essentially be fabricated in conformance with ASME B31.3 Process Piping, and it will meet the requirements of ASME AG-1, Section SA, with the exceptions noted in RPP-1923, "General WAC 246-247- Technology Standards Exemption Justification for Waste Tank Ventilation Systems."</p> <p>A 500 cfm inlet HEPA filter in an ASME AG-1 compliant housing will be installed on a second riser on the 241-ER-311 to accommodate the inlet air stream created by the use of the portable exhauster. When the exhauster is not running, the inlet HEPA filter will serve as a tank barometric breather filter to provide abatement of particulate emissions from the tank.</p>	Continuous	<p>CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>The Annual Possession Quantity is limited dot the following radionuclides (Curies/year):</p> <p>Am-241 4.79E-04   Cs-137 9.36+00   Pu-239/240 3.36E-04   Sr-89/90 2.88E+00  </p>	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents/procedures, and/or database.
Each HEPA filter shall be in-place tested annually in accordance with the requirements of ASME AG-1 Section TA. HEPA filters shall have a minimum efficiency of 99.95%.	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.
The 500 CFM HEPA filter shall comply with the requirements of ASME/ANSI AG-1 Section FC, and the housing shall comply with the requirements of Section HA.	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.

**P-244A-003**

WDOH Emission Unit ID : 912

Page in AOP : EU0912-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<p><b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b> Passive Breather Filter (Radial breather filter installed on February 2, 2007)</p>	Continuous	CDM: Field interviews.
<p><b>Required Sampling:</b> Smear survey on the inside surface of the ducting and downstream of the HEPA filter or on the outside of the screen covering the outlet of the vent <b>Sampling Frequency:</b> 1 per year <b>Radionuclide Requiring Measurement:</b> Levels below 10,000 dpm/100cm<sup>2</sup> beta/gamma and 200 dpm/100cm<sup>2</sup> alpha will verify low emissions.</p>	Continuous	CDM: Annual Radiological Surveillance Task, RSRs, and field interviews.
<p><b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) &amp; WAC 246-247-075(3)</p>	Continuous	CDM: Near Field Monitoring Program.
<p>Permit: AIR 06-1051 - F Issue Date:10-05-06 Effective Date:10-05-06            NOC: Isolation and Closure of Exhaust Stacks 296-A-25, 296-B-28, 296-S-22, and 296-T-18            WDOH NOC ID: 697 Date In AOP: 01-01-07 Page in AOP: EU0912-001            NOC NOT UTILIZED DURING CY 2007 SEE <u>TABLE 3</u></p>		

**P-244BX-003**  
WDOH Emission Unit ID : 922  
Page in AOP : EU0922-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b> Passive Breather Filter	Continuous	<b>CDM:</b> Field interviews.
<b>Required Sampling:</b> Smear survey on the inside surface of the ducting and downstream of the HEPA filter or on the outside of the screen covering the outlet of the vent. <b>Sampling Frequency:</b> 1 per year. <b>Radionuclide Requiring Measurement:</b> Levels below 10,000 dpm/100cm <sup>2</sup> beta/gamma and 200 dpm/100cm <sup>2</sup> alpha will verify low emissions.	Continuous	<b>CDM:</b> Annual Radiological Surveillance Task, RSRs, and field interviews.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3)	Continuous	<b>CDM:</b> Near Field Monitoring Program.
Permit: AIR 06-1051 - G <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>NOC:</b> Isolation and Closure of Exhaust Stacks 296-A-25, 296-B-28, 296-S-22, and 296-T-18 <b>WDOH NOC ID:</b> 697 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0922-001 <b>NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3</b>		

**P-244S-003**  
WDOH Emission Unit ID : 959  
Page in AOP : EU0959-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b> Passive Breather Filter	Continuous	<b>CDM:</b> Field interviews.
<b>Required Sampling:</b> Smear survey on the inside surface of the ducting and downstream of the HEPA filter or on the outside of the screen covering the outlet of the vent. <b>Sampling Frequency:</b> 1 per year. <b>Radionuclide Requiring Measurement:</b> Levels below 10,000 dpm/100cm <sup>2</sup> beta/gamma and 200 dpm/100cm <sup>2</sup> alpha will verify low emissions.	Continuous	<b>CDM:</b> Annual Radiological Surveillance Task, RSRs, and field interviews.

Requirement	Compliance Status	Compliance Determination Method
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3)	Continuous	CDM: Near Field Monitoring Program.
Permit: AIR 06-1051 - H <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>NOC:</b> Isolation and Closure of Exhaust Stacks 296-A-25, 296-B-28, 296-S-22, and 296-T-18 <b>WDOH NOC ID:</b> 697 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0959-001 NOC NOT UTILIZED DURING CY 2007 SEE <u>TABLE 3</u>		

**P-244TX-003**

WDOH Emission Unit ID : 969  
Page in AOP : EU0969-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b> Passive Breather Filter	Continuous	CDM: Field interviews.
<b>Required Sampling:</b> Smear survey on the inside surface of the ducting and downstream of the HEPA filter or on the outside of the screen covering the outlet of the vent. <b>Sampling Frequency:</b> 1 per year. <b>Radionuclide Requiring Measurement:</b> Levels below 10,000 dpm/100cm <sup>2</sup> beta/gamma and 200 dpm/100cm <sup>2</sup> alpha will verify low emissions.	Continuous	CDM: Annual Radiological Surveillance Task, RSRs, and field interviews.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3)	Continuous	CDM: Near Field Monitoring Program.
Permit: AIR 06-1051 - I <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>NOC:</b> Isolation and Closure of Exhaust Stacks 296-A-25, 296-B-28, 296-S-22, and 296-T-18 <b>WDOH NOC ID:</b> 697 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU0969-001 NOC NOT UTILIZED DURING CY 2007 SEE <u>TABLE 3</u>		

**400 Area Diffuse/Fugitive**  
WDOH Emission Unit ID : 1128  
Page in AOP : EU1128-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
No active Abatement Controls in the AOP for this certification period.		
<p><b>Required Sampling:</b> Per the sitewide ambient monitoring program samples will be collected from the existing near-facility monitoring stations</p> <p><b>Sampling Frequency:</b> Per the sitewide ambient monitoring program</p> <p><b>Radionuclide Requiring Measurement:</b> Each radionuclide that could contribute greater than 10 percent of the potential-to-emit TEDE.</p>	Continuous	<p><b>CDM:</b> Sampling is verified by information in ABCASH. The Statement of Work for Services Provided by the Waste Sampling and Characterization Facility for the Environmental Compliance Program during Calendar Year 2007 (HNF-EP-0835) defines what analyses are performed and the frequency.</p>
<p><b>Federal and State Regulatory Requirement:</b> WAC 246-247-075(3)</p> <p><b>Permit Monitoring and Testing Procedure:</b> 40 CFR 61, Appendix B, Method 114</p>	Continuous	<p><b>CDM:</b> The NESHAP Quality Assurance Project Plan for Radioactive Air Emissions (HNF-EP-0528) specifies the hardware and method used to sample and the analytical methods used in the laboratory.</p>
<p>Permit: AIR 06-1011 - E <b>Issue Date:</b>10-05-06 <b>Effective Date:</b>10-05-06</p> <p><b>NOC:</b> Sodium Residuals Reaction/Removal and other Deactivation Work Activities at the Fast Flux Test Facility</p> <p><b>WDOH NOC ID:</b> 646 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU1128-001</p>		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 5.70E-03 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).	Continuous	<p><b>CDM:</b> The Annual Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2007.</p>
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The activity will involve reaction of sodium residuals associated with the Fast Flux Test Facility Project systems and equipment. This activity could be conducted in place or at designated cleaning locations. Typically, the sodium residuals would be reacted with superheated steam. The primary advantages of the superheated steam process (SSP) are that it does not allow condensation to occur and component cleaning can be performed in a shorter time period. Prior to steam injection into the system to be cleaned the steam is heated to ~ 204 C (400 F). The equipment to be cleaned is heated to a minimum of 100 C (212 F) and higher if possible. Most systems will require multiple injection points. As the superheated steam reacts with the metallic sodium, the</p>	Continuous	<p><b>CDM:</b> FFTF-36419, FFTF Closure Project Documented Safety Analysis, inquiry of facility personnel, and review of facility records associated with HNF-PRO-12115, Work Management, and Job Control System.</p>

Requirement	Compliance Status	Compliance Determination Method
<p>temperature increases. The temperature is controlled such that the maximum reaction temperature is no greater than ~538 C (1,000 F).</p> <p>Because of the high initial temperature and the increase of the temperature caused by the reaction, no condensation occurs. The caustic formed is a liquid at the processing temperatures and because it is - denser than the liquid sodium, it settles to the bottom of any pools leaving the sodium on top where it is always exposed to the superheated steam. Due to the continued exposure of the molten sodium to the superheated steam, the reaction continues at a constant rate. Superheated steam injection is continued until hydrogen is no longer being generated. The system is then cooled and rinsed and the fluid is drained from the system.</p> <p><b>PERFORM IN PLACE CLEANING OF VESSELS, COMPONENTS, AND LARGE BORE PIPE</b></p> <p>A PTRAEU would be used to clean, in place, large bore sodium pipe [greater than or equal to --20 centimeter (8 inch) diameter], components and vessels in the primary and secondary sodium cooling systems. The PTRAEU also would be used to clean the Interim Decay Storage (IDS) and Fuel Storage Facility (FSF) vessels [Note: Select components in the primary sodium system, and large diameter piping and components in the secondary sodium system may be removed and cleaned in FSF or the Maintenance and Storage Facility (MASF), as described below].</p> <p>Typically, penetrations into the piping/vessels would be made at appropriate locations using a low speed drill. Existing sodium heating systems would be energized, and piping/vessels heated to liquefy' the existing sodium residuals. A PTRAEU would be connected to the penetration points, and used at various locations to inject the superheated steam into plant systems.</p> <p>The superheated steam would be injected. Hydrogen generation would be monitored to follow the reaction. Sulfuric acid would be added to the resultant process liquid (i.e., sodium hydroxide solution) to reduce the pH to &lt;13. This solution would be routed for offloading to tanker transport for overland transfer to Liquid Effluent Treatment Facility (LERF) and subsequent treatment at 200 Area Effluent Treatment Facility (ETF). If needed or chosen for use during these activities, the categorical NOC for sitewide use of tanker loading for wastewater could be used.</p> <p><b>REMOVE SMALL BORE PIPE AND COMPONENTS FOR REACTION N A CLEANING STATION</b></p> <p>Small bore piping [&lt;20 centimeter (8 inch) diameter], valves and other components [e.g., core component pots from IDS, fuel storage tubes from FSF, and dump heat exchangers (DHX) tube bundles] may be removed and processed in a proposed stationary cleaning station that would be located in FSF. Mechanical means (e.g., portable saws, pipe cutters) would be used to cut the pipe, valves, and components into manageable size. All heat exchanger tube bundles, which contain multiple parallel flow paths, would be dismantled to ensure effective cleaning.</p> <p>The proposed FSF stationary cleaning station would consist of a chamber with removable rack for loading piping and components. The piping would be loaded at an angle, allowing the residual sodium to drain to a catch basin when heated before the injection of inert gas and/or reaction medium. The process in the cleaning station would be consistent with the in place process where the resultant waste sodium hydroxide solution is collected, the pH reduced to &lt;13, and transported to the 200 Areas. The FSF is considered an appropriate location due to availability of sufficient floor space, existing overhead crane, available utilities, and proximity to proposed operations. If needed or chosen for use during these activities, the categorical NOC for sitewide use of</p>		

Requirement	Compliance Status	Compliance Determination Method												
<p>tanker loading for wastewater could be used.</p> <p>Cleaned piping and components would be disposed of in a Hanford Site solid waste management facility.</p> <p><b>REMOVE LARGE COMPONENTS FOR CLEANING</b> The large diameter cleaning vessel (LDCV) located in the existing MASF could be used for cleaning large components following removal (e.g., primary sodium pumps, intermediate heat exchanger (IHX) tube bundles, and instrument trees). The LDCV could be retrofitted with a new super heated steam supply and associated control system for use in cleaning the aforementioned components. The IHX tube bundles, which contain multiple parallel sodium flow paths, may be dismantled to ensure effective cleaning. Small bore pipe and components also could be cleaned in MASF, if necessary.</p> <p><b>OTHER DEACTIVATION ACTIVITIES</b> Other related routine, continued deactivation activities that could occur as part of the proposed action are: remove/dispose of asbestos; remove/stabilize existing hazards in conjunction with systems and equipment deactivation associated with sodium residuals; remove/recycle/dispose excess deactivated equipment and components; and remove depleted uranium and/or lead shielding.</p>														
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 5.70E-03 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Alpha-0   9.00E-15   Liquid/Particulate Solid   WAC 246-247-030(21)(e) Alpha release rate based on Pu-239.</p> <p>B/G-0   1.50E-01   Liquid/Particulate Solid   WAC 246-247-030(21)(e) Beta/Gamma release rate based on Cs- 137.</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <table border="0"> <tr> <td>Ba-137 m</td> <td>Co-60</td> <td>Cs-134</td> </tr> <tr> <td>Cs-137</td> <td>H-3</td> <td></td> </tr> <tr> <td>Mn-54</td> <td>Na-22</td> <td>Pu-239</td> </tr> <tr> <td>Ru-106</td> <td>Zn-65</td> <td></td> </tr> </table> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-03006). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)) DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>	Ba-137 m	Co-60	Cs-134	Cs-137	H-3		Mn-54	Na-22	Pu-239	Ru-106	Zn-65		<p>Continuous</p>	<p>CDM: Verified the basis for the PTE calculation in the NOC application.</p>
Ba-137 m	Co-60	Cs-134												
Cs-137	H-3													
Mn-54	Na-22	Pu-239												
Ru-106	Zn-65													
<p>Operations shall be performed in accordance with the controls specified in radiation work planning documents and/or operating procedures aid shall be available for inspection upon request.</p>	<p>Continuous</p>	<p>CDM: FFTF-36419, FFTF Closure Project Documented Safety Analysis, HNF-5173, PHMC Radiological Control Manual, FFTF-POL-6-14,</p>												

Requirement	Compliance Status	Compliance Determination Method
		FFTF Plant Policy Manual, inquiry of facility personnel, and review of facility records associated with HNF-PRO-12115, Work Management, and Job Control System.
All activities shall be conducted under the auspices of radiological or health physics control technicians or personnel. Routine field surveys, including swipes/smears, shall be conducted. Fixatives, covers, or other standard measures shall be used, as necessary to contain contamination.	Continuous	<b>CDM:</b> FFTF-36419, FFTF Closure Project Documented Safety Analysis, HNF-5173, PHMC Radiological Control Manual, FFTF-POL-6-14, FFTF Plant Policy Manual, inquiry of facility personnel, and review of facility records associated with HNF-PRO-12115, Work Management, and Job Control System.
Appropriate spill prevention procedures shall be in place to minimize the release of radioactive liquid waste to the environment, and to provide immediate cleanup of any liquid spills.	Continuous	<b>CDM:</b> FFTF-36419, FFTF Closure Project Documented Safety Analysis, HNF-IP-0263, Building Emergency Plan for FFTF Property Protected Area, FFTF-POL-6-14, FFTF Plant Policy Manual, inquiry of facility personnel, and review of facility records associated with HNF-PRO-12115, Work Management, and Job Control System.
The total amount of sodium reacted from all emission units shall not exceed 4,000 gallons per year with no more than 2,000 gallons challenging a single emission unit.	Continuous	<b>CDM:</b> FFTF-36419, FFTF Closure Project Documented Safety Analysis, FFTF-POL-6-14, FFTF Plant Policy Manual, inquiry of facility personnel, and review of facility records associated with HNF-PRO-12115, Work Management, and Job Control System.
Other radioisotopes may be present due to activation products, fission products, decay products, and tracer gases. These other isotopes are approved for this emission unit and will not contribute significantly to the calculated potential-to-emit.	Not Applicable	<b>CDM:</b> This is a statement of fact. Compliance determination is not necessary.

**P-241U301B-001**  
WDOH Emission Unit ID : 1129  
Page in AOP : EU1129-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b> Passive Breather Filter	Continuous	<b>CDM:</b> Field interviews.
<b>Required Sampling:</b> Smear survey on the inside surface of the ducting and downstream of the HEPA filter or on the outside of the screen covering the outlet of the vent <b>Sampling Frequency:</b> 1 per year <b>Radionuclide Requiring Measurement:</b> Levels below 10,000 dpm/100cm <sup>2</sup> beta/gamma and 200 dpm/100cm <sup>2</sup> alpha will verify low emissions.	Continuous	<b>CDM:</b> Annual Radiological Surveillance Task, RSRs, and field interviews.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3)	Continuous	<b>CDM:</b> Near Field Monitoring Program.
Permit: AIR 06-1022 - B <b>Issue Date:</b> 10-05-06 <b>Effective Date:</b> 10-05-06 <b>NOC:</b> Installation and Operation of Breather Filter on Tank 241-UX-302A, 241-AZ-154, and 241-U-301B <b>WDOH NOC ID:</b> 659 <b>Date In AOP:</b> 01-01-07 <b>Page in AOP:</b> EU1129-001		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 2.73E-06 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice of Construction is limited to 2.73E-04 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).	Continuous	<b>CDM:</b> Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.
This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.  Installation of a passive breather filter on tanks 241-UX-302A, 241-AZ-154, and 241-U-301B. The breather filter will be a radial HEPA filter with a removal efficiency of 99.97% and a rated capacity of 40 cfm. The filter will be replaced on an annual basis, eliminating the need for annual aerosol testing. The	Continuous	<b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.

Requirement	Compliance Status	Compliance Determination Method																		
<p>breather filter shall minimize the amount of radioactive particulates emitted as a consequence of tank breathing due to barometric pressure changes. The catch tank will breath at a rate of approximately 0.007 cfm with a flow rate less than 1 cfm.</p> <p>The 241-UX-302A catch tank is a 17,760 gallon capacity catch tank which has been isolated and currently contains 1,736 gallons of waste.</p> <p>The 241-AZ-154 catch tank is a 869 gallon capacity catch tank designed to receive condensate from the 241-AZ and 241-AY double shell tank heating coils. The steam coils have sense been blanked off. Current data indicates the tank is empty. Periodically water intrusion is seen in this tank from rain and snow.</p> <p>The 241-U-301B catch tank is a 36,000 gallon capacity catch tank designed to support waste transfers from 244-TX via 241-U-152. Current data indicates that 1,467 gallons of waste remain in this tank.</p>																				
<p>The Annual Possession Quantity is limited to the following radionuclides (Curies/year):</p> <table border="0"> <tr> <td>Am-241</td> <td>1.11E-09</td> <td> </td> </tr> <tr> <td>Pu-239/240</td> <td>1.39E-09</td> <td> </td> </tr> <tr> <td>Sr-90</td> <td>3.33E-09</td> <td> </td> </tr> <tr> <td>U-234</td> <td>3.28E-10</td> <td> </td> </tr> <tr> <td>U-235</td> <td>1.28E-10</td> <td> </td> </tr> <tr> <td>Zn-65</td> <td>7.77E-08</td> <td> </td> </tr> </table>	Am-241	1.11E-09		Pu-239/240	1.39E-09		Sr-90	3.33E-09		U-234	3.28E-10		U-235	1.28E-10		Zn-65	7.77E-08		Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents/procedures, and/or database.</p>
Am-241	1.11E-09																			
Pu-239/240	1.39E-09																			
Sr-90	3.33E-09																			
U-234	3.28E-10																			
U-235	1.28E-10																			
Zn-65	7.77E-08																			
<p>The breather filter must meet all of the requirements as described in the "AG-1 COMPLIANCE MATRIX FOR FLANDERS FILTER MODEL 0-007-1-12-RF-NU-00-E3-Z04059B", of the DOE letter 06-ED-001, dated January 18, 2006 titled RADIOACTIVE AIR EMISSIONS NOTICE OF CONSTRUCTION APPLICATION FOR INSTALLATION OF A BREATERH FILTER ON TANK 241-UX-302A.</p> <p>Should a change to the Compliance Matrix be required, DOH approval of the deviation shall be obtained prior to installation of the new breather filter.</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>																		
<p>All removal and installation operation, of the breather filter, must follow the requirements outlined in ALARACT 1 "Demonstration for Riser Preparation/Opening", and ALARACT 16 "Demonstration for Work on Potentially Contaminated Ventilation System Components".</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>																		
<p>The breather filter must be replaced annually. The new filter must be a Type 1 (radial flow filter) with a Type C filter pack, as defined by AG-1 Code on Nuclear Air</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>																		

Requirement	Compliance Status	Compliance Determination Method
and Gas Treatment Section FK, Special HEPA Filters. The filter frames, end-caps, flanges, and grilles must be made of 304/304L stainless steel. The filter must use UL-586 compliant resin to provide the sealing of the filter media to the frame. The filter must have a minimum removal efficiency of 99.97% and a rated flow of 40 cfm.		

**P-241AZ154-001**

WDOH Emission Unit ID : 1130  
Page in AOP : EU1130-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (01-01-07 to 12-31-07)		
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1 <b>Add'l Description:</b> Passive Breather Filter	Continuous	<b>CDM:</b> Field interviews.
<b>Required Sampling:</b> Smear survey on the inside surface of the ducting and downstream of the HEPA filter or on the outside of the screen covering the outlet of the vent <b>Sampling Frequency:</b> 1 per year. <b>Radionuclide Requiring Measurement:</b> Levels below 10,000 dpm/100cm <sup>2</sup> beta/gamma and 200 dpm/100cm <sup>2</sup> alpha will verify low emissions.	Intermittent	<b>CDM:</b> Annual Radiological Surveillance Task, RSRs, field interviews, CH2M HILL notification procedure and notification logbook. <b>Comment:</b> Annual replacement of the radial breather filter was not performed on time during the reporting period; reported per the CH2M HILL notification procedure.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3)	Continuous	<b>CDM:</b> Near Field Monitoring Program.

Permit: AIR 06-1022 - C **Issue Date:**10-05-06 **Effective Date:**10-05-06  
**NOC:** Installation and Operation of Breather Filter on Tank 241-UX-302A, 241-AZ-154, and 241-U-301B  
**WDOH NOC ID:** 659 **Date In AOP:** 01-01-07 **Page in AOP:** EU1130-001

Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 2.73E-06 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice of Construction is limited to 2.73E-04 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).	Continuous	<b>CDM:</b> Field interviews, ABCASH, and/or near field monitoring, or stack emissions reported in the Annual Radionuclide Air Emissions Report for the Hanford Site.

Requirement	Compliance Status	Compliance Determination Method									
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>Installation of a passive breather filter on tanks 241-UX-302A, 241-AZ-154, and 241-U-301B. The breather filter will be a radial HEPA filter with a removal efficiency of 99.97% and a rated capacity of 40 cfm. The filter will be replaced on an annual basis, eliminating the need for annual aerosol testing. The breather filter shall minimize the amount of radioactive particulates emitted as a consequence of tank breathing due to barometric pressure changes. The catch tank will breath at a rate of approximately 0.007 cfm with a flow rate less than 1 cfm.</p> <p>The 241-UX-302A catch tank is a 17,760 gallon capacity catch tank which has been isolated and currently contains 1,736 gallons of waste.</p> <p>The 241-AZ-154 catch tank is a 869 gallon capacity catch tank designed to receive condensate from the 241-AZ and 241-AY double shell tank heating coils. The steam coils have sense been blanked off. Current data indicates the tank is empty. Periodically water intrusion is seen in this tank from rain and snow.</p> <p>The 241-U-301B catch tank is a 36,000 gallon capacity catch tank designed to support waste transfers from 244-TX via 241-U-152. Current data indicates that 1,467 gallons of waste remain in this tank.</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>									
<p>The Annual Possession Quantity is limited to the following radionuclides (Curies/year):</p> <table border="0"> <tr> <td>Alpha-0</td> <td>1.99E-11</td> <td> </td> </tr> <tr> <td>Beta-0</td> <td>5.30E-10</td> <td> </td> </tr> <tr> <td>Gamma-0</td> <td>5.07E-10</td> <td> </td> </tr> </table>	Alpha-0	1.99E-11		Beta-0	5.30E-10		Gamma-0	5.07E-10		Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents/procedures, and/or database.</p>
Alpha-0	1.99E-11										
Beta-0	5.30E-10										
Gamma-0	5.07E-10										
<p>The breather filter must meet all of the requirements as described in the "AG-1 COMPLIANCE MATRIX FOR FLANDERS FILTER MODEL 0-007-1-12-RF-NU-00-E3-Z04059B", of the DOE letter 06-ED-001, dated January 18, 2006 titled RADIOACTIVE AIR EMISSIONS NOTICE OF CONSTRUCTION APPLICATION FOR INSTALLATION OF A BREATER FILTER ON TANK 241-UX-302A.</p> <p>Should a change to the Compliance Matrix be required, DOH approval of the deviation shall be obtained prior to installation of the new breather filter.</p>	Continuous	<p><b>CDM:</b> Field interviews, CH2M HILL work planning/controls/documents, and procedures.</p>									

Requirement	Compliance Status	Compliance Determination Method
All removal and installation operation, of the breather filter, must follow the requirements outlined in ALARACT 1 "Demonstration for Riser Preparation/Opening", and ALARACT 16 "Demonstration for Work on Potentially Contaminated Ventilation System Components".	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.
The breather filter must be replaced annually. The new filter must be a Type 1 (radial flow filter) with a Type C filter pack, as defined by AG-1 Code on Nuclear Air and Gas Treatment Section FK, Special HEPA Filters. The filter frames, end-caps, flanges, and grilles must be made of 304/304L stainless steel. The filter must use UL-586 compliant resin to provide the sealing of the filter media to the frame. The filter must have a minimum removal efficiency of 99.97% and a rated flow of 40 cfm.	Continuous	CDM: Field interviews, CH2M HILL work planning/controls/documents, and procedures.

**Drum Venting System 2**

WDOH Emission Unit ID : 1181

Page in AOP : EU1181-001

EMISSION UNIT DID NOT OPERATE DURING CY 2007 SEE TABLE 2

<p>Permit: AIR 07-307 - E <b>Issue Date:</b>03-23-07 <b>Effective Date:</b>03-15-07 <b>Obsolete Date:</b> 10-19-07  <b>NOC:</b> Operation of the Transuranic Waste Retrieval Project  <b>WDOH NOC ID:</b> 719 <b>Date In AOP:</b> 05-03-07 <b>Page in AOP:</b> EU1181-001  <b>NOC NOT UTILIZED DURING CY 2007 SEE <u>TABLE 3</u></b></p>
<p>Permit: AIR 07-1012 - E <b>Issue Date:</b>10-22-07 <b>Effective Date:</b>10-19-07  <b>NOC:</b> Operation of the Transuranic Waste Retrieval Project  <b>WDOH NOC ID:</b> 719 <b>Date In AOP:</b> 12-05-07 <b>Page in AOP:</b> EU1181-001  <b>NOC NOT UTILIZED DURING CY 2007 SEE <u>TABLE 3</u></b></p>

**S-MO444-001**

WDOH Emission Unit ID : 1183

Page in AOP : EU1183-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of: (02-09-07 to 12-31-07)		
No active Abatement Controls in the AOP for this certification period.		
<b>Required Sampling:</b> None <b>Radionuclide Requiring Measurement:</b> Total Alpha (assumed Am-241) and Total Beta (assumed Sr-90)	Continuous	CDM: Plant procedures and personnel interviews.

Requirement	Compliance Status	Compliance Determination Method
<p><b>Federal and State Regulatory Requirement:</b> WAC 246-247-075(3)  <b>Permit Monitoring and Testing Procedure:</b>  Emissions will be calculated per conditions below.</p>	Continuous	CDM: Plant procedures.
<p>Permit: AIR 07-304 <b>Issue Date:</b>03-23-07 <b>Effective Date:</b>03-20-07  <b>NOC:</b> Head Space Gas Sampling (HSGS) Analysis at MO-444  <b>WDOH NOC ID:</b> 656 <b>Date In AOP:</b> 05-03-07 <b>Page in AOP:</b> EU1183-001</p>		
Requirement	Compliance Status	Compliance Determination Method
<p>The total abated emission limit for this Notice of Construction is limited to 8.10E-10 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).</p>	Continuous	CDM: Calculation per procedure.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>Analyses of head space gas sample/s (HSGS) will be performed on samples obtained from transuranic (TRU) solid waste storage containers in various field locations. HSGS is performed per Radioactive Air Emissions Notice of Construction Application for the TRU Retrieval Process (DOE/RL-2001-57). The HSGS protocol employs a syringe sampling system to collect head space gas samples for analysis. To sample the container head space gas, a side-port needle is pressed through the sample port septum and into the head space beneath the lid. This permits the gas to be drawn under a vacuum directly into the syringe. Samples are withdrawn into a syringe through a 0.5 micron filter (99.95% efficient, Pall Corporation or equivalent).</p> <p>The syringe is transported to a field laboratory where the sample is inserted into the gas chromatograph mass spectrometer (GCMS) equipment. The emissions will be vented from the GCMS and exhausted to the atmosphere through a room exhaust fan (approx. 193 ft<sup>3</sup> per minute [5.5E06 ml per minute] capacity). The process involves injecting the sample from the syringe into the GCMS for analysis. The analysis involves heating the gas to greater than 200 degrees Centigrade and then emitting the analyzed gas at a rate of approximately 30 ml per minute. Up to 150 of these samples are planned to be done per week.</p>	Continuous	<p>CDM: NOC Application and process descriptions are contained in procedures. Process did not change during reporting period.</p> <p>Comment: Short form application transmitted via letter 07-SED-0073 from RL to WDOH dated Jan 8, 2007.</p>
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 8.10E-10 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Alpha-0   4.70E-11   Gas   WAC 246-247-030(21)(a)  Alpha release rate is assumed to be Am-241.</p> <p>B/G-0   7.00E-10   Gas   WAC 246-247-030(21)(a)  Beta/Gamma release rate is assumed to be Sr-90</p>	Continuous	CDM: Verified the basis of the PTE calculation in the NOC application.

Requirement	Compliance Status	Compliance Determination Method															
<p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <table border="0"> <tr> <td>Am-241</td> <td>Am-243</td> <td>Cf-252</td> <td>Cm-244</td> <td>Cs-134</td> </tr> <tr> <td>Cs-137</td> <td>Eu-152</td> <td>Eu-154</td> <td>Pu-238</td> <td>Pu-239</td> </tr> <tr> <td>Pu-240</td> <td>Pu-241</td> <td>Sr-90</td> <td></td> <td></td> </tr> </table> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)) DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>	Am-241	Am-243	Cf-252	Cm-244	Cs-134	Cs-137	Eu-152	Eu-154	Pu-238	Pu-239	Pu-240	Pu-241	Sr-90				
Am-241	Am-243	Cf-252	Cm-244	Cs-134													
Cs-137	Eu-152	Eu-154	Pu-238	Pu-239													
Pu-240	Pu-241	Sr-90															
The number of samples processed in a year shall not exceed 7800. (WAC 246-247-060(5))	Continuous	CDM: Plant Procedure.															
All radionuclide's are assumed to be either americium-241 (alpha) or strontium-90 (beta-gamma), although any radionuclide isotope could be encountered. (WAC 246-247-060(5))	Not Applicable	<p>CDM: This is a statement of fact; no action is conveyed to the permittee by this condition. It conveys information that forms part of the basis for the PTE from the NOC Application.</p> <p>Comment: Short form application transmitted via letter 07-SED-0073 from RL to WDOH dated Jan 8, 2007.</p>															
Radioactive air emissions will be calculated as follows: Drum Headspace Concentration X Sample Volume X Filter Efficiency X Samples/yr X Release Factor X Unit Dose Factor. (WAC 246-247-075(3))	Continuous	CDM: Plant Procedure.															

**J-361 Building**  
WDOH Emission Unit ID : 1185  
Page in AOP : EU1185-001

Requirement	Compliance Status	Compliance Determination Method
For the time period of : (05-16-07 to 12-31-07)		
No active Abatement Controls in the AOP for this certification period.		
<b>Required Sampling:</b> Radionuclide emissions will be determined using 40 CFR 61 Appendix D calculations in lieu of monitoring.	Continuous	CDM: Radioactive gases released are tracked by the Radioactive Gas Inventory/Database. Radionuclide

Requirement	Compliance Status	Compliance Determination Method
<b>Sampling Frequency:</b> None <b>Radionuclide Requiring Measurement:</b> Radioxenon		emissions were evaluated during the annual NESHAPS inventory assessment.
<b>Federal and State Regulatory Requirement:</b> WAC 246-247-075[3] <b>Permit Monitoring and Testing Procedure:</b> None	Continuous	<b>CDM:</b> Radionuclide emissions are determined using 40 CFR 61 Appendix D and reported in the annual NESHAPS inventory assessment.
Permit: AIR 07-503 <b>Issue Date:</b> 05-16-07 <b>Effective Date:</b> 05-16-07 <b>NOC:</b> Operation of the 361 Building in Testing Equipment Operability Utilizing Radioxenon <b>WDOH NOC ID:</b> 657 <b>Date In AOP:</b> 07-26-07 <b>Page in AOP:</b> EU1185-001		
Requirement	Compliance Status	Compliance Determination Method
The total abated emission limit for this Notice of Construction is limited to 2.00E-12 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).	Continuous	<b>CDM:</b> The radionuclide air emissions data for the calendar year 2007 was reviewed to verify the abated emissions from the 361 Building were below the NOC limits.
<p>This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.</p> <p>The proposed action is to perform equipment operability utilizing radioxenon and to evaluate xenon gas found in the atmosphere. Releases will occur inside the building after being routed through the sample system and collected in a sample archive bottle. Any remaining radioxenon will be a fugitive emission from the building.</p> <p>The 361 Building is a pre-cast concrete portable equipment shelter that is permanently located in the southwest corner of the 300 Area on the Hanford Site. Sampling equipment (i.e., Swedish Automatic Unit for Noble gas and Acquisition and analysis [SAUNA]) will be installed to sample atmospheric xenon some of which may be radioactive. Periodically a radioactive xenon calibration gas will be used to confirm operability of the instrument. The SAUNA is a xenon collection and analysis system. Radioxenon will be consumed by the system, analyzed, transferred to an archive storage bottle, and then finally released by evacuating the archive bottle into the room air space.</p>	Continuous	<p><b>CDM:</b> Under the PNNL Standards-Based Management System (SBMS) each new research project is required to be reviewed via the Electronic Prep &amp; Risk (EPR) assessment process. The reviews are recorded in the EPR database.</p> <p>Facility changes are required to be reviewed via the SBMS Subject Area for Engineering Calculations, Drawings and Specifications, Creating and Modifying. Projects with potential air emissions are reviewed by Effluent Management (EM) under the SBMS Airborne Emission Subject Area, and the records retained by EM.</p>

Requirement	Compliance Status	Compliance Determination Method															
<p>The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 2.00E-12 mrem/year. Approved are the associated potential release rates (Curies/year) of:</p> <p>Xe-122   1.00E-12   Gas   WAC 246-247-030(21)(a)            Xe-123   1.00E-12   Gas   WAC 246-247-030(21)(a)            Xe-125   1.00E-12   Gas   WAC 246-247-030(21)(a)            Xe-127   1.00E-12   Gas   WAC 246-247-030(21)(a)            Xe-131 m   2.50E-08   Gas   WAC 246-247-030(21)(a)            Xe-133   1.00E-12   Gas   WAC 246-247-030(21)(a)            Xe-133 m   1.00E-12   Gas   WAC 246-247-030(21)(a)            Xe-135   2.50E-08   Gas   WAC 246-247-030(21)(a)            Xe-135 m   1.00E-12   Gas   WAC 246-247-030(21)(a)            Xe-137   1.00E-12   Gas   WAC 246-247-030(21)(a)            Xe-138   1.00E-12   Gas   WAC 246-247-030(21)(a)</p> <p>The radioactive isotopes identified for this emission unit are (no quantities specified):</p> <table border="0"> <tr> <td>Xe-122</td> <td>Xe-123</td> <td>Xe-125</td> </tr> <tr> <td>Xe-127</td> <td>Xe-131 m</td> <td></td> </tr> <tr> <td>Xe-133</td> <td>Xe-133 m</td> <td>Xe-135</td> </tr> <tr> <td>Xe-135 m</td> <td>Xe-137</td> <td></td> </tr> <tr> <td>Xe-138</td> <td></td> <td></td> </tr> </table> <p>The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)) DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.</p>	Xe-122	Xe-123	Xe-125	Xe-127	Xe-131 m		Xe-133	Xe-133 m	Xe-135	Xe-135 m	Xe-137		Xe-138			<p>Continuous</p>	<p><b>CDM:</b> A NESHAPs Inventory of radioactive materials is conducted for PNNL facilities on an annual basis in accordance with PNNL-10855 Rev. 4, "Assessment of Unabated Facility Emission Potentials for Evaluating Airborne Radionuclide Monitoring Requirements at PNNL-2007". Reviewed the 2007 NESHAPs radionuclide inventory assessment results to verify compliance.</p>
Xe-122	Xe-123	Xe-125															
Xe-127	Xe-131 m																
Xe-133	Xe-133 m	Xe-135															
Xe-135 m	Xe-137																
Xe-138																	
<p>Because the total unabated potential-to-emit (PTE) for this project is &lt; 0.1 mrem/yr total effective dose equivalent (TEDE) to the maximally exposed individual (MEI), the radionuclide emissions will be determined using 40 CFR 61 Appendix D calculations in lieu of monitoring. [WAC 246-247-040(5), -060(5)]</p>	<p>Continuous</p>	<p><b>CDM:</b> A NESHAPs Inventory of radioactive materials is conducted for PNNL facilities on an annual basis in accordance with PNNL-10855 Rev. 4, "Assessment of Unabated Facility Emission Potentials for Evaluating Airborne Radionuclide Monitoring Requirements at PNNL-2007". Reviewed the 2007 NESHAPs radionuclide inventory assessment results to verify compliance.</p>															

**Decon Trailer (Intermittent Powered Exhaust)**

WDOH Emission Unit ID : 1186

Page in AOP : EU1186-001

EMISSION UNIT DID NOT OPERATE DURING CY 2007 SEE TABLE 2

Permit: AIR 07-1102 - B **Issue Date:**11-15-07 **Effective Date:**11-15-07  
**NOC:** 200/600 Areas Facilities Support Decontamination Trailer (Intermittent Power Exhaust)  
**WDOH NOC ID:** 678 **Date In AOP:** 12-05-07 **Page in AOP:** EU1186-001  
NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3

**Decon Trailer (Collection Tank Vents)**

WDOH Emission Unit ID : 1187

Page in AOP : EU1187-001

EMISSION UNIT DID NOT OPERATE DURING CY 2007 SEE TABLE 2

Permit: AIR 07-1102 - C **Issue Date:**11-15-07 **Effective Date:**11-15-07  
**NOC:** 200/600 Areas Facilities Support Decontamination Trailer (Intermittent Power Exhaust)  
**WDOH NOC ID:** 678 **Date In AOP:** 12-05-07 **Page in AOP:** EU1187-001  
NOC NOT UTILIZED DURING CY 2007 SEE TABLE 3

Table 1. Compliance Demonstration for Requirements on  
Minor, Passively Ventilated Vents on Single Shell Tanks.

Requirement	Compliance Status	Compliance Demonstration Method
<b>Zone or Area:</b> <b>Abatement Technology:</b> HEPA <b>Required Units:</b> 1	Continuous	CDM: Field interviews
<b>Required Sampling:</b> Smear survey on the inside surface of the ducting and downstream of the HEPA filter or on the outside of the screen covering the outlet of the vent. <b>Sampling Frequency:</b> 1 per year. <b>Radionuclide Requiring Measurement:</b> Levels below 10,000 dpm/100cm <sup>2</sup> beta/gamma and 200 dpm/100cm <sup>2</sup> alpha will verify low emissions.	Continuous	CDM: Annual Radiological Surveillance Task, RSRs, and field interviews.
<b>Federal and State Regulatory Requirement:</b> 40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3)	Continuous	CDM: Near Field Monitoring Program.
<b>Variations Footnoted Below</b>		
<p><b>1. Additional Sampling Requirements:</b> Contamination surveys of breather filters with stack extensions will be performed on the downstream side of the filter or on the outside of the screen covering the outlet of the vent (if one exists) or by removing the test port cap downstream of the HEPA filter, surveying the cap and inserting smear media (e.g. swab, masslin) in the opening and smearing the interior ducting surface on the opposite side of the test port cap opening.</p> <p><b>2. Abatement Technology:</b> CDM: Field interviews, CH2M HILL notification procedure and notification logbook. Comment: Breather filter failed aerosol testing during the reporting period; reported per the CH2M HILL notification procedure.</p> <p><b>3. Abatement Technology:</b> CDM: Field interviews, CH2M HILL notification procedure and notification logbook. Comment: Aerosol testing of the breather filter was not performed on time during the reporting period; reported per the CH2M HILL notification procedure.</p> <p><b>4. Abatement Technology:</b> CDM: Field interviews, CH2M HILL notification procedure and notification logbook. Comment: Aerosol testing of the breather filter was not performed on time and the breather filter failed annual flow testing during the reporting period; reported per the CH2M HILL notification procedure.</p>		

Table 1. Compliance Demonstration for Requirements on  
Minor, Passively Ventilated Vents on Single Shell Tanks

Emission Unit	EU ID	Emission Unit	EU ID	Emission Unit	EU ID
P-241A101-001	92	P-241AX103-001	304	P-241B107-001	275
P-241A102-001	90	P-241AX104-001	302	P-241B108-001	268
P-241A103-001	87	P-241B101-001	269	P-241B109-001	277
P-241A104-001	88	P-241B102-001	270	P-241B110-001	278
P-241A105-001 <sup>2</sup>	91	P-241B103-001	279	P-241B111-001	276
P-241A106-001	94	P-241B104-001	272	P-241B112-001	274
P-241AX101-001	305	P-241B105-001	266	P-241B201-001	267
P-241AX102-001	303	P-241B106-001	281	P-241B202-001	280

**Table 1. Compliance Demonstration for Requirements on  
Minor, Passively Ventilated Vents on Single Shell Tanks**

Emission Unit	EU ID	Emission Unit	EU ID	Emission Unit	EU ID
P-241B203-001	282	P-241C112-001	232	P-241TX105-001	116
P-241B204-001	271	P-241C201-001	233	P-241TX106-001	126
P-241BX101-001	259	P-241C202-001	246	P-241TX107-001	114
P-241BX102-001	262	P-241C203-001	242	P-241TX108-001	123
P-241BX103-001	257	P-241C204-001	235	P-241TX109-001	128
P-241BX104-001 <sup>1</sup>	255	P-241S101-001	132	P-241TX110-001	121
P-241BX105-001	273	P-241S103-001	133	P-241TX111-001	130
P-241BX106-001	261	P-241S104-001	131	P-241TX112-001	115
P-241BX107-001	258	P-241S105-001	137	P-241TX113-001	117
P-241BX108-001	265	P-241S106-001	139	P-241TX114-001	119
P-241BX109-001	263	P-241S107-001	140	P-241TX115-001	125
P-241BX110-001	256	P-241S108-001	135	P-241TX116-001	122
P-241BX111-001	264	P-241S109-001	136	P-241TX117-001	113
P-241BX112-001	260	P-241S110-001	138	P-241TX118-001	129
P-241BY101-001	283	P-241S111-001	202	P-241TY101-001	86
P-241BY102-001	286	P-241SX113-001	201	P-241TY102-001	82
P-241BY103-001	288	P-241SX115-001	200	P-241TY103-001	85
P-241BY104-001 <sup>3</sup>	289	P-241T101-001	79	P-241TY104-001 <sup>2</sup>	84
P-241BY105-001 <sup>4</sup>	284	P-241T102-001	68	P-241TY105-001	83
P-241BY106-001	285	P-241T103-001	78	P-241TY106-001	81
P-241BY107-001	294	P-241T104-001	71	P-241U101-001	103
P-241BY108-001 <sup>1</sup>	291	P-241T105-001	65	P-241U102-001 <sup>1</sup>	101
P-241BY109-001 <sup>3</sup>	290	P-241T106-001	66	P-241U103-001 <sup>1</sup>	97
P-241BY110-001	293	P-241T107-001	69	P-241U104-001	109
P-241BY111-001	292	P-241T108-001	73	P-241U105-001 <sup>1</sup>	112
P-241BY112-001 <sup>4</sup>	287	P-241T109-001	67	P-241U106-001 <sup>1</sup>	111
P-241C101-001	247	P-241T110-001	76	P-241U107-001	99
P-241C102-001	237	P-241T111-001	70	P-241U108-001 <sup>1</sup>	98
P-241C103-001	737	P-241T112-001	72	P-241U109-001	105
P-241C104-001	716	P-241T201-001	80	P-241U110-001	110
P-241C105-001	717	P-241T202-001	77	P-241U111-001	107
P-241C106-004	712	P-241T203-001	74	P-241U112-001 <sup>1</sup>	108
P-241C107-001	230	P-241T204-001	75	P-241U201-001	102
P-241C108-001	231	P-241TX101-001	127	P-241U202-001	106
P-241C109-001	245	P-241TX102-001	124	P-241U203-001	100
P-241C110-001	244	P-241TX103-001	120	P-241U204-001	104
P-241C111-001	1	P-241TX104-001	118		

Table 2. Attachment 2 Emission Units That Did Not Operate  
During this Certification Period.

Compliance with Sampling and Monitoring Requirements via  
the ABCASH and Near Facility Monitoring Programs

Page in AOP	Emission Unit	WDOH EU ID	Compliance Status	CDM
EU0054-001	P-296P028-001	54	Not Applicable	Field interviews. This emission unit is inactive and will require an NOC to resume operation or a report of closure to de-register.
EU0064-001	P-296SX-001	64	Continuous	Field interviews, CH2M HILL notification procedure and notification logbook. A slow leak of condensate was discovered from the duct condensate return line; reported per the CH2M HILL notification procedure.
EU0096-001	P-204AR-001	96	Continuous	Field interviews. This emission unit did not operate during the reporting period. Although the 204-AR Building exhauster did not operate, annual aerosol testing is required based on agreement with WDOH. Annual aerosol test of the HEPA filter was not performed on time during the reporting period, reported per the CH2M HILL notification procedure.
EU0145-001	P-296P032-001	145	Not Applicable	Field interviews. This emission unit is inactive and will require an NOC to resume operation or a report of closure to de-register.
EU0162-001	P-242T-001	162	Continuous	Field interviews. This emission unit did not operate during the reporting period.
EU0236-001	C-106 Sluicing	236	Not Applicable	Field interviews. This emission unit is inactive and will require an NOC to resume operation or a report of closure to de-register.
EU0308-001	P-213W-001	308	Not Applicable	Field interviews. This emission unit is inactive and will require an NOC to resume operation or a report of closure to de-register.
EU0384-001	P-296A010-001	384	Continuous	The emission unit did not operate during the reporting period.
EU0443-001	300 Area Emissions	443	Continuous	No activities were conducted requiring the use of the NOC during the reporting period.
EU0447-001	Sitewide Type-1, 2, 3 - Roof Replacement	447	Continuous	No activities were conducted under the Roof Replacement NOC during the reporting period.
EU0448-001	Vented Containers – WRAP	448	Continuous	No activities were conducted under this NOC during the reporting period that were associated with the WRAP Vented Container emission unit.

Table 2. Attachment 2 Emission Units That Did Not Operate  
During this Certification Period.

Compliance with Sampling and Monitoring Requirements via  
the ABCASH and Near Facility Monitoring Programs

Page in AOP	Emission Unit	WDOH EU ID	Compliance Status	CDM
EU0455-001	Sitewide HEPA Vacuums – TRU Retrieval	455	Continuous	The TRU Waste Retrieval Project did not utilize HEPA Vacs during the reporting period.
EU0455-001	Sitewide HEPA Vacuums – Roof Replacement	455	Continuous	No activities were conducted under the Roof Replacement NOC during the reporting period.
EU0461-001	W-PORTEX 011	461	Continuous	The emission unit was not operated by the CWC during reporting period.
EU0476-001	Sitewide Guzzler	476	Continuous	The emission unit did not operate during the reporting period.
EU0476-001	Sitewide Guzzler – Roof Replacement	476	Continuous	No activities were conducted under the Roof Replacement NOC during the reporting period.
EU0476-001	Sitewide Guzzler - Tank Farms	476	Continuous	Field interviews. This emission unit did not operate during the reporting period.
EU0476-001	Sitewide Guzzler – WTP	476	Continuous	No soil contamination was encountered therefore the Guzzler was not used by WTP in 2007.
EU0486-001	200 Area Diffuse/Fugitive - CS&I	486	Not Applicable	Emission unit has not started up yet (Cleaning Radiologically Contaminated Vehicles).
EU0486-001	200 Area Diffuse/Fugitive - Roof Replacement	486	Continuous	No activities were conducted under this NOC during the reporting period.
EU0486-001	200 Area Diffuse/Fugitive - WTP	486	Continuous	This NOC serves as a contingency approval for implementation in the event that soil contamination is discovered during WTP excavation activities. Implementation of the NOC Approval has not occurred because the routine soil surveys have not detected contamination.
EU0539-001	P-Vadose-002	539	Continuous	Field interviews. This emission unit did not operate during the reporting period.
EU0541-001	P-Vadose-003	541	Continuous	Field interviews. This emission unit did not operate during the reporting period.
EU0689-001	100 Area Diffuse/Fugitive	689	Continuous	There are no active NOC approvals associated with the 100 Diffuse and Fugitive emission unit in the AOP for this certification period.
EU0735-001	P-296A044-001	735	Not Applicable	Field interviews. Initial hot operational startup did not occur during the reporting period; therefore this condition did not apply. Cold testing of exhauster 296-A-44 (EU ID 735) began on May 11, 2007, but the unit has not been connected to AN Farm.

Table 2. Attachment 2 Emission Units That Did Not Operate  
During this Certification Period.  
Compliance with Sampling and Monitoring Requirements via  
the ABCASH and Near Facility Monitoring Programs

Page in AOP	Emission Unit	WDOH EU ID	Compliance Status	CDM
EU0736-001	P-296A045-001	736	Not Applicable	Field interviews. Initial hot operational startup did not occur during the reporting period; therefore this condition did not apply. Cold testing of exhauster 296-A-44 (EU ID 735) began on May 11, 2007, but the unit has not been connected to AN Farm.
EU0855-001	P-296A046-001	855	Not Applicable	Field interviews. Initial operational startup did not occur during the reporting period; therefore this condition did not apply.
EU0856-001	P-296A047-001	856	Not Applicable	Field interviews. Initial operational startup did not occur during the reporting period; therefore this condition did not apply.
EU0878-001	P-BULKVIT	878	Not Applicable	Field interviews. Initial operational startup did not occur during the reporting period; therefore this condition did not apply.
EU0885-001	W-296P049-001	885	Not Applicable	Field interviews. Initial operational startup did not occur during the reporting period; therefore this condition did not apply.
EU0886-001	W-296P050-001	886	Not Applicable	Field interviews. Initial operational startup did not occur during the reporting period; therefore this condition did not apply.
EU1181-001	Drum Venting System 2	1181	Continuous	The unit did not operate during the reporting period.
EU1186-001	Decon Trailer (Intermittent Powered Exhaust)	1186	Continuous	The emission unit did not operate during the reporting period.
EU1187-001	Decon Trailer (Collection Tank Vents)	1187	Continuous	The emission unit did not operate during the reporting period.

Table 3. Attachment 2 NOC Approvals That Were Not Utilized  
During this Certification Period.

Page in AOP	Approval Number	NOC ID	Compliance Status	CDM
EU0384-001	AIR 06-1026 Reactivation of PUREX Storage Tunnel Number 2	665	Continuous	No activities were conducted under this NOC during the reporting period.
EU0539-001	AIR 06-1003 – B Tank Waste Remediation System Vadose Zone Characterization	635	Continuous	Field interviews. No activities were conducted requiring the use of the NOC during the reporting period.
EU0541-001	AIR 06-1003 - C			
EU0448-001	AIR 06-1008 Sitewide Vented Container Storage	641	Continuous	No activities were conducted under this NOC during the reporting period that were associated with the WRAP Vented Container emission unit.
EU0448-001	AIR 07-701			
EU0476-009	AIR 06-1012 Guzzler Excavation and Backfilling Activities in Support of 200 East Area A Farm Complex	647	Continuous	Field interviews. No activities were conducted requiring the use of the NOC during the reporting period. The Guzzler was not used by CH2M HILL in 2007.
EU0340-001	AIR 06-1014 WESF Liquid Low Level Radioactive Liquid Removal from Tank 100	649	Continuous	No activities were conducted under this NOC during the reporting period.
EU0461-001	AIR 06-1019 – B Central Waste Complex (CWC) Operations	654	Continuous	No activities were conducted under this NOC during the reporting period that were associated with the W-PORTEX 001 (PermaCon) emission unit.
EU0476-003	AIR 06-1021 Use of the Guzzler Vacuum Excavation System for Radiologically Limited Activities on the Hanford Site	658	Continuous	No activities were conducted under this NOC during the reporting period.
EU0227-001	AIR 06-1028 Installation and Operation of a Waste Retrieval System in Tanks 241-AN-101,102,103, 104, 105, 106 AND 107	668	Continuous	Field interviews. No activities were conducted requiring the use of the NOC during the reporting period.
EU0447-003	AIR 06-1030 – A Roof Replacement Activities Involving Radioactive Contamination at Facilities on the Central Plateau	670	Continuous	No activities were conducted under this NOC during the reporting period.
EU0455-004	AIR 06-1030 - B			
EU0476-006	AIR 06-1030 - C			
EU0486-021	AIR 06-1030 - D			
EU0476-008	AIR 06-1032 – A Excavation Activities for the Building of the RPP Waste Treatment Plant	672	Continuous	This NOC serves as a contingency approval for implementation in the event that soil contamination is discovered during WTP excavation activities. Implementation of the NOC Approval has not occurred because the routine soil surveys have not detected contamination.
EU0486-023	AIR 06-1032 - B			
EU0447-005	AIR 06-1033 – A Categorical Tank Farm Facility Entry and Surveillance	673	Continuous	Field interviews. No activities were conducted requiring the use of the NOC during the reporting period.

Table 3. Attachment 2 NOC Approvals That Were Not Utilized  
During this Certification Period.

Page in AOP	Approval Number	NOC ID	Compliance Status	CDM
EU0486-029	AIR 07-1102 – A 200/600 Areas Facilities Support Decontamination Trailer	678	Continuous	No activities were conducted under this NOC during the reporting period.
EU1186-001	AIR 07-1102 - B			
EU1187-001	AIR 07-1102 - C			
EU0486-030	AIR 06-1038 – A Liquid Pumping and Enhanced Sluicing on Tank 241-C-106	683	Continuous	Field interviews. No activities were conducted requiring the use of the NOC during the reporting period.
EU0498-001	AIR 06-1038 - B			
EU0443-001	AIR 06-1039 300 Area Excavation Activities	684	Continuous	No activities were conducted requiring the use of the NOC during the reporting period.
EU0476-009	AIR 06-1040 – A 244-CR Vault Isolation and Interim Stabilization	685	Continuous	Field interviews. No activities were conducted requiring the use of the NOC during the reporting period. The Guzzler was not used by CH2M HILL in 2007.
EU0486-033	AIR 06-1040 - B			Field interviews. No activities were conducted requiring the use of the NOC during the reporting period.
EU0498-004	AIR 06-1040 - C			
EU0713-001	AIR 06-1040 - D			
EU0486-044	AIR 06-1043 – A E-525 Double-Shell Tank (DST) Transfer System Modifications Project	688	Continuous	Field interviews. No activities were conducted requiring the use of the NOC during the reporting period.
EU0751-001	AIR 06-1043 - B			
EU0447-007	AIR 06-1044 – A Tank Farm Restoration and Safe Storage	689	Continuous	Field interviews. No activities were conducted requiring the use of the NOC during the reporting period.
EU0476-017	AIR 06-1044 - B			Field interviews. No activities were conducted requiring the use of the NOC during the reporting period. The Guzzler was not used by CH2M HILL in 2007.
EU0486-047	AIR 06-1044 - C			Field interviews. No activities were conducted requiring the use of the NOC during the reporting period.
EU0486-053	AIR 06-1046 241-AN Tank Farm Installation and Operation of a New Ventilation System	692	Continuous	Field interviews. No activities were conducted requiring the use of the NOC during the reporting period.
EU0486-055	AIR 06-1047 241-AW Tank Farm Installation and Operation of a New Ventilation System	693	Continuous	Field interviews. No activities were conducted requiring the use of the NOC during the reporting period.
EU0057-005	AIR 06-1048 – A 241-S-102 Installation and Operation of Waste Retrieval Systems	694	Continuous	Field interviews. No activities were conducted requiring the use of the NOC during the reporting period.
EU0057-005	AIR 07-505 - A			
EU0486-61	AIR 06-1051 - A Isolation and Closure of Exhaust Stacks 296-A-25, 296-B-28, 296-S-22, and 296-T-18	697	Not Applicable	No active requirements in the AOP for this certification period. This NOC was reported to be closed by 06-ESQ-135, dated September 22, 2006.
EU0738-001	AIR 06-1051 - B			

Table 3. Attachment 2 NOC Approvals That Were Not Utilized  
During this Certification Period.

Page in AOP	Approval Number	NOC ID	Compliance Status	CDM
EU0740-001	AIR 06-1051 - C			
EU0742-001	AIR 06-1051 - D			
EU0744-001	AIR 06-1051 - E			
EU0912-001	AIR 06-1051 - F			
EU0922-001	AIR 06-1051 - G			
EU0959-001	AIR 06-1051 - H			
EU0969-001	AIR 06-1051 - I			
EU0455-006	AIR 06-1054 - A Operation of the Transuranic Waste Retrieval Project	700	Continuous	No activities were conducted under this NOC during the reporting period that were associated with the HEPA Vac emission unit.
EU0476-019	AIR 06-1056 - A Categorical Tank Farm Facility Waste Retrieval and Closure: Phase I- Site Preparation and System Installation	702	Continuous	Field interviews. No activities were conducted requiring the use of the NOC during the reporting period. The Guzzler was not used by CH2M HILL in 2007.
EU0050-001	AIR 06-1057 - A Categorical Tank Farm Facility Waste Retrieval and Closure: Phase II Waste Retrieval Operations	703	Continuous	Field interviews. No activities were conducted requiring the use of the NOC during the reporting period.
	AIR 07-305 - A			
EU0057-007	AIR 06-1057 - B			
EU0057-008	AIR 07-305 - B			
EU0058-004	AIR 06-1057 - C			
EU0058-005	AIR 07-305 - C			
EU0749-005	AIR 06-1057 - F AIR 07-305 - F			
EU0885-001	AIR 06-1057 - G AIR 07-305 - G			
EU0886-001	AIR 06-1057 - H AIR 07-305 - H			
EU0486-076	AIR 06-1059 - A Supplemental Treatment Test and Demonstration Facility	705	Continuous	Field interviews. No activities were conducted requiring the use of the NOC during the reporting period.
EU0878-001	AIR 06-1059 - B			Field interviews. No activities were conducted requiring the use of the NOC during the year.
EU0735-001	AIR 06-1060 - A Operation of New Ventilation Systems in AN and AW Tank Farms	706	Continuous	Field interviews. Initial hot operational startup did not occur during the reporting period. Cold testing of exhauster 296-A-44 (EU ID 735) began on May 11, 2007, but the unit has not been connected to AN Farm.
EU0736-001	AIR 06-1060 - B			
EU0855-001	AIR 06-1060 - C			
EU0856-001	AIR 06-1060 - D			Field interviews. No activities were conducted requiring the use of the NOC during the year.
EU0093-004	AIR 06-1064 - A Installation and Operation of Waste Retrieval Systems in Tanks 241-AZ-101, 241-AZ-102, 241-AY-101, and 241-AY-102	714	Continuous	Field interviews. No activities were conducted requiring the use of the NOC during the reporting period.

Table 3. Attachment 2 NOC Approvals That Were Not Utilized  
During this Certification Period.

Page in AOP	Approval Number	NOC ID	Compliance Status	CDM
EU0476-022	AIR 06-1064 - B			Field interviews. No activities were conducted requiring the use of the NOC during the reporting period. The Guzzler was not used by CH2M HILL in 2007.
EU0486-088	AIR 06-1064 - C			Field interviews. No activities were conducted requiring the use of the NOC during the reporting period.
EU0486-092	AIR 06-1065 Cleaning Radiologically Contaminated Vehicles	715	Continuous	No activities were conducted under this NOC because the emission unit has not started up yet.
EU0455-006	AIR 07-307 - A Operation of the Transuranic Waste Retrieval Project	719	Continuous	No activities were conducted under this NOC during the reporting period that were associated with the HEPA Vac emission unit.
	AIR 07-1012 - A	719		
EU1181-001	AIR 07-307 - E	719		No activities were conducted under this NOC during the reporting period that were associated with the Drum Venting System 2 emission unit.
	AIR 07-1012 - E			

**APPENDIX C**

**AOP ATTACHMENT 3 REQUIREMENTS**

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### Asbestos Compliance

Page in AOP: 3-001

**Permit:** Asbestos Requirements **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07

**NOC:** General Asbestos Requirement

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> The National Emissions Standards for Hazardous Air Pollutants (NESHAP), 40 Code of Federal Regulations (CFR) Part 61, Subpart M, "National Emission Standard for Asbestos," and the Benton Clean Air Authority (BCAA) Regulation 1, Article 8, "Asbestos" require the Department of Energy, its contractors, or its subcontractors to file a notification prior to commencement of a demolition or renovation activity at an affected facility. Pursuant to the authorities delegated by the State of Washington, Department of Ecology (Ecology) and the U.S. Environmental Protection Agency (EPA), the BCAA is the responsible authority to conduct day-to-day regulatory responsibility and ensure compliance with 40 CFR 61 Subpart M and Article 8 of Regulation 1 of BCAA, adopted by reference in this air operating permit (AOP), for the Hanford Site. BCAA shall inform Ecology prior to taking any final permitting or enforcement actions at Hanford.</p> <p><b>Model ID:</b> Not applicable.  <b>EPA Test Method:</b> Not specified.  <b>EPA Test Method Frequency:</b> Not applicable.  <b>Periodic Monitoring:</b> Not Applicable.  <b>Required Records:</b> Not Applicable.</p>	<p>Intermittent</p>	<p><b>CDM:</b> Records review and reasonable inquiry of knowledgeable personnel.</p> <ul style="list-style-type: none"> <li>• In January 2008, DOE and its Hanford Site contractors discovered that NOIs submitted to BCAA during CY 2007 for approval of planned demolition or asbestos renovation activities did not fully address the administrative requirements of 40 CFR 61.145(b)(4). A deviation notification in accordance with AOP Standard Terms and General Conditions Section 4.5.2 was submitted to BCAA on 2/14/2008. This was an administrative discrepancy. No violations of asbestos emission control requirements or standards were identified, and asbestos abatement work is being performed in full compliance with applicable requirements by properly trained and certified staff using appropriate controls and worker safety measures. The Hanford Site NOI preparation procedure has been revised to ensure all required information is included in future NOIs.</li> </ul> <p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>• PNNL Facilities Engineering identify renovation and demolition projects involving asbestos on the Facility Modification Permit (FMP) review form, and submit the FMP to Effluent Management to determine compliance requirements.</li> <li>• Asbestos abatement work performed pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) is exempt from permitting, and other administrative requirements.</li> <li>• The WTP is a new facility under construction. Asbestos-containing products were not used and no demolition or renovation activities subject to 40 CFR 61 Subpart M or BCAA, Regulation 1, Article 8, occurred during the reporting period.</li> </ul>

### Open Burning Compliance

Page in AOP: 3-001

**Permit:** AOP Outdoor Burning **Issue Date:** 01-01-07 **Date In AOP:** 01-01-07

**NOC:** AOP Outdoor Burning Standards

Requirement	Compliance Status	Compliance Determination Method
<p><b>Condition:</b> Chapter 173-425 Washington Administrative Code (WAC) and BCAA Regulation 1, Article 5, "Outdoor Burning," require the Department of Energy, its contractors, or its subcontractors to follow these rules regulating outdoor burning, including obtaining special outdoor burning permits if required. The BCAA, pursuant to the authorities delegated by Ecology, is the responsible authority to ensure compliance with WAC 173-425 and Article 5 of Regulation 1 of BCAA adopted by reference in this AOP for the Hanford Site.</p> <p><b>Model ID:</b> Not applicable.</p> <p><b>EPA Test Method:</b> Not specified.</p> <p><b>EPA Test Method Frequency:</b> Not applicable.</p> <p><b>Periodic Monitoring:</b> Not specified.</p> <p><b>Required Records:</b> Not applicable.</p>	<p>Continuous</p>	<p><b>CDM:</b> Inquiry of persons responsible for the activity. Complied with Special Burning Permits:            No. 20060007, Fire Prevention, Other Outdoor Burning;            No. 20070005, Fire Prevention, Other Outdoor Burning. Windblown tumbleweeds were also burned.</p> <p><b>Comment:</b> Props at the HAMMER Training Facility using propane are not regulated under the outdoor burning standard.</p>

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