Attachment 2

HANFORD RADIOACTIVE AIR EMISSION LICENSE

State of Washington Department of Health

License Number: FF-01

(as part of NWP-AOP-00-05-006)

Issue Date:

Effective Date:

Expiration Date:

The Licensee; U.S. Department of Energy, Hanford Site, 825 Jadwin Ave., Richland, Washington 99352; is required to comply with all applicable paragraphs contained in the chapter 246-247 Washington Administrative Code (WAC) Radiation Protection -- Air Emissions.

Dated at Richland, Washington this XX day of (Xmonth) 2001

Reviewed By:

_____

License Writer

Approved By:

_____

Head, Air Emissions and Defense Waste Section

Table of Contents

1.0 EMISSION STANDARDS 3

2.0 APPLICABLE REQUIREMENT TERMS 3

2.1 Notice of Construction Requirements 3

2.2 ALARACT Demonstration Requirements 4

2.3 Federally Enforceable Requirements 4

3.0 MONITORING AND TESTING 5

3.1 Monitoring and Testing for Tables 1.1 and 1.2 5

3.2 Compliance Assurance Monitoring 8

4.0 QUALITY ASSURANCE, REPORTING AND RECORDKEEPING 8

4.1 Quality Assurance for Tables 1 and 2. 8

4.2 Recordkeeping 8

4.3 Reporting 11

5.0 EMISSION UNITS SPECIFIC APPLICABLE REQUIREMENTS TABLES 11

Table 1.1 Requirements for major point sources 13

Table 1.2 Requirements for minor point sources 73

Table 1.3 Requirements for non-point sources 208

Table 2.1 Requirements for minor passively ventilated vents in high level waste tank farms 235

1.0 EMISSION STANDARDS

The emission of radionuclides to the ambient air from the Department of Energy facility as set forth in 40 CFR 61.92 shall not exceed those amounts that would cause any member of the public to receive in any year an effective dose equivalent of 10 mrem per year. **[WAC 246-247-040]**

2.0 APPLICABLE REQUIREMENT TERMS

WAC 246-247 is a state only applicable requirement.

2.1 Notice of Construction Requirements

A Notice of Construction (NOC) is written information submitted under WAC 246-247-060(1) and (2) that provides information listed in WAC 246-247-110 "Appendix A - Application information requirements." This information must include the total effective dose equivalent (TEDE). The equivalent dose is calculated using the source term derived from 40 CFR Part 61 Appendix D, or other EPA, or State of Washington, Department of Health (Health) approved method. The calculated emissions are input to the dispersion and other computer models described in 40 CFR 61.93 using abated emissions to calculate the dose.

WAC 246-247-060(1) requirements for new construction or modification of emission units are as follows:

> Early in the design phase, the applicant shall submit a NOC containing the information required in Appendix A of WAC 246-247.
>
> Within thirty days of receipt of the NOC, Health shall inform the applicant if additional information is required. The department may determine, on the basis of the information submitted, that the requirements of BARCT or ALARACT have been met, or may require the applicant to submit a BARCT or ALARACT demonstration compatible with Appendix B or C of WAC 246-247, respectively.
>
> Within sixty days of receipt of all required information, Health shall issue an approval or denial to construct. The department may require changes to the final proposed control technology.
>
> The applicant may request a phased approval process by so stating and submitting a limited application. Health may grant a conditional approval to construct for such activities as would not preclude the construction or installation of any control or monitoring equipment required after review of the completed application.
>
> Health shall issue a license, or amend an existing license, authorizing operation of the emission unit(s) when the proposed new construction or modification is complete. For facilities subject to the air operating permit requirements of chapter 173-401, the license shall become part of the air operating permit issued by the Department of Ecology or a local air pollution control authority. For new construction, this action shall constitute registration of the emission unit(s).

WAC 246-247-060(2) requirements for modification of unregistered emission units that are not exempt from the regulations are as follows:

The applicant shall submit an application containing the information required in Appendix A of WAC 246-247.

Within thirty days of receipt of the application, Health shall inform the applicant if additional information is required. The department may determine, on the basis of the information submitted, that the requirements of BARCT or ALARACT have been met, or may require the applicant to submit a BARCT or ALARACT demonstration compatible with Appendix B or C of WAC 246-247, respectively.

Within sixty days of receipt of all required information, Health shall issue or amend the license. For facilities subject to the air operating permit requirements of Chapter 173-401, the license shall become part of the air operating permit issued by the department of ecology or a local air pollution control authority. This action shall constitute registration of the emission unit(s). A determination of non-compliance may result in the issuance of a Notice of Violation.

Health reserves the right to require the owner of an existing, unregistered emission unit to make modifications necessary to comply with the applicable standards of WAC 246-247-040.

The department of Energy shall notify the department of Health at least seven calendar days before any planned pre-operational tests of new or modified emission units that involve emissions control, monitoring, or containment systems of the emission unit(s). The department reserves the right to witness these tests under WAC 246-247-060 (4).

2.2 ALARACT Demonstration Requirements

The ALARACT requirement means the use of radionuclide emission control technology that achieves emission levels that are consistent with ALARA. ALARACT compliance is demonstrated by evaluating the existing control system and proposed nonsignificant modification in relation to applicable technology standards and other control technologies operated successfully in similar applications. An ALARACT compliance demonstration is used for inspection or audit purposes, and to demonstrate compliance with the substantive ALARACT technology standard. The requirement for these demonstrations is considered applicable to this license. Demonstrations reflect good industrial practice and will minimize emissions until the work practices can be completed. Determination of whether good industrial practice is being used will be based on available information such as, but not limited to, monitoring results, review of operations and maintenance procedures, and inspections of the emission unit or equipment. Specific provisions of the ALARACT demonstrations other than those required by specific requirements in this license and monitoring activities under section 3, 5, and in tables 1.1, 1.2, and 2.1 shall not be deemed a part of this license. **[WAC 246-247 030(4)] [WAC 246-247 130(Appendix C)]**

2.3 Federally Enforceable Requirements

40 CFR 61 is a federally enforceable applicable requirement

DOE must submit to the U.S.EPA Region X Administrator, applications for approval of construction for any new source or modification of any existing source that emits radionuclides as required by 40 CFR 61.07 and 40 CFR 61.96. Additionally, DOE shall submit notifications of startup as required by 40 CFR 61.09.

Federal Facility Compliance Agreement – The FFCA was signed on February 2, 1994. A provision in the FFCA requires quarterly status reports until the FFCA is complete (V. Reporting). Also within the FFCA is a schedule to evaluate additional Hanford stacks by August 31, 1995 (Appendix A III. Identified Nonregistered Stacks). The evaluation was made and a schedule was negotiated with EPA Region X for the completion of upgrades on stack sampling systems. Table 1.1 gives the status of these designated stacks. The schedule along with identified milestones and stack status is incorporated into the quarterly status reports provided to EPA Region X. The latest report is found in Attachment 4 to this permit.

3.0 MONITORING AND TESTING

3.1 Monitoring and Testing for Tables 1.1 and 1.2

All required monitoring must be performed under WAC 246-247-075 and described in the paragraphs referenced below.

All required stack monitoring not otherwise specified shall conform to the monitoring and testing requirements of 40 CFR 61, Subpart H published in the Federal Register on December 15, 1989

All required monitoring equipment shall conform to the requirements in WAC 246-247-075(2).

In accordance with WAC 246-247-075(4) approval may be granted by the department to allow alternative monitoring procedures if continuous monitoring is not a feasible or reasonable alternative. Periodic confirmatory measurements, when employed, must be performed during process operations to verify low emissions. Under 40 CFR 61.93(b)(2)(ii), samples must be collected with sufficient frequency to provide a representative sample of the emissions during normal operations.

Figure 1. may be used to select an approved alternate monitoring scenario for stacks listed in Table 1.2 (stacks with PTE < 0.1 mrem/yr). A seven-day notification must be given to the Department before implementing a chosen scenario.

The department may require the owner or operator to make provisions at existing emission unit sampling stations, for the department to take split or co-located samples of the emissions.
[WAC 246-247-075(10)]

Note: Monitoring and sampling or measurement for emission units listed in Tables 1.1 and 1.2 needs only to occur if the emission unit operates during the year.

The shrouded probe is an approved stack sampling technology for both continuous monitoring of major stacks and periodic confirmatory measurement of minor stacks.
[WAC 173-401-615]

Figure 1. Process for Changing Periodic Confirmatory Measurement Methods for Table 1.2 Minor Stacks*

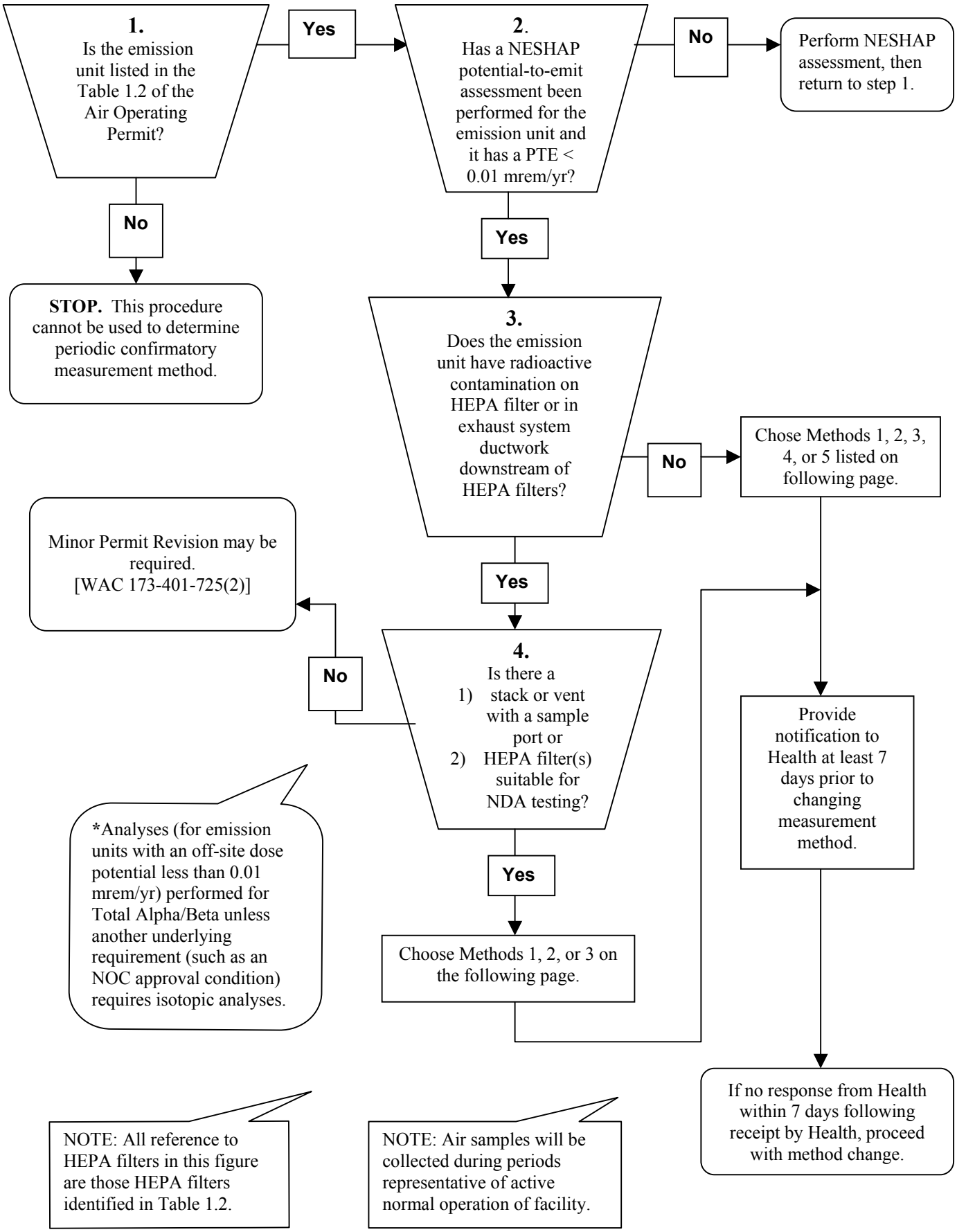

Figure 1. Continued (Process for Changing Periodic Confirmatory Measurement Methods for Table 1.2 Minor Stacks)

Acceptable Methods

Method 1.
Perform Record Stack Sampling a minimum of one week per calendar year or as negotiated with Health.

Method 2.
Perform NDA test a minimum of one time every calendar year or as negotiated with Health.

Method 3.
Engineering Calculations

Method 4.
Upstream air samples from areas within the facility with representative radioactive contamination performed a minimum of one week per calendar year at each sample location or as negotiated with Health

Method 5.
Wipe samples of interior surfaces with representative radioactive contamination a minimum of once per calendar year or as negotiated with Health.

3.2 Compliance Assurance Monitoring

This section specifically addresses newly discovered sources of emissions from the legacy of operations on the Hanford site. The licensee must establish methods to assure compliance for any unlicensed source of radioactive airborne emissions at Hanford. These methods must determine a means to describe emission monitoring, recordkeeping, and reporting. The licensee must document the compliance methods and notify the department for inclusion into the license. The department will evaluate the compliance methods and may determine that additional monitoring is necessary. Upon approval, the department will identify and add the emission source in the license by an administrative modification to the permit.
[WAC 246-247-060]

4.0 QUALITY ASSURANCE, REPORTING AND RECORDKEEPING

4.1 Quality Assurance for Tables 1 and 2.

A quality assurance program must be conducted and documented under the standards referenced in WAC 246-247-075(6) and 40 CFR Part 61, Method 114 (4) Quality Assurance Methods.

Under WAC 246-247-075(6), the licensee must have a documented quality assurance program compatible with the applicable national standards such as ANSI/ASME NQA-1, NQA-2, QAMS-004 and QAMS-005.

The licensee must respond to formal audit findings and corrective actions documented by Health. Written response must include measures to prevent recurrence and action(s) taken or planned. Health will evaluate the adequacy of the audit responses and may take follow-up actions to verify that corrective action was accomplished."
[WAC 246-247-080(11)]

The licensee must be able to demonstrate the reliability and accuracy of the radioactive air emissions monitoring data.
[WAC 246-247-075(13)]

4.2 Recordkeeping

Records must be maintained on site for a period of five years from the date of the monitoring sample, measurement, report or application for all required monitoring data and support information. Support information includes all calibration and maintenance records, all original continuous monitoring records (such as strip charts or equivalent), and required reports.
[WAC 246-247-080(8),WAC 173-401-615(2)(a), WAC 173-401-615(2)(c)]

The following is a list of requisite retrievable records. Electronic or hard copy records will satisfy these requirements.

Sub-section 1 - Records Required by 40 CFR 61.14 (f) and WAC 246-247-080.
[Note: For NESHAP Major Designated Stacks Only]

Calibration Records

- Records and procedures for stack sampling system instrumentation , functional checks/periodic calibrations (i.e. vacuum gauges, rotameters, and gas meters).

Monitoring Data

- Stack flow data, and sampling data including flow rate calculations (e.g. vent and balance).
- The Radioactive Air Emissions Report for the Hanford Site (NESHAP annual report)
- Documentation verifying compliance with Quality Assurance requirements of 40 CFR 61, Subpart H, Appendix B, Method 114 (e.g., The Quality Assurance Program for Radionuclide Airborne Emissions Monitoring, the Effluent Monitoring Quality Assurance Project Plan for Radioactive Airborne Emissions Data, and the Quality Assurance Plan for Facility Effluent Monitoring.)
- Records documenting periods of malfunction or in operation (i.e., monitoring system down time)

Sub-section 2 - Records Required by 40 CFR 61.95 and WAC 246-247-080.
[Note: As Applicable, For All Sources of Radioactive Air Emissions]

Monitoring Data (for powered, ventilated point sources)

- Stack flow data, and sampling data including flow rate calculations (e.g. vent and balance).
- The Radioactive Air Emissions Report for the Hanford Site (NESHAP annual report)
- NESHAP assessments

Passively Ventilated Point Sources

Nonpoint Source and Fugitive Emissions

- The Radioactive Air Emissions Report for the Hanford Site (NESHAP annual report)
- The annual Hanford Site Environmental Report

Notices of Construction

- Notice of Construction Applications
- Approval orders from WDOH including any approval conditions
- Approval to construct letters from EPA.

Sub-section 3 - State-only Records Required by WAC 246-247-080(8)

BARCT and ALARACT Demonstrations

- Records of Best Available Radionuclide Control Technology (BARCT) and/or As Low As Reasonably Achievable Control Technology (ALARACT) demonstrations

Drawings and Blueprints (for major stacks)

- Configuration drawings and/or process flow diagrams of radioactive air emission unit effluent control and monitoring systems

Line Loss Studies (if performed)

- Estimated and documented line losses and sample collection efficiency studies completed at the direction of the WDOH

Calibration and Maintenance Records and Procedures

- Maintenance records, maintenance procedures, and all original strip chart records (major stacks) or equivalent for all stack sampling system instrumentation (e.g., continuous air monitoring-record samplers, probes, pumps, rotameters, flow regulators, pressure gauges, totalizers, gas meters, and flow switches) as appropriate for methods identified in Tables 1.1 and 1.2

- Functional checks/periodic calibration records and procedures for all nondesignated stack instrumentation (i.e., vacuum gauges, rotameters, and gas meters).

- Maintenance records and maintenance procedures for required abatement control technology equipment identified in Tables 1.1 and 1.2

Efficiency Tests of high efficiency particulate air (HEPA) filters

- Test procedures and results of the HEPA filter/aerosol tests.

Training

- Training records of personnel and supervisors specific to the operation and maintenance of radioactive air emission units.

Reports

- Reports of closure

- 10-day notification follow-up reports

Operation Log

- Categorically approved units

- Specific regulatory order approval condition

Quality Assurance Program

- Documentation verifying compliance with Quality Assurance requirements of WAC 246-247-075(6) (e.g., The Quality Assurance Program for Radionuclide Airborne Emissions Monitoring, the Effluent Monitoring Quality Assurance Project Plan for Radioactive Airborne Emissions Data, and the Quality Assurance Plan for Facility Effluent Monitoring.)

A log must be maintained under WAC 246-247-080(7) for portable units given categorical approval to operate under this license. The log must contain relevant operation parameters including the date, location, duration of the release, measured or calculated radionuclide concentrations, the type of emissions (liquid, gaseous, solid), and the type of emission control and monitoring equipment. **[WAC 173-401-615(2)]**

4.3 Reporting

Reports must be submitted as required in section 4.3 of the Standard Terms and Conditions of the Hanford Air Operating Permit.

5.0 EMISSION UNITS SPECIFIC APPLICABLE REQUIREMENTS TABLES

The following tables list the regulatory requirements for monitoring, emission abatement and specific limits and conditions in approved Notice of Construction applications.

Abatement technology identified in the following tables are state-only enforceable requirements.

Table 1.1 and 1.2 identify specific BARCT and ALARACT requirements for major (NESHAP designated) stacks and minor (non-designated) stacks, respectively. Required abatement technology includes:

1. Primary controls, e.g. HEPA filters, carbon filters.
2. Other listed equipment necessary to ensure the integrity or support the operations of the primary controls.
3. Fans identified as required abatement technology equipment are exhaust fans.
4. The use of units identified as backup, standby, and intermittent units do not constitute the loss of required emission controls.

Table 2.1 identifies passively ventilated minor point sources in high level waste tank farms with emission controls.

Emission unit monitoring identified in the following tables are applicable federal and state enforceable requirements.

Table 1.1 identifies specific monitoring and testing requirements, isotopic measurements, and sampling frequencies for major (NESHAP designated) stacks.

Table 1.2 identifies specific monitoring, testing and sampling requirements and frequencies for minor (non-designated) stacks. Methods for required sampling include, but are not limited to, record sampling, upstream sampling, and engineering calculations, wipe samples and non-destructive assessment (NDA).

Table 2.1 identifies passively ventilated minor source monitoring requirements for high level waste tank farms.

Table 1.3 identifies non-point emission monitoring requirements. (Ref: WAC 246-247-075(8)).

Tables 1.1, 1.2 , and 1.3 also contain Notice of Construction conditions and limits for approval to construct, modify, and operate an emission unit; and identifies Federal or State only applicable requirements under 40 CFR 61.06, or WAC 246-247-060 respectively.

Note: Numerical reference of NOC conditions in tables 1.1, 1.2, and 1.3 may differ from the conditions numbered in the original NOC approval under the referenced AIR letter number. Reference to approval condition numbers in other listed conditions, refers to the number in the underlying AIR approval letter.

(1) All information from the NOC approval must represent the emission unit(s) and are considered applicable requirements. Modification approval is required before any change is made to a specific applicable requirement. Modification approval is required if this change could increase the amount of radioactive materials emitted or may result in the emission of any radionuclide not previously emitted. Modification approval is not required for any process system change, or description in any NOC that qualifies under the provisions of WAC 173-401-722 and 724.

(2)Inspections reporting, and record keeping shall be maintained under WAC246-247-080.

(3)Monitoring, testing, and quality assurance shall be performed under WAC 246-247-075.

***ABATEMENT TECHNOLOGY SPECIFIC REQUIREMENTS.**
(Applicable to the DCRTs listed in Table 1.1)

1. May continue to operate with existing unmodified equipment provided continued operations do not include new or modified source terms outside of existing mission.

2. The existing system may not be used to support decontamination and decommissioning without Health's prior approval.

Exclusions to conditions 1 and 2:

Conditions 1 and 2 shall not apply to activities to isolate and /or stabilize each facility for near- or long-term safe passive or active management.

3. Operations to support the existing missions may continue using exiting filter test methods.

4. A date for cessation of operations or a schedule for upgrade will be provided if life and mission extension is proposed.

5. Restart of active ventilation after the cessation date will require notification to Health and could be subject to inspection by Health verifying ALARACT.

6. Enhanced emissions trending with defined parameters be provided for, process, frequency, and action levels. Process support equipment (fan interlocks, DP gauges, etc.) shall be regulated as abatement technology for these units.

7. It is recognized extended facility life is possible for 244-A, 244-S and 244-TX. These units are to be assessed for standards compliance and/or actions triggering modification under WAC 246-247-040 and WAC 246-247-060, respectively, if life and mission extension is requested. Upgrades will be evaluated and implemented accordingly.

Note: All Tank Farm stacks and associated equipment operate intermittently.

Table 1.1 Requirements for major point sources

100K Cold Vacuum Drying

Cold Vac. Drying
COLD VACUUM DRY SYSTEM BLDG (CVS)
Emission Unit ID: 436
FFCA Status: In Compliance.

Abatement Technology (state only enforceable)

Applicable Requirements:
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology	Required Number of Units	Additional Description/Conditions
	[WAC 246-247-010(4)] [WAC 246-247-040(4)]	[WAC 246-247-010(4)] [WAC 246-247-060(5)]	[WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure	Radionuclides Requiring Measurement	Sampling Frequency
	[WAC 246-247-040(5)] [WAC 173--401-615(1)]	[WAC 173-401-615(1)]	[WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3)		All radionuclides which could contribute 10% of the potential EDE.	Monthly Sample

This Emission Unit has 3 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Cold Vacuum Drying Facility, Phase II	NOC revision approval	3/21/2000	438

Conditions (state only enforceable)

1) No WDOH conditions apply to this NOC.

Project Title	Approval No.	Date Approved	NOC_ID
Cold Vacuum Drying Facility, Project W-441, Phase II, Revision 1	AIR 99-804	8/5/1999	382

Conditions (state only enforceable)

1) This approval, with its Conditions and Limitations, constitutes and amendment to the Department's Radioactive Air Emission License. This amendment must be included in the next revision of the Hanford Air Operating Permit (WAC 246-247-060(1)(e) and (2)(c)).

2) U.S. DOE shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5).

3) The facility shall notify the department at least seven days prior to any planned preoperational testing of the emission unit's emissions control, monitoring or containment systems. The department reserves the right to observe such tests (WAC 246-247-060(4)).

4) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least 5 years (WAC 246-247-080(8)).

5) The abated dose limit for this facility shall not exceed 0.0042 mrem/yr to the MEI as described in the NOC revision.

6) All reports and records must be kept and reported according to 40 CFR 61, Subpart H (WAC 246-247-080(2)).

7) The facility shall make requested documents available in a timely manner for review. (WAC 246-247-080(10)).

8) When this project is completed, or operations cease, the facility shall notify the department via a report of closure, including whether or not any potential for airborne releases occurred (WAC 246-247-080(6)).

9) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that last more than four hours, it must be reported to the department within 24 hours. Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in the approval (paragraph 5).

10) All measured or calculated emissions must be reported annually (WAC 246-247-080(3)).

11) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections, as required by EPA (WAC 246-247-080(9)). At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet

12) The department reserves the right to inspect and audit this unit during construction and operation, including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations (WAC 246-247-080(1)).

13) The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).

14) These conditions and limitations must be proceduralized prior to starting the activities described in the Notice of Construction.

15) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13) and WAC 246-247-075(6)). The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in, or equivalent to, those listed in the above-cited regulation.

16) If the department finds that the emission unit described in this NOC, is not in compliance with the standards in WAC 245-247-040 during construction, as described in this NOC, or during operation, it reserves the right to require modifications to bring it into compliance (WAC 246-247-060-(2)(d)).

17) The facility must be able to demonstrate that the workers associated with this emission unit are adequately trained in the use an maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures (WAC 246-247-075(12)).

18) Equipment and procedures for continuous monitoring shall conform to ANSI N13.1 (1999). The specific design must be approved by the department prior to installation. Any deviation from ANSI N13.1 must be approved by the department prior to construction (WAC 246-247-075(2)).

19) The department retains the right to conduct its own stack sampling, environmental monitoring or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing (WAC 246-247-075(10) and (11)).

Project Title	**Approval No.**	**Date Approved**	**NOC_ID**
Cold Vacuum Drying - Phase II	AIR 97-605	6/19/1997	229

Conditions (state only enforceable)

1) The CVDF shall consist of up to six process bays in which SNF transport trailers can be housed while water is drained and vacuum/gas purge process dries SNF. It shall have a support area consisting of a control room, change rooms,

and other functions.

2) All controls, as described in the amended NOC are required, & building HEPA filters meet ASME/ANSI N509 &N510.

3) The stack monitoring system must be continuous and NESHAPs compliant.

200 P-296P032-001

296-P-32
ROTARY MODE CORE SAMPLER
Emission Unit ID: 145
FFCA Status: In Compliance.

Abatement Technology (state only enforceable)

Applicable Requirements:BARCT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	1-flow path with 2 HEPA's
	HEPA	2	
	Prefilter	1	
	Heater	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4) & WAC 246-247-75(2)	Method 2 appendix A Method 114 appendix B 61.93(b)(2)(ii) ANSI N13.1	All radionuclides which could contribute 10% of the potential EDE.	Continuous

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Use of a portable exhauster at 244-AR Vault., Rev. 2	RTAM	2/17/1999	343

Conditions (state only enforceable)

1) The stack identification numbers 296-A-12 and 296-A-13 cannot be used to identify the portable exhauster WDOH. WDOH shall be notified of the stack identification number prior to startup.

2) If personnel enter the building during air jetting or transfers the exhauster must be operating to pull a negative pressure through the controls. A negative pressure must be pulled on all four tanks through a common header at 5.7 cubic meters/minute.

3) Monitoring system: The stack sampler will operate continuously during exhauster operation and it shall be considered a NESHAPS major stack. The monitoring system design and operation shall be fully compliant with 40 CFR 61 and ANSI N13.1 requirements & guidance.

4) 296-A-13 cannot be used for two separate emission units with different monitoring and control equipment.

5) The project described in the NOC, DOE/RL-97-05 Revision 2, is approved with the following conditions and limitations: Process Description: The 244-AR Vault portable exhauster shall be only allowed for air jetting activities of accumulated liquids from the cell sumps into the tanks and for transfers among the tanks within the vault. Permission to use the exhauster for other purposes is strictly not approved.

6) The approval to operate the exhauster is valid for ten years from the date of this letter. Operations beyond that

time requires re-approval.

7) The G-1 filter shall be fully testable to ANSI/ASME N509/510 standards and shall be successfully tested before use in this application.

8) Abated Dose: The potential abated dose to the maximally exposed individual is not to exceed 2.1 E-04 millirem per year. Actual emissions are limited to the abated curies per year listed in Table 2 of AIR 97-1007. No radionuclide that is not listed in this table may be emitted in any detectable concentrations.

9) All health physics practices, contamination control and monitoring activities applicable to the control and monitoring of radioactive air emissions must be incorporated into procedures prior to beginning this project.

10) Control System: The ventilation system will be comprised of a G-1 Series HEPA filter, a prefilter, two HEPA filters, all in series, and the exhaust fan and stack. The RMCS dual HEPA filters shall be testable as a single unit for this application only and are acceptable as equivalent for this NOC only. They must be successfully tested before

11) The calculated offsite dose from this project shall not exceed 2.1E-4 mrem/yr to the maximally exposed individual.

12) This approval to commence the project is valid for two years from the date of this letter. If the project does not commence within that window, the approval is void.

200 P-296P033-001

296-P-33
ROTARY MODE CORE SAMPLER
Emission Unit ID: 144
FFCA Status: In Compliance.

Abatement Technology (state only enforceable)

Applicable Requirements:BARCT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	1 flow path with 2 HEPA's each
	HEPA	2	
	Prefilter	1	
	Heater	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4) & WAC 246-247-75(2)	Method 2 appendix A Method 114 appendix B 61.93(b)(2)(ii) ANSI N13.1	All radionuclides which could contribute 10% of the potential EDE.	Continuous

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Rotary Mode Core Sampling (RMCS) Systems 3 & 4, Rev. 1	AIR 98-301	3/6/1998	261

Conditions (state only enforceable)

1) WDOH Conditions and Limitations dated September 3, 1997 (AIR 97-901) are applicable. There are no new WDOH conditions that apply to this NOC.

200 P-296P034-001

296-P-34
ROTARY MODE CORE SAMPLER
Emission Unit ID: 253
FFCA Status: In Compliance.

Abatement Technology (state only enforceable)

Applicable Requirements:BARCT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	1 flow path with 2 HEPA's
	HEPA	2	
	Prefilter	1	
	Heater	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4) & WAC 246-247-75(2)	Method 2 appendix A Method 114 appendix B 61.93(b)(2)(ii) ANSI N13.1	All radionuclides which could contribute 10% of the potential EDE.	Continuous

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Rotary Mode Core Sampling (RMCS) Systems 3 & 4, Rev. 1	AIR 98-301	3/6/1998	261

Conditions (state only enforceable)

1) WDOH Conditions and Limitations dated September 3, 1997 (AIR 97-901) are applicable. There are no new WDOH conditions that apply to this NOC.

200E P-296A042-001

296-A-42
241-AN TANK FARM
Emission Unit ID: 93
FFCA Status: In Compliance.

Abatement Technology (state only enforceable)

Applicable Requirements:BARCT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	2 parallel flow paths
	HEGA	1	2 parallel flow paths
	HEPA	2	Before and After the HEGA (gas absorber) 2 parallel flow paths
	Heater	1	2 parallel flow paths with 1 operational
	HEME	1	
	Condenser	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4) & WAC 246-247-75(2)	Method 2 appendix A Method 114 appendix B 61.93(b)(2)(ii) ANSI N13.1	90Sr	Continuous

This Emission Unit has 2 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
241-AY and 241-AZ Ventilation Upgrades	NOC revision approval	1/19/1999	333

Conditions (state only enforceable)

1) WDOH Conditions and Limitations dated July 10, 1998 (AIR 98-708) are applicable. There are no new WDOH conditions that apply to this NOC.

Project Title	Approval No.	Date Approved	NOC_ID
241-AY and 241-AZ Ventilation Upgrades	AIR 98-708	7/10/1998	286

Conditions (state only enforceable)

1) The NOC constitutes a contract between the department and the facility. The department must approve any

2) The department reserves the right at any time to require the licensee to provide for split or collocated sampling of this emission unit (WAC 246-247-075(10).

3) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from the facility (WAC 246-247-075(13) and (WAC 246-247-075(6). The facility must demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in the above cited regulation.

4) Continuous monitoring must be in place prior to operating. This will include continuous ambient air sampling for this project.

5) Any problems, which could affect the monitoring, ventilation or controls to this facility must be reported to the department.

6) WDOH Conditions and Limitations dated July 10, 1998 (AIR 98-708) are applicable. There are no new WDOH conditions that apply to this NOC.

7) Nothing may be inferred that is not specifically described in the NOC.

8) The emission limit (abated) for this emission unit is 1.81E-3 mrem/yr to the MEI (WAC 246-247-040(5)).

9) An ALARACT demonstration may be required at any time by the department. WAC 246-247-080(1)).

10) Abatement controls are those required to be in place at the point effluent enters the vapor space, not necessarily at a common header. Therefore, the following are required control: the recirculating and cooling system coming off each tank, consisting of a condenser, evaporative tower, pump and moisture separator; a condenser at the common header, with a water chiller, and pump, a high efficiency moisture eliminator; an electric heater, two parallel sets of HEPA filters, each with a high efficiency gas absorber. Down time for any of these components must be negotiated with the department.

11) The ventilation flow rate is limited to a maximum of 0.5 cubic meters per second.

12) All conditions and limitations must be proceduralized prior to the implementation of this NOC.

13) Any deviation from the description of the modification or new construction, without approval of the department, may result in enforcement action under WAC 246-247-100.

14) The department must approve any deviation from required or recommended monitoring standards.

15) Preoperational tests planned for this unit, requirement for notification at least seven days prior to such testing under (WAC 246-247-060(4)) will apply.

16) All records required by WAC 246-247 must be readily (promptly) retrievable, and must be stored onsite at the facility. All records shall be maintained for a minimum of five years (WAC 246-247-080(8)).

17) All measured or calculated emissions must be reported annually (WAC 246-247-080(3)).

18) The department reserves the right to conduct an environmental surveillance program around this emission unit and to require the facility to conduct or modify its own environmental monitoring program (WAC 246-247-075(9)).

19) The monitoring system must be ANSI N13.1 and ANSI N42.18 compliant. It is understood the department has approved the system as an acceptable alternative method (Reference: AIR 98-108 and AIR 98-207)

200E P-296AYAZ-001

296-A-17
241-AY/AZ TANK FARM
Emission Unit ID: 221
FFCA Status: In Compliance.

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	Non-Operational	This unit is inactive and will require an NOC to resume operation or a report of closure to deregister.
	HEPA	Non-Operational	This unit is inactive and will require an NOC to resume operation or a report of closure to deregister.
	Heater	Non-Operational	This unit is inactive and will require an NOC to resume operation or a report of closure to deregister.
	De-entrainer	Non-Operational	This unit is inactive and will require an NOC to resume operation or a report of closure to deregister.

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4) & WAC 246-247-75(2)	Method 2 appendix A Method 114 appendix B 61.93(b)(2)(ii) ANSI N13.1	137Cs	Continuous

200E C-106 Sluicing

296-C-6
241-C TANK FARM
Emission Unit ID: 236
FFCA Status: In Compliance.

Abatement Technology (state only enforceable)

Applicable Requirements:BARCT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	
	HEPA	2	In series
	Heater	1	
	High Efficiency Metal Filter	1	
	High Efficiency Mist Eliminator	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4) & WAC 246-247-075(2)	Method 2 appendix A Method 114 appendix B 61.93(b)(2)(ii) ANSI N13.1	All radionuclides which could contribute 10% of the potential EDE.	Continuous

This Emission Unit has 2 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
241-C-106 Sluicing Phase II Rev2	NOC Revision	4/8/1999	468

Conditions (state only enforceable)

1) A new stack height will constructed to 5.7 meters and using a rain deflector to direct emissions up.
2) Gas stack sampling probes will be installed two duct diameters a head of the record sampling probe inlet in accordance with paragraph 2.1.1 of Method 1A, 40 CFR 60, Appendix A as required by 40 CFR 61.93 (b)(2)(I).

Project Title	Approval No.	Date Approved	NOC_ID
241-C-106 Tank Sluicing, Phase II, Rev. 2	AIR 98-1002	10/2/1998	310

Conditions (state only enforceable)

1) U.S. DOE shall comply with all requirements and limitations of this license.
2) The facility shall make requested documents available in a timely manner for review.

3) Other Conditions: 1) any problems, which could affect the monitoring, ventilation, or controls to this facility must be reported to the department. WDOH is to be notified if the record sampler is not continuously operated as required. WDOH must be notified of differential pressure alarms on the HEPA filters, the HEME, and HEMF. WDOH must also be notified when the HEME or HEMF is taken off line due to a system abnormality. If the HEME, or HEMF needs to be bypassed due to planned maintenance or other planned activity, WDOH must be informed prior to the bypass occurring. WDOH is to be notified of actual loss of the electric heater or failure of the heater that takes the off-gas temperature outside of the normal operating limits. WDOH is to be notified of wetting of the filter train, any visible liquid in the HEPA filter drain sight glass or shifting of the filter due to operational upset or anomaly. 2) The NOC constitutes a contract between the department and the facility. The department must approve any changes. 3) The department must approve any deviation from required or recommended monitoring standards. 4) Nothing may be inferred that is not specifically described in this NOC.

4) The department retains the right to conduct its own stack sampling, environmental monitoring or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing (WAC 246-247-075(9)).

5) The required controls are: The abatement controls are those required to be in place at the point the effluent enters the vapors space and includes the recirculation system. High Efficiency Mist Eliminators (HEME), High Efficiency Metal Filter (HEMF), a heater, two HEPA filters in series, and a fan.

6) When this project is completed, or operations cease, the facility shall notify the department via a report of closure, including whether or not any potential for airborne release occur.

7) All reports and records must be kept and reported according to 40 CFR 61, Subpart H.

8) The radionuclides are limited to: Those described in Table I of the August 28, 1998 DOE letter 98-EAP-469.

9) The facility shall notify the department at least seven days prior to any planned preoperational testing of the emission unit's emissions control, monitoring or containment systems. The department reserves the right to

10) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least 5 years (WAC 246-247-080(8)).

11) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections. At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet the requirements.

12) The process is limited to the mobilizing and retrieving waste in 241-C-106 tank, conveying waste out of 241-C-106 tank, transferring waste to the 241-AY-102, filtering radioactive particulates and vapors, removing heat to maintain safe temperature levels, monitoring and controlling operations, and shielding and maintenance actions.

13) The annual possession quantity is limited to: The annual possession quantity is as described in Section 7.0 of the Notice of Construction for Project W-320, Tank 241C-106 Sluicing.

14) All measured or calculated emissions must be reported annually (WAC 246-247-080(3)).

15) The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in, or equivalent to, those listed in the above-cited regulation.

16) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that last more than four hours, it must be reported to the department within 24 hours. (Note: Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in the approval (paragraph 5)).

17) If the department finds that the emission unit described in this NOC, is not in compliance with the standards in WAC 245-247-040 during construction ,as described in this NOC, or during operation, it reserves the right to require modifications to bring it into compliance.

18) The facility must be able to demonstrate that the workers associated with this emission unit are adequately trained in the use an maintenance of emission control and monitoring systems, and in the performance of associated test and

emergency response procedures.

19) U.S. DOE shall monitor this project or emission unit as follows: Continuously stack sampling must occur during operation of the emission unit. The sampling system must meet ANSI N13.1 and ANSI 42.18. This will include continuous ambient air sampling for this project. The definition of "continuous ambient air sampling" refers to the Near-Field Monitoring program conducted by Waste Management Hanford (WMH). The definition of continuous is being negotiated between WDOH and DOE.

20) The department reserves the right to inspect and audit this unit during construction and operation, including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations.

21) The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).

22) The abated emission limit is: 2.05E-07 mrem/yr to the MEI.

23) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13) and WAC 246-247-075(6)).

200E P-296P016-001

296-P-16
241-C TANK FARM
Emission Unit ID: 234

FFCA Status: Not in Compliance. Schedule for Upgrade by 4/30/2006. Federally enforceable only.

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	
	HEPA	2	In series
	Prefilter	1	
	Heater	1	
	De-entrainer	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4) & WAC 246-247-75(2)	Method 2 appendix A Method 114 appendix B 61.93(b)(2)(ii) ANSI N13.1	All radionuclides which could contribute 10% of the potential EDE.	Continuous

This Emission Unit has 2 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Stack Monitoring System Upgrades Resume Work Strategy (Project W-420)	RTAM	5/6/1999	365

Conditions (state only enforceable)

1) Use the APQ, in Curies, as the governing requirement for compliance with the NOC.
2) Determine how much of APQ was reached due to contamination encounter thus far in the excavation work.
3) Track any remaining contamination as it is encountered and subtract it from the NOC's APQ. Keep a running total of the actual field encountered APQ to show that the NOC APQ will not be exceeded.

Project Title	Approval No.	Date Approved	NOC_ID
Stack Monitoring System Upgrades (Project W-420)	AIR 99-115	1/29/1999	339

Conditions (state only enforceable)

1) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least 5 years.

2) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections. At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet the requirements.

3) The facility shall make requested documents available in a timely manner for review.

4) The abated emission limit is: 2.89E-3 mrem/yr to the MEI.

5) The facility must maintain a log in an approved format for this activity or emission unit.

6) The required controls are: Wind speed construction of 20 mph, HPT coverage, engineering and controls

7) The facility's modification activity shall consist of replacing the stack and its associated sampling and monitoring equipment. Portions of existing concrete pads will be removed and the soil excavated to accommodate the installation of utilities (power, signal lines, etc.) The existing ventilation and stack sampling systems will remain operational during the excavation activities but will be shut down during stack and equipment removal and the relocation of the equipment cabinet to a temporary near-by location.

8) The annual possession quantity is limited to:
For Excavation Activities: Sr-90, 5.51E-03 Ci; Am-241, 2.21E-01 Ci
For Equipment Removal Activities: Sr, 1.72E-06 Ci; Am-241, 2.68E-07 Ci

9) The department retains the right to conduct its own stack sampling, environmental monitoring or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing.

10) If the department finds that the emission unit described in this NOC, is not in compliance with the standards in WAC 245-247-040 during construction ,as described in this NOC, or during operation, it reserves the right to require modifications to bring it into compliance.

11) All reports and records must be kept and reported according to 40 CFR 61, Subpart H.

12) The department reserves the right to inspect and audit this unit during construction and operation, including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations.

13) The radionuclides are limited to Sr-90 and Am-241:
For Excavation Activities: Sr-90, dose 2.41E-07 mrem/year to the MEI;
Am-241, dose 2.89E-03 mrem/yr to the MEI
For Equipment Removal Activities: Sr-90, dose 3.08E-10 mrem/year to the MEI;
Am-241, dose 1.43E-08 to the MEI

14) When this project is completed, or operations cease, the facility shall notify the department via a report of closure, including whether or not any potential for airborne releases occurred.

15) The facility shall notify the department at least seven days prior to any planned preoperational testing of the emission unit's emissions control, monitoring or containment systems. The department reserves the right to

16) All measured or calculated emissions must be reported annually.

17) The facility must be able to demonstrate that the workers associated with this emission unit are adequately trained in the use an maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures.

18) The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in, or equivalent to, those listed in WAC 246-247-075(6).

19) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13) and WAC 246-247-075(6)).

20) U.S. DOE shall comply with all Conditions and Limitations of this license.

21) Radiological field surveys will performed during replacement of the stack and associated sampling and monitoring equipment. HPT coverage will be provided during excavation with these activities stopping if evenly distributed (i.e., non-speck) contamination detection reading of 100,000 dpm/100cm2 beta-gamma, or 35 dpm/100cm2 above background alpha are encountered. If contamination levels in affected areas are greater than 1.000 dpm/100cm2 beta gamma and 20 dpm/100cm2 alpha, contamination controls including bagging and taping, applying fixatives,

foaming, or glove bags will be used. A 20 mph sustained wind speed restriction shall apply to all demolition and replacement work. When ventilation is restored, between shutdown and completion of the upgrades, the stack emissions measurement system will be restored.

22) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that last more than four hours, it must be reported to the department within 24 hours. (Note: Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in the approval (paragraph 5)).

200E P-244A-001

296-A-25
244 -A-LIFT STATION
Emission Unit ID: 222

FFCA Status: Not in Compliance. Schedule for Upgrade by 4/30/2006. Federally enforceable only.

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
			* Technology Specific Requirements
	Fan	1	
	HEPA	2	2 in series 2 in parallel flow paths
	Prefilter	1	Two parallel flow paths.
	Heater	1	Both tank and annulus connect before going through the heater

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4) & WAC 246-247-75(2)	Method 2 appendix A Method 114 appendix B 61.93(b)(2)(ii) ANSI N13.1	All radionuclides which could contribute 10% of the potential EDE.	Continuous

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Stack Monitoring System Upgrades (Project W-420)	AIR 99-115	1/29/1999	339

Conditions (state only enforceable)

1) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13) and WAC 246-247-075(6)).

2) If the department finds that the emission unit described in this NOC, is not in compliance with the standards in WAC 245-247-040 during construction ,as described in this NOC, or during operation, it reserves the right to require modifications to bring it into compliance.

3) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections. At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet the requirements.

4) Radiological field surveys will performed during replacement of the stack and associated sampling and monitoring equipment. HPT coverage will be provided during excavation with these activities stopping if evenly distributed (i.e., non-speck) contamination detection reading of 100,000 dpm/100cm2 beta-gamma, or 35 dpm/100cm2 above background alpha are encountered. If contamination levels in affected areas are greater than 1.000 dpm/100cm2 beta gamma and 20 dpm/100cm2 alpha, contamination controls including bagging and taping, applying fixatives, foaming, or glove bags will be used. A 20 mph sustained wind speed restriction shall apply to all demolition and replacement work. When ventilation is restored, between shutdown and completion of the upgrades, the stack emissions measurement system will be restored.

5) The facility must be able to demonstrate that the workers associated with this emission unit are adequately trained in the use an maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures.

6) The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in, or equivalent to, those listed in WAC 246-247-075(6).

7) The department reserves the right to inspect and audit this unit during construction and operation, including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations.

8) All reports and records must be kept and reported according to 40 CFR 61, Subpart H.

9) All measured or calculated emissions must be reported annually.

10) When this project is completed, or operations cease, the facility shall notify the department via a report of closure, including whether or not any potential for airborne releases occurred.

11) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least 5 years.

12) The department retains the right to conduct its own stack sampling, environmental monitoring or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing.

13) The facility shall make requested documents available in a timely manner for review.

14) The facility's modification activity shall consist of replacing the stack and its associated sampling and monitoring equipment. Portions of existing concrete pads will be removed and the soil excavated to accommodate the installation of utilities (power, signal lines, etc.) The existing ventilation and stack sampling systems will remain operational during the excavation activities but will be shut down during stack and equipment removal and the relocation of the equipment cabinet to a temporary near-by location.

15) The required controls are: Wind speed construction of 20 mph, HPT coverage, engineering and controls

16) The radionuclides are limited to Sr-90 and Am-241:
For Excavation Activities: Sr-90, dose 4.14E-07 mrem/year to the MEI;
Am-241, dose 4.96E-03 mrem/yr to the MEI
For Equipment Removal Activities: Sr-90, dose 5.86E-11 mrem/year to the MEI;
Am-241, dose 3.51E-10 to the MEI

17) The annual possession quantity is limited to:
For Excavation Activities: Sr-90, 9.45E-03 Ci; Am-241, 3.79E-01 Ci
For Equipment Removal Activities: Sr, 3.17E-07 Ci; Am-241, 6.33E-09 Ci

18) The abated emission limit is: 4.96E-3 mrem/yr to the MEI.

19) The facility shall notify the department at least seven days prior to any planned preoperational testing of the emission unit's emissions control, monitoring or containment systems. The department reserves the right to

20) The facility must maintain a log in an approved format for this activity or emission unit.

21) U.S. DOE shall comply with all Conditions and Limitations of this license.

22) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that last more than four hours, it must be reported to the department within 24 hours. (Note: Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in the approval (paragraph 5)).

200E P-244BX-001

296-B-28
244-BX-DCRT
Emission Unit ID: 208

FFCA Status: Not in Compliance. Schedule for Upgrade by 4/30/2006. Federally enforceable only.

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
			* Technology Specific Requirements
	Fan	1	
	HEPA	2	3 parallel flow paths
	Prefilter	1	3 parallel flow paths
	Heater	1	Annulus exhaust is not heated

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4) & WAC 246-247-75(2)	Method 2 appendix A Method 114 appendix B 61.93(b)(2)(ii) ANSI N13.1	All radionuclides which could contribute 10% of the potential EDE.	Continuous

This Emission Unit has 2 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Stack Monitoring System Upgrades Resume Work Strategy (Project W-420)	RTAM	5/6/1999	365

Conditions (state only enforceable)

1) Use the APQ, in Curies, as the governing requirement for compliance with the NOC.
2) Determine how much of APQ was reached due to contamination encounter thus far in the excavation work.
3) Track any remaining contamination as it is encountered and subtract it from the NOC's APQ. Keep a running total of the actual field encountered APQ to show that the NOC APQ will not be exceeded.

Project Title	Approval No.	Date Approved	NOC_ID
Stack Monitoring System Upgrades (Project W-420)	AIR 99-115	1/29/1999	339

Conditions (state only enforceable)

1) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least 5 years.

2) U.S. DOE shall comply with all Conditions and Limitations of this license.

3) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13) and WAC 246-247-075(6)).

4) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that last more than four hours, it must be reported to the department within 24 hours. (Note: Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in the approval (paragraph 5)).

5) The facility must maintain a log in an approved format for this activity or emission unit.

6) If the department finds that the emission unit described in this NOC, is not in compliance with the standards in WAC 245-247-040 during construction ,as described in this NOC, or during operation, it reserves the right to require modifications to bring it into compliance.

7) The radionuclides are limited to Sr-90 and Am-241:
For Excavation Activities: Sr-90, dose 2.76E-07 mrem/year to the MEI;
Am-241, dose 3.31E-03 mrem/yr to the MEI
For Equipment Removal Activities: Sr-90, dose 9.30E-11 mrem/year to the MEI;
Am-241, dose 5.56E-10 to the MEI

8) Radiological field surveys will performed during replacement of the stack and associated sampling and monitoring equipment. HPT coverage will be provided during excavation with these activities stopping if evenly distributed (i.e., non-speck) contamination detection reading of 100,000 dpm/100cm2 beta-gamma, or 35 dpm/100cm2 above background alpha are encountered. If contamination levels in affected areas are greater than 1.000 dpm/100cm2 beta gamma and 20 dpm/100cm2 alpha, contamination controls including bagging and taping, applying fixatives, foaming, or glove bags will be used. A 20 mph sustained wind speed restriction shall apply to all demolition and replacement work. When ventilation is restored, between shutdown and completion of the upgrades, the stack emissions measurement system will be restored.

9) The abated emission limit is:
3.31E-03 mrem/yr to the MEI.

10) When this project is completed, or operations cease, the facility shall notify the department via a report of closure, including whether or not any potential for airborne releases occurred.

11) The annual possession quantity is limited to:
For Excavation Activities: Sr-90, 6.30E-03 Ci; Am-241, 2.52E-01 Ci
For Equipment Removal Activities: Sr, 4.48E-07 Ci; Am-241, 8.95E-09 Ci

12) All measured or calculated emissions must be reported annually.

13) The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in, or equivalent to, those listed in WAC 246-247-075(6).

14) All reports and records must be kept and reported according to 40 CFR 61, Subpart H.

15) The facility shall notify the department at least seven days prior to any planned preoperational testing of the emission unit's emissions control, monitoring or containment systems. The department reserves the right to

16) The required controls are: Wind speed construction of 20 mph, HPT coverage, engineering and controls

17) The facility's modification activity shall consist of replacing the stack and its associated sampling and monitoring equipment. Portions of existing concrete pads will be removed and the soil excavated to accommodate the installation of utilities (power, signal lines, etc.) The existing ventilation and stack sampling systems will remain operational during the excavation activities but will be shut down during stack and equipment removal and the relocation of the equipment cabinet to a temporary near-by location.

18) The facility must be able to demonstrate that the workers associated with this emission unit are adequately trained in the use an maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures.

19) The department reserves the right to inspect and audit this unit during construction and operation, including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations.

20) The facility shall make requested documents available in a timely manner for review.

21) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections. At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet the requirements.

22) The department retains the right to conduct its own stack sampling, environmental monitoring or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing.

200E P-244CR-001

296-C-5
244-CR-VAULT
Emission Unit ID: 213

FFCA Status: Not in Compliance. Schedule for Upgrade by 4/30/2006. Federally enforceable only.

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	
	HEPA	8	2 banks of 4 filters(2X2)
	Prefilter	4	One bank of 4 prefilters (2X2)

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4) & WAC 246-247-75(2)	Method 2 appendix A Method 114 appendix B 61.93(b)(2)(ii) ANSI N13.1	All radionuclides which could contribute 10% of the potential EDE.	Continuous

This Emission Unit has 3 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Stack Monitoring System Upgrades Resume Work Strategy (Project W-420)	RTAM	5/6/1999	365

Conditions (state only enforceable)

1) Use the APQ, in Curies, as the governing requirement for compliance with the NOC.
2) Determine how much of APQ was reached due to contamination encounter thus far in the excavation work.
3) Track any remaining contamination as it is encountered and subtract it from the NOC's APQ. Keep a running total of the actual field encountered APQ to show that the NOC APQ will not be exceeded.

Project Title	Approval No.	Date Approved	NOC_ID
Stack Monitoring System Upgrades (Project W-420)	AIR 99-115	1/29/1999	339

Conditions (state only enforceable)

1) The annual possession quantity is limited to:
For Excavation Activities: Sr-90, 4.72E-03 Ci; Am-241, 1.89E-01 Ci
For Equipment Removal Activities: Sr, 2.36E-07 Ci; Am-241, 3.67E-08 Ci
2) The abated emission limit is: 2.48E-03 mrem/yr to the MEI.
3) U.S. DOE shall comply with all Conditions and Limitations of this license.

4) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that last more than four hours, it must be reported to the department within 24 hours. (Note: Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in the approval (paragraph 5)).

5) When this project is completed, or operations cease, the facility shall notify the department via a report of closure, including whether or not any potential for airborne releases occurred.

6) The department retains the right to conduct its own stack sampling, environmental monitoring or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing.

7) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13) and WAC 246-247-075(6)).

8) If the department finds that the emission unit described in this NOC, is not in compliance with the standards in WAC 245-247-040 during construction ,as described in this NOC, or during operation, it reserves the right to require modifications to bring it into compliance.

9) The department reserves the right to inspect and audit this unit during construction and operation, including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations.

10) The radionuclides are limited to Sr-90 and Am-241:
For Excavation Activities: Sr-90, dose 2.07E-07 mrem/year to the MEI;
Am-241, dose 2.48E-03 mrem/yr to the MEI
For Equipment Removal Activities: Sr-90, dose 7.63E-10 mrem/year to the MEI;
Am-241, dose 3.55E-08 to the MEI

11) Radiological field surveys will performed during replacement of the stack and associated sampling and monitoring equipment. HPT coverage will be provided during excavation with these activities stopping if evenly distributed (i.e., non-speck) contamination detection reading of 100,000 dpm/100cm2 beta-gamma, or 35 dpm/100cm2 above background alpha are encountered. If contamination levels in affected areas are greater than 1.000 dpm/100cm2 beta gamma and 20 dpm/100cm2 alpha, contamination controls including bagging and taping, applying fixatives, foaming, or glove bags will be used. A 20 mph sustained wind speed restriction shall apply to all demolition and replacement work. When ventilation is restored, between shutdown and completion of the upgrades, the stack emissions measurement system will be restored.

12) The facility must be able to demonstrate that the workers associated with this emission unit are adequately trained in the use an maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures.

13) The facility must maintain a log in an approved format for this activity or emission unit.

14) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least 5 years.

15) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections. At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet the requirements.

16) The facility shall make requested documents available in a timely manner for review.

17) The facility's modification activity shall consist of replacing the stack and its associated sampling and monitoring equipment. Portions of existing concrete pads will be removed and the soil excavated to accommodate the installation of utilities (power, signal lines, etc.) The existing ventilation and stack sampling systems will remain operational during the excavation activities but will be shut down during stack and equipment removal and the relocation of the equipment cabinet to a temporary near-by location.

18) The required controls are: Wind speed construction of 20 mph, HPT coverage, engineering and controls

19) All measured or calculated emissions must be reported annually.
20) The facility shall notify the department at least seven days prior to any planned preoperational testing of the emission unit's emissions control, monitoring or containment systems. The department reserves the right to
21) The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in, or equivalent to, those listed in WAC 246-247-075(6).
22) All reports and records must be kept and reported according to 40 CFR 61, Subpart H.

Project Title	Approval No.	Date Approved	NOC_ID
244-CR Vault Double-Contained Receiver Tank	AIR 94-913	9/15/1994	45

Conditions (state only enforceable)

1) Must maintain a negative pressure on the CR Vault while it is in use. When the CR vault is not in use, the cover blocks shall be taped.
2) Control System: The ventilation system shall consist of a pre-filter, two HEPA filters, a fan, and a stack.
3) Process Description: Start up and operation of an actively ventilated emissions abatement system shall be allowed during operation of the 244-CR Vault DCRT. The DCRT is used in the transfer of waste within the Tank Farms.
4) Monitoring will be performed continuously during the transfer of waste.

200E P-296B001-001

296-B-1
B- PLANT
Emission Unit ID: 402
FFCA Status: In Compliance.

Abatement Technology (state only enforceable)

Applicable Requirements:BARCT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	2	Only one fan operates at a time.
	HEPA	4	Two trains, 2 in each train
	Prefilter	2	Two trains, one in each train

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4) & WAC 246-247-075(2)	Method 2 appendix A Method 114 appendix B 61.93(b)(2)(ii) ANSI N13.1	137Cs, 90Sr	Continuous

This Emission Unit has 2 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
B Plant Modification of the Ventilation System (Emission Point: 296-B-1)	AIR 97-1012	10/28/1997	240

Conditions (state only enforceable)

1) The discharge from the new stack must be fully NESHAPS compliant and continuously monitored in accordance to the requirements of 40 CFR 61.93.

Project Title	Approval No.	Date Approved	NOC_ID
B Plant Modification of the Ventilation System (Emission Point: 296-B-1)	AIR 97-805	8/20/1997	235

Conditions (state only enforceable)

1) The new 296-B Stack must comply with all National Emissions Standards for Hazardous Air Pollutants (NESHAPS) requirements. All equipment in the new ventilation system must meet the specifications outlined in Section 8.2 of the NOC The sampling system is outlined in Section 9.4 - 9.4.4 of the NOC.

Note: Only the test requirements of 8.2 and the sampling requirements of section 9.4.4 are currently applicable. The requirements of the other sections were completed during construction. (2/27/2001)

2) The offsite abated emission must not exceed 4.52 E-02 millirem per year to the Maximally Exposed Individual. The isotopic breakdown is limited to those listed in Appendix A of the NOC.

3) The new HEPA filters must be fully compatible with ANSI 509/510 standards.

200E P-296B002-001

296-B-2
B- PLANT
Emission Unit ID: 404

FFCA Status: In Compliance.

Abatement Technology (state only enforceable)

Applicable Requirements:BARCT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	HEPA	1	In series(passive ventilation)

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4)(i) & WAC 246-247-075(2)	Alternative monitoring method approved is annually NDA testing on the second in-line HEPA filter.	All radionuclides which could contribute 10% of the potential EDE.	annually

This Emission Unit has 4 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Modification of B-Plant complex, 221-B Canyon Building (Project W-059)	NOC Revision approval	9/5/2000	494

Conditions (state only enforceable)

1) Change the frequency of NDA on the record filter from quarterly to annually.
2) Perform aerosol testing of the record filter annually.

Project Title	Approval No.	Date Approved	NOC_ID
B Plant Modification of the Ventilation System, annual test for plugging	NOC revision approval	1/4/2000	418

Conditions (state only enforceable)

1) If a valve is found to be leaking, the Department of Health must be notified prior to replacement to determine if a notice of construction is needed for the procedure.

Project Title	Approval No.	Date Approved	NOC_ID
B Plant Modification of the Ventilation System (Emission Point: 296-B-1)	AIR 97-805	8/20/1997	235

Conditions (state only enforceable)

1) The new HEPA filters must be fully compatible with ANSI 509/510 standards.
2) The passively ventilated 291-B retired filters in the HEPA vaults and sand filter must use the alternate method for collecting the record samples and HEPA maintenance outlined in Appendix C of the NOC. The alternate method

requires the quarterly nondestructive analysis of the second HEPA in series. The logs of these analyses are used to track emissions. The records must be available during DOH inspections. **Note: Quarterly NDA changed to annual by 9/5/2000 NOC revision approval. All the remainder of this condition is applicable.**

3) The offsite abated emission must not exceed 4.52 E-02 millirem per year to the Maximally Exposed Individual. The isotopic breakdown is limited to those listed in Appendix A of the NOC.

4) All other conditions listed in Section 8.3 - 8.5 of the NOC must be used to passively ventilate the retired filters and the 291-B stack after the old system will be shut down.

200E Canister Storage Bldg

CSB
CANNISTER STORAGE BLDG (CSB)
Emission Unit ID: 435

Abatement Technology (state only enforceable)

Applicable Requirements:BARCT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	2	operates in parallel, one fan at a time and one in backup mode
	HEPA	2	double stage, operates in parallel, one HEPA at a time and one in backup mode

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	All radionuclides which could contribute 10% of the potential EDE.	The record filter is to be counted annually (either a destructive or non-destructive technique) using a gamma spectrometer calibrated to

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Canister Storage Building	AIR 98-710	7/30/1998	289

Conditions (state only enforceable)

1) All measured or calculated emissions must be reported annually (WAC 246-247-080(3)).
2) Nothing may be inferred that is not specifically described in the NOC.
3) The department must approve any deviation from required or recommended monitoring standards.
4) Continuous monitoring must be in place prior to operating. This will include continuous ambient air sampling for this project.
5) All Conditions and Limitations must be proceduralized prior to the implementation of this NOC.
6) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from the facility (WAC 246-247-075(13) and (WAC 246-247-075(6). The facility must demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in the above cited regulation.
7) 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 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.

8) If there is an unexpected release of radioactivity, or if there is a shutdown, or any other condition that if it were allowed to persist, would result in emissions of radionuclides in excess of any Conditions or Limitations in the license, or that last more than four hours, it must be reported to the department within 24 hours. Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 1), BARCT (paragraph 2), or ALARACT (paragraph 4), whichever is applicable, or any limitations included in this approval (paragraph 5).

9) The NOC constitutes a contract between the department and the facility. Any changes must be approved by the department

10) 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.

11) The emission limit for this emission unit is less than 1.58E-02 mrem/yr to the MEI abated (WAC 246-247-040(5)).

12) If construction is not commenced with two years from the date of this letter, the approval is void.

13) Preoperational tests planned for this unit, requirement for notification at least seven days prior to such testing under (WAC 246-247-060(4)) will apply.

14) All records required by WAC 246-247 must be readily (promptly) retrievable, and must be stored onsite at the facility. All records shall be maintained for a minimum of five years (WAC 246-247-080(8)

15) Any problems, which could affect the monitoring, ventilation or controls to this facility must be reported to the department.

16) The monitoring system must be ANSI N13.1 and ANSI N42.18 compliant.

17) Any deviation from the description of the modification or new construction, without approval of the department, may result in enforcement action under WAC 246-247-100. Cs-137.

18) The department reserves the right at any time to require the licensee to provide for split or collocated sampling of this emission unit (WAC 246-247-075(10).

19) This approval, with its Conditions and Limitations, constitutes an amendment to the Department's Radioactive Air Emissions License. This amendment must be included in the next revision of the Hanford Air Operating Permit (WAC 246-247-060(1)(e) and (2)).

20) If the department finds that the emission unit described in this NOC is not in compliance with the standards in WAC 246-247-040 during construction and/or operation, the department will require modifications to bring it into compliance (WAC 246-247-060(2)(d)).

21) The department reserves the right to conduct an environmental surveillance program around this emission unit and to require the facility to conduct or modify its own environmental monitoring program (WAC 246-247-075(9)).

22) U.S. DOE shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5)).

200E P-291A001-001

291-A-1
PUREX
Emission Unit ID: 369
FFCA Status: In Compliance.

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	3	In parallel, one operating, two back-up
	HEPA	2	In series
	Glass Filter	1	(Deep Bed Glass filter)

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4) & WAC 246-247-75(2)	Method 2 appendix A Method 114 appendix B 61.93(b)(2)(ii) ANSI N13.1	239/240Pu, 241Am	Continuous

200E P-296B010-001

296-B-10
Waste Encapsulation and Storage Facility (WESF)
Emission Unit ID: 340

FFCA Status: In Compliance.

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
K-3 Filter Pit	Fan	1	2 parallel paths (1 in-use, 1 backup)
K-3 Filter Pit	HEPA	2	2 parallel flow paths, in-series
K-3 Filter Pit	Impingement Vanes	1	
K-3 Filter Pit	Heater	1	
K-3 Filter Pit	Demister	1	
K-1 Filter Bldg.	Fan	1	2 in parallel
K-1 Filter Bldg.	HEPA	2	In series
K-1 Filter Bldg.	Prefilter	2	In series

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4) & WAC 246-247-75(2)	Method 2 appendix A Method 114 appendix B 61.93(b)(2)(ii) ANSI N13.1	All radionuclides which could contribute 10% of the potential EDE.	Continuous

This Emission Unit has 2 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Waste Encapsulation and Storage Facility - approval of alternative monitoring method	AIR 99-501	5/19/1999	369

Conditions (state only enforceable)

1) No WDOH conditions apply.

Project Title	Approval No.	Date Approved	NOC_ID
Waste Encapsulation and Storage Facility (WESF) Liquid Low Level Radioactive Stream Piping Modification and Contingency Operations	RTAM	2/26/1998	259

Conditions (state only enforceable)

1) The following ALARACT Standards apply to this activity. WAC 246-247-130 Appendix C, "ALARA References"

2) The tank is considered a non-sealed, non-airtight source during the transport activity and the calculated PTE

includes all phases of this activity.

3) The contamination controls requirements for DOE/RL-96-75 will apply. This emission unit will be tracked using, as a guide, DOE/RL-96-75 and reported separate from those listed in DOE/RL-96-75

4) Levels on the outside of the tank transport packaging will be less than 2,000 dpm/100 cm2 Alpha

5) Description of "mechanical plugs" will be provided to DOH for review and approval (via signed meeting minutes) prior to the activity.

6) DOH considers the temporary framed plastic enclosure with HEPA filtration is the primary control device for this activity. Glovebags used during cutting of the piping will be considered occupational safety controls.

7) Structural analysis of the tank integrity using the mass of the contents will be performed and provided to DOH for review and approval (via signed meeting minutes) prior to the tank lift.

200W P-244S-001

296-S-22
244 S-DCRT
Emission Unit ID: 165

FFCA Status: Not in Compliance. Schedule for Upgrade by 4/30/2006. Federally enforceable only.

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	
			* Technology Specific Requirements
	HEPA	2	2 parallel flow paths
	Prefilter	1	2 parallel flow paths
	Heater	1	Annulus exhaust is not heated

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4) & WAC 246-247-75(2)	Method 2 appendix A Method 114 appendix B 61.93(b)(2)(ii) ANSI N13.1	All radionuclides which could contribute 10% of the potential EDE.	Continuous

This Emission Unit has 3 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Stack Monitoring System Upgrades Resume Work Strategy (Project W-420)	RTAM	5/6/1999	365

Conditions (state only enforceable)

1) Use the APQ, in Curies, as the governing requirement for compliance with the NOC.
2) Determine how much of APQ was reached due to contamination encounter thus far in the excavation work.
3) Track any remaining contamination as it is encountered and subtract it from the NOC's APQ. Keep a running total of the actual field encountered APQ to show that the NOC APQ will not be exceeded.

Project Title	Approval No.	Date Approved	NOC_ID
Stack Monitoring System Upgrades (Project W-420)	AIR 99-115	1/29/1999	339

Conditions (state only enforceable)

1) The annual possession quantity is limited to:
For Excavation Activities: Sr-90, 5.51E-03 Ci; Am-241, 2.21E-01 Ci
For Equipment Removal Activities: Sr, 4.59E-07 Ci; Am-241, 9.17E-09 Ci

2) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections. At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet the requirements.

3) The facility must maintain a log in an approved format for this activity or emission unit.

4) U.S. DOE shall comply with all Conditions and Limitations of this license.

5) The radionuclides are limited to Sr-90 and Am-241:
For Excavation Activities: Sr-90, dose 2.41E-07 mrem/year to the MEI;
Am-241, dose 2.89E-03 mrem/yr to the MEI
For Equipment Removal Activities: Sr-90, dose 9.47E-11 mrem/year to the MEI;
Am-241, dose 35.66E-10 to the MEI

6) If the department finds that the emission unit described in this NOC, is not in compliance with the standards in WAC 245-247-040 during construction ,as described in this NOC, or during operation, it reserves the right to require modifications to bring it into compliance.

7) When this project is completed, or operations cease, the facility shall notify the department via a report of closure, including whether or not any potential for airborne releases occurred.

8) The facility shall notify the department at least seven days prior to any planned preoperational testing of the emission unit's emissions control, monitoring or containment systems. The department reserves the right to

9) The required controls are: Wind speed construction of 20 mph, HPT coverage, engineering and controls

10) Radiological field surveys will performed during replacement of the stack and associated sampling and monitoring equipment. HPT coverage will be provided during excavation with these activities stopping if evenly distributed (i.e., non-speck) contamination detection reading of 100,000 dpm/100cm2 beta-gamma, or 35 dpm/100cm2 above background alpha are encountered. If contamination levels in affected areas are greater than 1.000 dpm/100cm2 beta gamma and 20 dpm/100cm2 alpha, contamination controls including bagging and taping, applying fixatives, foaming, or glove bags will be used. A 20 mph sustained wind speed restriction shall apply to all demolition and replacement work. When ventilation is restored, between shutdown and completion of the upgrades, the stack emissions measurement system will be restored.

11) All reports and records must be kept and reported according to 40 CFR 61, Subpart H.

12) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least 5 years.

13) The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in, or equivalent to, those listed in WAC 246-247-075(6).

14) The facility shall make requested documents available in a timely manner for review.

15) The facility's modification activity shall consist of replacing the stack and its associated sampling and monitoring equipment. Portions of existing concrete pads will be removed and the soil excavated to accommodate the installation of utilities (power, signal lines, etc.) The existing ventilation and stack sampling systems will remain operational during the excavation activities but will be shut down during stack and equipment removal and the relocation of the equipment cabinet to a temporary near-by location.

16) The abated emission limit is: 2.89E-3 mrem/yr to the MEI.

17) The department retains the right to conduct its own stack sampling, environmental monitoring or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing.

18) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that last more than four hours, it must be reported to the department within 24 hours. (Note: Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in the approval (paragraph 5)).

19) All measured or calculated emissions must be reported annually.

20) The facility must be able to demonstrate that the workers associated with this emission unit are adequately trained in the use an maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures.

21) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13) and WAC 246-247-075(6)).

22) The department reserves the right to inspect and audit this unit during construction and operation, including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations.

Project Title	Approval No.	Date Approved	NOC_ID
S-Farm removal of duct work and associated exhausters	AIR 95-1004	10/12/1995	120

200W P-244TX-001

296-T-18
244-TX-DCRT
Emission Unit ID: 166

FFCA Status: Not in Compliance. Schedule for Upgrade by 4/30/2006. Federally enforceable only.

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
			* Technology Specific Requirements
	Fan	1	
	HEPA	2	3 parallel flow paths with 2 HEPAs in series
	Prefilter	1	3 parallel flow paths
	Heater	1	Annulus exhaust is not heated

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4) & WAC 246-247-75(2)	Method 2 appendix A Method 114 appendix B 61.93(b)(2)(ii) ANSI N13.1	All radionuclides which could contribute 10% of the potential EDE.	Continuous

This Emission Unit has 2 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Stack Monitoring System Upgrades Resume Work Strategy (Project W-420)	RTAM	5/6/1999	365

Conditions (state only enforceable)

1) Use the APQ, in Curies, as the governing requirement for compliance with the NOC.
2) Determine how much of APQ was reached due to contamination encounter thus far in the excavation work.
3) Track any remaining contamination as it is encountered and subtract it from the NOC's APQ. Keep a running total of the actual field encountered APQ to show that the NOC APQ will not be exceeded.

Project Title	Approval No.	Date Approved	NOC_ID
Stack Monitoring System Upgrades (Project W-420)	AIR 99-115	1/29/1999	339

Conditions (state only enforceable)

1) U.S. DOE shall comply with all Conditions and Limitations of this license.
2) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this

unit (WAC 246-247-075(13) and WAC 246-247-075(6)).

3) The department retains the right to conduct its own stack sampling, environmental monitoring or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing.

4) The facility must be able to demonstrate that the workers associated with this emission unit are adequately trained in the use an maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures.

5) The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in, or equivalent to, those listed in WAC 246-247-075(6).

6) The department reserves the right to inspect and audit this unit during construction and operation, including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations.

7) The facility must maintain a log in an approved format for this activity or emission unit.

8) All reports and records must be kept and reported according to 40 CFR 61, Subpart H.

9) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections. At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet the requirements.

10) When this project is completed, or operations cease, the facility shall notify the department via a report of closure, including whether or not any potential for airborne releases occurred.

11) The facility's modification activity shall consist of replacing the stack and its associated sampling and monitoring equipment. Portions of existing concrete pads will be removed and the soil excavated to accommodate the installation of utilities (power, signal lines, etc.) The existing ventilation and stack sampling systems will remain operational during the excavation activities but will be shut down during stack and equipment removal and the relocation of the equipment cabinet to a temporary near-by location.

12) The facility shall make requested documents available in a timely manner for review.

13) The annual possession quantity is limited to:
For Excavation Activities: Sr-90, 5.51E-03 Ci; Am-241, 2.21E-01 Ci
For Equipment Removal Activities: Sr, 4.59E-07 Ci; Am-241, 9.17E-09 Ci

14) All measured or calculated emissions must be reported annually.

15) The abated emission limit is: 2.89E-3 mrem/yr to the MEI.

16) The required controls are: Wind speed construction of 20 mph, HPT coverage, engineering and controls

17) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that last more than four hours, it must be reported to the department within 24 hours. (Note: Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in the approval (paragraph 5)).

18) If the department finds that the emission unit described in this NOC, is not in compliance with the standards in WAC 245-247-040 during construction ,as described in this NOC, or during operation, it reserves the right to require modifications to bring it into compliance.

19) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least 5 years.

20) The facility shall notify the department at least seven days prior to any planned preoperational testing of the emission unit's emissions control, monitoring or containment systems. The department reserves the right to

21) Radiological field surveys will performed during replacement of the stack and associated sampling and monitoring equipment. HPT coverage will be provided during excavation with these activities stopping if evenly distributed (i.e., non-speck) contamination detection reading of 100,000 dpm/100cm2 beta-gamma, or 35 dpm/100cm2 above background alpha are encountered. If contamination levels in affected areas are greater than 1.000 dpm/100cm2

beta gamma and 20 dpm/100cm2 alpha, contamination controls including bagging and taping, applying fixatives, foaming, or glove bags will be used. A 20 mph sustained wind speed restriction shall apply to all demolition and replacement work. When ventilation is restored, between shutdown and completion of the upgrades, the stack emissions measurement system will be restored.

22) The radionuclides are limited to Sr-90 and Am-241:
For Excavation Activities: Sr-90, dose 2.41E-07 mrem/year to the MEI;
Am-241, dose 2.89E-03 mrem/yr to the MEI
For Equipment Removal Activities: Sr-90, dose 4.38-02 mrem/year to the MEI;
Am-241, dose 1.31E+01 to the MEI

200W P-244U-001

296-U-11
244-U-DCRT
Emission Unit ID: 329
FFCA Status: In Compliance.

Abatement Technology (state only enforceable)

Applicable Requirements:BARCT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
			* Technology Specific Requirements
	Fan	Non-Operational	This unit is inactive and will require an NOC to resume operation or a report of closure to deregister.
	HEPA	Non-Operational	This unit is inactive and will require an NOC to resume operation or a report of closure to deregister.
	Prefilter	Non-Operational	This unit is inactive and will require an NOC to resume operation or a report of closure to deregister.
	Heater	Non-Operational	This unit is inactive and will require an NOC to resume operation or a report of closure to deregister.

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4) & WAC 246-247-75(2)	Method 2 appendix A Method 114 appendix B 61.93(b)(2)(ii) ANSI N13.1	All radionuclides which could contribute 10% of the potential EDE.	Continuous

200W P-291Z001-001
291-Z-1
PLUTONIUM FINISHING PLANT(Z PLANT)
Emission Unit ID: 393
FFCA Status: In Compliance.

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
(all operations)	Fan	4	3 standby (7 total)
(242-Z Operations)	HEPA	2	2 Stages for process operations
236-Z Operations)	HEPA	2	2 Stages for process operations
(234-5Z Operations)	HEPA	2	2 Stages for process operations

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4) & WAC 246-247-75(2)	Alternative effluent flow rate not to exceed 290,000 cfm. Method 114 appendix B 61.93(b)(2)(ii) ANSI N13.1	All radionuclides which could contribute 10% of the potential EDE.	Continuous

This Emission Unit has 5 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Magnesium Hydroxide Precipitation Process at PFP	AIR 00-801	8/25/2000	488

Conditions (state only enforceable)

1) U.S. DOE shall comply with all Conditions and Limitations of this Notice of Construction (WAC 246-247-060(5)).

2) These Conditions and Limitations must be proceduralized prior to starting the activities described in the Notice of Construction.

3) This approval, with its Conditions and Limitations must be included in the next revision of the Hanford Air Operating Permit (WAC 246-247-060(1)(e) and (2)(c)), and will at that time, constitute a revision of the Radioactive Air Emissions License.

4) If the department finds that the emission unit described in this NOC is not in compliance with the standards in WAC 246-247-040 during construction (as described in the NOC or during operation) the department reserves the right to require modifications to bring it into compliance (WAC 246-247-060(2)(d)).

5) The facility shall notify the department at least seven days prior to any planned preoperational testing of the emission unit's emission control, monitoring or containment systems. The department reserves the right to

observe such tests (WAC 246-247-060(4)).

6)The department reserves the right to conduct its own stack sampling, environmental monitoring or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing (WAC 246-247-075(10)).

7) The facility must be able to demonstrate that the workers associated with this emission unit are adequately trained in the use and maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures (WAC 246-247-075(12)).

8) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13) and WAC 246-247-075(6)). The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in the above-cited regulation.

9) The department reserves the right to inspect and audit this unit during construction and operation. This includes all activities, equipment, operation procedures, documents, data, and other records related to compliance with the regulations (WAC 246-247-080(1)).

10) The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).

11) All reports and records must be kept and reported according to 40 CFR 61, Subpart H (WAC 246-247-080(2)).

12) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least five years (WAC 246-247-080(8)).

13) All measured or calculated emissions must be reported annually (WAC 246-247-080(3)).

14) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any Conditions or Limitations in the NOC or that lasts more than four hours, it must be reported to the department within 24 hours. Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in this approval

15) This unit must be fully accessible to Department of Health (DOH) inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections, as required by EPA (WAC 246-247-080(9)). At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet the requirements.

16) The facility shall make requested documents available for timely manner for review (WAC 246-247-080(10)).

17) When this project is completed, or operations cease, the facility shall notify the department via a report of closure, and indicate whether or not any potential for airborne release occurred (WAC 246-247-080(6)).

18) The work approved in this NOC is limited to those described activities associated with the construction and operation activities involving the magnesium hydroxide precipitation process of plutonium solutions in nitric acid solutions within the Plutonium Finishing Plant (PFP).

19) Approved activities included in the process are the following: Stabilization by precipitation and use of the muffle furnaces; drying of the precipitated plutonium oxide (PuO2); packaging of the dried PuO2 for interim storage and disposal of the filtrate from the liquid nitrate solution using existing PFP processes.

20) The total unabated emissions are limited to 3.1E+01 Ci/yr.

21) The total unabated dose TEDE to the hypothetical MEI cannot exceed 2.20E+02 mrem/yr.

22) The total abated emissions are limited to 1.10E-01 mrem/yr.

23) The concentration of the nitric acid make up feed solution used in the magnesium hydroxide process cannot exceed 3.0 Molar.

24) The concentration of the nitric acid diluting solution used in the magnesium hydroxide process will average 0.35 Molar and be maintained within the safe operating parameters established for the process.

25) All operating Conditions and Limitations imposed by DOH in letter # AIR 96-1205 or stated in the Notice of Construction for the Muffle Furnaces must be observed.

26) Construction activities in Room 227 are limited to the installation of wall and ceiling mounts that will stabilize the

glovebox during seismic activities. Decontamination activities in Room 227 must be less than 0.1 mrem/yr.

* The HEPA filtered vacuums used for decontamination activities in Room 227 must be approved in the list included in the Radioactive Air Emissions Notice of Construction for HEPA Filtered Vacuum Radioactive Air Emissions Units DOE-RL-97-50. This document is to be used as a guide for the use of HEPA filtered vacuum, prior to the time the room is connected to the ventilation system. All records must be maintained as required in the HEPA Filtered Vacuum Radioactive Air Emissions Units (DOE-RL-97-50) NOC.

27) Construction activities in Room 230C are limited to the following:

* Decontaminate and/or stabilize any contaminated areas as necessary.
* Install two new gloveboxes to house the process equipment. These include precipitators, phase separator, polishing filters. Filtering tanks and hotplates.
* Anchor the two new glove boxes to the floor.
* Install wall and ceiling mounts, as necessary, to secure the gloveboxes in case of seismic activity.
* Install drain lines from the new gloveboxes to a clean section of an existing drain line.
* Connect the two new gloveboxes to the existing E-4 ventilation header.
* Route feed returns and spare lines that originate in Room 227 to the new gloveboxes.
* Install a new conveyor transport to connect to the new gloveboxes.
* Cut a hole, with dimensions approximating a four-foot diameter semicircle, into the wall between Rooms 230C and 230B to allow access to a glovebox port.
* Remove and relocate the electrical power conditioner.
* Relocate the current safety shower and eye wash station.
* Install a new electrical control panel.
* Install a wash water tank and run lines to two new gloveboxes.

28) The maximum stack flow rate cannot exceed 137 cubic meters per second.

29) Testing of all HEPA filters described in the NOC will be performed annually.

30) The annual possession quantity for Plutonium (Pu) in nitric acid solutions cannot exceed 0.4 metric tons of Pu.

31) The air in rooms 227 and 230C will exhaust through the E-3 High - Efficiency Particulate Air (HEPA) ventilation system. The E-3 ventilation system contains one stage of HEPA filtration with a minimum efficiency of 99.95 percent for particles with a medium diameter of 0.3 microns, before connecting with the E-4 ventilation system and exhausting through the 291-Z-1 stack.

The process off gases in Rooms 227 and 230C used in the work associated with the MHPP will exhaust through the E-4 ventilation system. The E-4 ventilation system has two stages of HEPA filtration with a minimum efficiency of 99.95 percent for particles with a medium diameter of 0.3 microns. The E-4 ventilation system then passes through two additional stages of HEPA filtration, before connecting with the E-3 ventilation system and exhausting through the 291-Z-1 stack."

32) The monitoring system for the 291-Z-1 stack must remain compliant to all the NESHAPs requirements.

33) The muffle furnaces must connect into the E-4 ventilation system and be configured as described in the Muffle Furnace Notice of Construction (DOE/RL-96-79).

34) The maximum furnace temperature must not exceed approximately 1,000 degrees C for the thermal stabilization process.

35) All work on this project must be completed on or before October 1, 2010.

Project Title	Approval No.	Date Approved	NOC_ID
PFP (234-5-Z) Stabilization of Plutonium Metal Oxides in Muffle Furnaces at the Plutonium Finishing Plant	AIR 96-1205	12/18/1996	209

Project Title	Approval No.	Date Approved	NOC_ID
Vertical Calciner at Plutonium Finishing Plant	AIR 96-1105	11/8/1996	195

Conditions (state only enforceable)

1) Emission unit stack 291-Z-1 shall meet applicable NESHAP requirements.
2) The proposed action is a modification of the existing process within the PFP complex. It is proposed that a vertical calciner be constructed and installed in Room 230C of the 234-5Z Building and operated to stabilized the
3) The source term is based on approximately 4,800 liters plutonium and transuranic solution, which are stored in PFP and a total mass of 335 kg of plutonium and americium is assumed to be in this volume.

Project Title	Approval No.	Date Approved	NOC_ID
Plutonium Finishing Plant Duct Work and Process Piping Remediation	RTAM	7/9/1996	170

Conditions (state only enforceable)

1) WDOH approved the planned modifications of the ductwork, the additional 35 feet of removal and an additional 100 feet of removal with the stipulation that the added length would involve 2 kilograms or less of plutonium.

Project Title	Approval No.	Date Approved	NOC_ID
Ductwork and Process Piping Remediation in Buildings 234-5Z & 291-Z (PFP)	Air 95-1102	11/7/1995	124

Conditions (state only enforceable)

1) Approved with the understanding that there shall be no changes to the existing control equipment & all remediation shall utilize a containment tent w/ HEPA filtration and/or glove bags.

200W P-296Z007 001

296-Z-7
PLUTONIUM FINISHING PLANT(Z PLANT)
Emission Unit ID: 503
FFCA Status: In Compliance.

Abatement Technology (state only enforceable)

Applicable Requirements:
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology	Required Number of Units	Additional Description/Conditions
	[WAC 246-247-010(4)] [WAC 246-247-040(4)]	[WAC 246-247-010(4)] [WAC 246-247-060(5)]	[WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure	Radionuclides Requiring Measurement	Sampling Frequency
	[WAC 246-247-040(5)] [WAC 173--401-615(1)]	[WAC 173-401-615(1)] All radionuclides which could contribute 10% of the potential EDE.	[WAC 246-247-075(1)] [WAC 173-401-615(1)]

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Plutonium Finishing Plant W-460 "Plutonium Stabilization and Handling"	AIR 00-709	7/20/2000	450

Conditions (state only enforceable)

1) U.S. DOE shall comply with all Conditions and Limitations of this Notice of Construction (WAC 246-247-060(5)).

2) These Conditions and Limitations must be proceduralized prior to starting the activities described in the Notice of Construction before the specified activity is to begin. Copies of these procedures must be provided to the department before starting these activities.

3) This approval with its Conditions and Limitations must be included in the next revision of the Hanford Air Operating Permit (WAC 246-247-060(1)(e) and (2)(c)), and will at that time, constitute a revision of the Radioactive Air Emissions License.

4) If the department finds that the emission unit described in this NOC is not in compliance with the standards in WAC 246-247-040 during construction or during operation, the department reserves the right to require modifications to bring it into compliance (WAC 246-247-060(2)(d)).

5) The facility shall notify the department at least seven days prior to any planned preoperational testing of the emission unit's emissions control, monitoring or containment systems. The department reserves the right to observe such tests (WAC 246-247-060(4)).

6) The department reserves the right to conduct its own stack sampling, environmental monitoring or other testing, as required around this unit to assure compliance. The facility must make provisions for such testing during construction. The department intends to split occasional stack samples on 296-Z-7 (WAC 246-247-075(10)).

7) The facility must be able to demonstrate that the workers associated with this emission unit are adequately trained in the use and maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures (WAC 246-247-075(12)).

8) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13) and WAC 246-247-075(6)). The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in the above-cited regulation.

9) The department reserves the right to inspect and audit this unit during construction and operation, including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations (WAC 246-247-080(1)). Periodic inspections will occur.

10) The department may require an ALARACT demonstration at any time (WAC 246-247-080 (1)).

11) All reports and records must be kept and reported according to 40 CFR 61, Subpart H (WAC 246-247-080(2)).

12) All measured or calculated emissions must be reported annually (WAC 246-247-080(3)).

13) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that lasts more than four hours, it must be reported to the department within 24 hours. Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in this approval

14) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least five years (WAC 246-247-080(8)).

15) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements, restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections, as required by EPA (WAC 246-247-080(9)). At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet the requirements.

16) The facility shall make requested documents available in a timely manner for review (WAC 246-247-080(10)).

17) When this project is completed, or operations cease, the facility shall notify the department via a report of closure, and indicate whether or not any potential for airborne release occurred (WAC 246-247-080(6)).

18) The materials to be stabilized and or repackaged under Project W-460 are limited to the plutonium and uranium oxides and metals that are already are stored in Plutonium Finishing Plant (PFP) complex.

19) Activities approved under this NOC are those associated with the construction and operation of activities involving the stabilization and repackaging of plutonium in 2736-ZB Building and the construction of a new major exhaust stack to be built and operated in the 2736-ZB Building to handle the effluents associated with these processes.

20) If the design of the ventilation system differs from that submitted in this NOC or the activities described in this project change, the project must obtain additional approval from DOH prior to commencement of construction.

21) The only modification approved for the 2736–Z Building is the replacement of the current shelving for new larger units to store the new 3013 compliant cans. Only the new 3013 cans (considered sealed sources) are approved for long-term storage in the 2736-Z building. No modifications are to be made to the ventilation system that exhausts through the minor 296-Z-6 stack.

22) The new stack (296-Z-7) must be compliant to all the technology standards listed in WAC 246-247-110(18). This information must be made available to DOH upon request. Inspections will verify full compliance. If there are any deviations from these standards, prior approval must be obtained from the department.

23) The new stack (296-Z-7) must be compliant to all the requirements of ANSI N13.1 (1999). Prior to installation, the department must approve the specific design if it deviates from the design submitted in this NOC. All required technical specifications shall be documented as required in the ANSI N13.1 and submitted to DOH to be approved prior to operation of the stack.

24) 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.

25) 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 from the stack stream. Exhausts from the pumps will return to the stack above the sample location.

26) Deposition losses in the sample lines must be evaluated. The results must be documented and issued in a report submitted to DOH after 12 months of operation.

27) Sampling for stack 296-Z-7 shall operate in a continuous mode.

28) Radioisotopes to be encountered during construction, stabilization and packaging activities include the following: uraniun-235, uranium-238, plutonium-238, plutonium-239, plutonium-240, plutonium-241, plutonium-242, americium-241 and americium-243.

29) The unabated dose to the TEDE to the hypothetical MEI is 1.67 E+3 millirem/year.

30) The abated dose to the TEDE to the hypothetical MEI is 8.34 E-1 millirem/year (at the LIGO Facility).

31) The total annual possession quantities are limited to the following: total plutonium isotopes – 1.6 metric tons/year, total uranium isotopes –1.1 tons/year, and total americium isotopes – 0.01 metric tons/year.

32) Soil excavation to support W-460 activities requires that a survey of the soil be performed every linear and vertical foot before and during excavation. Contaminated soil that is used as backfill must result in activity less that 50 cpm (counts per minutes) alpha or 500.000 cpm beta/gamma. These surveys must be recorded. These records must be made available to DOH upon request.

33) During soil excavation, if the contamination levels exceed 140 dpm alpha or 50,000 dpm beta/gamma, work must stop and DOH must be notified within twenty-four hours. DOH may request that an estimation of the dose due the excavation activities be calculated.

34) Contaminated soils must be separated from the piles of clean soil during excavation. The movement of contaminated soil will be controlled using fixatives, water and covers.

35) If contamination is more extensive than the prescribed limits, the spread of contamination must be controlled during the backfilling of soil. Minimal water shall be applied using a hand sprayer to control dust.

36) If contamination is present on the soil surface, the soil will either be removed and containerized, or covered with clean fill soil. After backfilling of the excavation site, where radiological contaminated soil is used as backfill, the surface soil will be surveyed to verify no contamination is on the soil surface.

37) The area will be radiologically posted both during and after completion of the project W-460, if appropriate.

38) The loss on ignition (LOI) purge gas flow rate will be 1 cfm of air. The offgas temperature will range from 1,150 degrees C to 1,200 degrees C. The offgas is discharged directly into the glovebox. There, it will mix with the approximately 13 degrees C nitrogen atmosphere in the LOI glovebox.

39) Supercritical fluid extraction (SEF) is also approved for the testing of oxide purity. The measured fluid stream of CO2 and water are exhausted into the glovebox atmosphere.

40) The temperature of the offgas must be below 40 degrees C prior to passing through dual stage testable HEPA filters. After exiting the HEPA filters, the offgas exits through the new stack (296-Z-7). The temperatures of the offgas must be established during operation to insure they are not exceeded. The documentation of the temperature must be available to DOH upon request.

41) The dual stage of HEPA filters shall be able to be individually tested with minimum efficiency of 99.95%.

42) 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. All staff must be trained on these procedures prior to the start of the project. DOH will review these procedures prior to the start of the project.

43) Activities in Room 642 are limited to material bag out, sample preparation, and heating of materials in the four muffle furnaces. The containers may only be opened in that area and ventilated through the 296-Z-7 stack.

44) The exhaust from the material bag out and preparation areas must each pass through a HEPA filter upon exiting the glove box. Prior to joining the main line, the exhaust must pass through to a HEPA filter prior to connecting with the Room 642 exhaust filter and then to the dual stage HEPA filter and exiting through stack 296-Z-7. All HEPA filters must be tested.

45) The annual possession quantities for all construction activities associated with the 296-Z-5 stack are limited to 1.2 E-5 curies for all radionuclides combined. The 296-Z-5 stack must remain operational during all construction

46) The 2736-ZB building will exhaust out of the existing 296-Z-5 stack through two stages of individually testable HEPA filters. They will have a minimum efficiency of 99.95% for particulate with a median diameter of 0.3 microns.

47) The product fill glove box located in Room 642 must be exhausted through a HEPA filter before connecting to the Room 642 exhaust HEPA filter.

48) The maximum design life of this project is not to exceed 11 years. All work must be completed by October 1, 2010.

49) Gloveboxes must have two exhaust systems, including a normal and an emergency system. Inside of each glove box, the normal exhaust system must have a roughing filter and fire screen. Outside of the glovebox, the normal exhaust system must be connected to a testable high efficiency particulate air (HEPA) filter.

50) The Department of Health requires that a particle size distribution study be conducted for 296-Z-7 emission unit after 12 months of full operation.

51) 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. At this point the offgas temperature must be below 40 degrees C.

52) All differential pressure magnehelic gauges associated with 296-Z-5, 296-Z-7 and 296-Z-6 HEPA filters must be calibrated annually.

53) In these Conditions and Limitations, all filters designated as HEPA filters must be testable to a minimum of 99.95% efficiency.

200W P-WRAP1 001

296-W-4

Waste Receiving and Processing Facility (WRAP)
Emission Unit ID: 193

FFCA Status: In Compliance.

Abatement Technology (state only enforceable)

Applicable Requirements:BARCT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	4	
	Prefilter	1	Prefilter for each HEPA housing
	HEPA	2	Redundant systems in parallel consisting of two banks each
	HEPA	2	Redundant systems in parallel consisting of two banks each

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3)	Method 2 appendix A Method 114 appendix B 61.93(b)(2)(ii) ANSI N13.1	All radionuclides which could contribute 10% of the potential EDE.	Continuous, Collect samples biweekly at a minimum

This Emission Unit has 3 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Waste Receiving and Processing (WRAP1)	NOC revision approval	1/20/1999	338

Conditions (state only enforceable)

1) Collect airborne effluent samples biweekly at a minimum.

Project Title	Approval No.	Date Approved	NOC_ID
Waste Receiving and Processing (WRAP1)	RTAM	7/9/1996	171

Conditions (state only enforceable)

1) This modification only changes the description of the permitted system, it does not change the PTE.

2) The filter media shall also be changed to a 200 mm glass fiber filter with a collection efficiency of 99% for 0.3 micron particles.

3) In order to maintain isokinetic sampling with the Berthold CAM, the 1 inch sample line shall be replaced with a 1.5 inch sample line (to enable a higher sample flow rate).

Project Title	Approval No.	Date Approved	NOC_ID
Waste Receiving and Processing (WRAP1)	AIR 93-907	9/7/1993	23

Conditions (state only enforceable)

1) Process Description: Waste treatment and repackaging facility. The primary function of WRAP1 is to examine, assay, characterize, treat, and repackage contact handled wastes.

2) Monitoring: Monitoring consists of record sampler.

3) WRAP exhaust stack shall be monitored for alpha and beta emitting particulates using an isokinetic probe.

4) Control System: prefilter and HEPAs.

5) There shall be a minimum of three stack sample points. The sample points shall be located at least 5 stack diameters down stream of any flow perturbations (such as a duct connection) and at least 2 stack diameters up stream of any flow disturbance (top of stack).

6) The number and placement of nozzles shall be consistent with ANSI N13.1.

300 EP-324-01-S

EP-324-01-S
324 WASTE TECHNOLOGY
Emission Unit ID: 360
FFCA Status: In Compliance.

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
Zone 1 Cells	Prefilter	2	1 for Zone 1 cell, 1 for POG V/V
Zone 1 Cells	HEPA	1	Last stage shared with B Cell
Zone 1 Cells	Fan	1	3 in parallel, Serves B Cell, Zone 1 Cells.
B Cell	Prefilter	2	
B Cell	Electro Static Precipitator	1	
Zone 2	Fan	1	2 in parallel. Serves both Storage Vault/Rms & Zone 2
Zone 2	Prefilter	1	
Zone 2	HEPA	1	Stage is control for Zone 2

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4) & WAC 246-247-75(2)	Method 2 appendix A Method 114 appendix B 61.93(b)(2)(ii) ANSI N13.1	All radionuclides which could contribute 10% of the potential EDE.	Continuous

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Cleanout of B-Cell in the 324 Building	AIR 95-903	9/18/1995	113

Conditions (state only enforceable)

1) Main HEPA filters shall be surveilled daily for differential pressure readings and tested annually for efficiency.
2) Electrostatic Precipitators in B-Cell shall be surveilled daily for differential pressure readings and monitored for amperage.
3) A non-testable HEPA Filter for B-Cell, and A-Frame filters for B-Cell and HLV are required.

300 EP-325-01-S

EP-325-01-S
325 APPLIED CHEMICAL LAB
Emission Unit ID: 361
FFCA Status: In Compliance.

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT (B
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	3	4 in parallel (3 operational, 1 back-up)
	HEPA	2	2 in series

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4) & WAC 246-247-75(2)	Method 2 Appendix A; Appendix B, Method 114	All radionuclides which could contribute 10% of the potential EDE.	Continuous

This Emission Unit has 6 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Modification to the Tritium Target Qualification Program Radiochemical Processing Laboratory 325 Building, 300 Area	AIR 00-208	2/23/2000	430

Conditions (state only enforceable)

1) The approved process activities include the sectioning of eight Tritium Producing Burnable Absorber Rods (TPBAR) tritium extraction and analysis, and the extraction and permeation testing.

2) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections, as required by EPA (WAC 246-247-080(9)). At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet the requirements.

3) Tritium emissions are to remain below 1.8E+3 curies. This total includes 379 Ci (rods currently approved) + 1.42E+3 Ci (additional eight TPBARs) for a total of 1.8E+3 Ci.

4) The project will begin January 2000 and will extend for a period of two years extending through the year 2001.

5) The inventory of commercial H-3 may only increase from 1,000 Ci to 3,000 Ci.

6) The sampling system shall consist of an isokinetic sampling probe. The exhaust flow rate is to be a nominal rate of 61m3/sec. Emission shall be monitored for H3 using a 2-stage silica gel collector.

7) Equipment and procedures for continuous monitoring shall conform to ANSI N13.1. The specific design must be approved by the department prior to installation. The department prior to construction must approve any

deviation from ANSI N13.1 WAC 246-247-075(2).

8) The unabated emission level is limited to the MEI is 5.73 mrem/yr.

9) Molecular sieves may be used until the exhaust gas as measured with an ion chamber indicates the sieves approaching a breakthrough. Disposal of spent molecular sieves must be in compliance with Pacific Northwest's radioactive waste management procedure.

10) The abated emission level is limited to the MEI is 0.1 mrem/yr.

11) The annual possession quantity for the radionuclides for the eight TPBARs is enclosed.

12) The facility must be able to demonstrate that the workers associated with this emission unit are adequately trained in the use and maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures (WAC 246-247-075(12)).

13) The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).

14) This approval, with its Conditions and Limitations, must be included in the next revision of the Hanford Air Operating Permit (WAC 246-247-060(1)(e) and (2)(c)) and will at that time, constitute a revision of the Radioactive Air Emissions License.

15) The department retains the right to conduct its own stack sampling, environmental monitoring or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing (WAC 246-247-075(10).

16) These Conditions and Limitations must be proceduralized prior to starting the activities described in the Notice of Construction.

17) U.S. DOE shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5)).

18) If the department finds that the emission unit described in this NOC is not in compliance with the standards in WAC 246-247-040 during construction (as described in the NOC or during operation)it reserves the right to require modifications to bring it into compliance (WAC 246-247-060(2)(d)).

19) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13) and WAC 246-247-075(6)). The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in the above cited regulation.

20) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least five years (WAC 246-247-080 (8)).

21) The department reserves the right to inspect and audit this unit during operation. This includes all activities, equipment, operation procedures, documents, data, and other records related to compliance with the regulations (WAC 246-247-080 (1)).

22) Approval is given to analyze eight additional (TPBARs) containing approximately 88,000 Ci of tritium. The rods must decay a minimum of one year from the time of irradiation to the proposed examination.

23) Sectioning of the TPBAR rods must be performed in the hot cells in HLRF. Sectioning must be done inside Plexiglas containment.

24) Tritium extraction and analysis activities are limited to the hot cells in HLRF ant to small-scale extractions in room 416.

25) The facility shall make requested documents available for timely review (WAC 246-247-080(10)).

26) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that lasts more than four hours, it must be reported to the department within 24 hours. Applicable standards(WAC 246-247-040)include unit specific emission limits (paragraph 5), the offsite dose standard(paragraph 1), ALARACT(paragraph 4), or any limitations included in this approval(paragraph 5) or the original Tritium Target Qualification Notice of Construction approval (letter # AIR 97-307).

27) All reports and records must be kept and reported according to 40 CFR 61, Subpart H. (WAC 246-247-080(2)).

28) The tritium permeation testing shall be conducted in room 48 of the basement in the laboratory hood or glovebox.

29) All measured or calculated emissions must be reported annually (WAC 246-247-080(3)).

30) The "Mandatory Use Procedures" require that each step be read prior to performing the activity. These procedures

are those that involve the following:
* Operation of the furnace and gas clean-up system used to extract tritium from the Tritium Producing Burnable Absorber Rods and;* The transfer of the extracted tritium to hydride transport vessels.

31) The required emission control technology consists of mandatory use procedures, control valves, two molecular sieves, and two stages of testable HEPAs. In room 416, two stage bladder traps in series must be used. The uranium getter material must be uranium hydride.

32) When this project is completed, or operations cease, the facility shall notify the department via a report of closure, and indicate whether or not any potential for airborne release occurred (WAC 246-247-080(6)).

33) Project activities are limited to High Level Radiochemical Facility (HLRF), Shielded Analytical Laboratory (SAL), and rooms 420, 418, and room 48 in the basement.

Project Title	Approval No.	Date Approved	NOC_ID
325 Building Hazardous Waste Treatment Unit (HWTU)	AIR 98-909	9/15/1998	302

Conditions (state only enforceable)

1) All Conditions and Limitations must be proceduralized prior to starting the activities described in the Notice of Construction (NOC).

2) Hazardous materials and radioactive mixed wastes will be stored, dispensed used, handled, packaged in drums and treated, using various small bench-scale treatment processes in the HWTU/SAL.

3) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least 5 years (WAC 246-247-080(8)).

4) Radioactive air emissions are limited to the concentrations listed in the NOC.

5) The facility shall make requested documents available in a timely manner for review. (WAC 246-247-080(10)).

6) All waste resulting from activities in the 325 Building treatment operations must be disposed of in accordance with prescribed PNNL Procedures.

7) When this project is completed, or operations cease, the facility shall notify the department via a report of closure, including whether or not any potential for airborne release occurs (WAC 246-247-080(6)).

8) Monitoring of emission point EP-325-01-S will not change. Stack particulate emission samples will be analyzed for alpha and beta activity, and specific isotopes as required. Analytical methodology for stack samples shall comply with 40 CFR 61 Appendix B, Method 114. An isokinetic sampling probe mounted in the exhaust stack will be used to collect the particulate samples.

9) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections, as required by the Environmental Protection Agency (WAC 246-247-080(9). At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet

10) The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).

11) The department retains the right to conduct its own stack sampling, environmental monitoring, or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing (WAC 246-247-075(10) and (11)).

12) The waste compactor must remain HEPA filtered and exhausted through the main stack. It is only to be used for low-level dry materials, such as gloves, wipes, and step off pad waste as described in the NOC. Compacting usually occurs in the large compartment of the compactor. Take wipes of the small compactor drawer after each compactor cycle. A log of these wipes must be maintained and available for an inspectors review.

13) Approved waste treatment processes used in the HWTU/SAL include pH adjustment, ion exchange, 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, catalytic destruction, and grout encapsulation (cementation) as described in the NOC.

14) Activities of the Radiochemical Processing Analytical Chemistry and Environmental Management groups in the 325 Building are limited to those described in the NOC.

15) The department reserves the right to inspect and audit this unit during operation, including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations (WAC 246-247-080(1)).

16) Equipment and procedures for continuous monitoring shall conform to ANSI N13.1. The specific design must be approved by the department prior to installation. Any deviation from ANSI N13.1 must be approved by the department prior to construction (WAC 246-247-075(2)).

17) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that last more than four hours, it must be reported to the department within 24 hours. Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 1), BARCT (paragraph 2) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in the approval (paragraph 5) (WAC 246-247-080(5)).

18) The additional 325 Building emissions must be as a result of waste treatment activities in the waste compactor in room 43, Hazardous Waste Treatment Unit (HWTU) in rooms 520 and 528, and the Shielded Analytical Laboratory (SAL) in rooms 200, 201, and 203 (Hot Cells) of the 325 Building as described in the NOC.

19) All measured or calculated emissions must be reported annually (WAC 246-247-080(3)).

20) All reports and records must be kept and reported according to 40 CFR 61, Subpart H (WAC 246-247-080(2)).

21) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13) and WAC 246-247-075(6)). The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in, or equivalent to, those listed in the above cited regulation.

22) U.S. DOE shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5)).

23) This approval, with its Conditions and Limitations, constitutes and amendment to the Department's Radioactive Air Emission License. This amendment must be included in the next revision of the Hanford Air Operating Permit (WAC 246-247-060(1)(e) and (2)).

24) The facility must be able to demonstrate that the workers associated with this emission unit are adequately trained in the use an maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures (WAC 246-247-075(12)).

Project Title	Approval No.	Date Approved	NOC_ID
Modification to the annual possession quantity of the 325 Building Special Nuclear Materials Disposition and Low-Level Waste Vitrification Research Programs (Pu-238)	AIR 98-807	8/20/1998	294

Conditions (state only enforceable)

1) Potential-to-emit abated (total effective dose equivalent to the maximally exposed individual): 5.85 E-03 mrem/yr

2) All other Conditions and Limitations of NOC letter # AIR 96-604 will stay the same and be adhered to.

Project Title	Approval No.	Date Approved	NOC_ID
Transfer Strontium-90 from the 324 Building to the 325 Building	Shortform Approval	1/19/1998	253

Conditions (state only enforceable)

1) Two stages of testable HEPA filters are currently installed on the building exhaust stack (EP-325-01-S).

2) Abated dose is 4.69E-03 mrem/year

3) Unabated dose is 4.69E+01 mrem/year

4) Monitoring is continuous. The sampling system is designed and constructed in conformance with ANSI N 13.1(1969). Samples are analyzed for gross alpha and gross beta, and specific radionuclides, including 90Sr.

5) Storage at the 325 Bldg approved only; open canisters and processing will require a new NOC

Project Title	Approval No.	Date Approved	NOC_ID
Applied Chemistry, 325 Building LLW Vitrification Research Program	AIR 96-604	6/7/1996	159

Conditions (state only enforceable)

1) Control Technology: 2 - high efficiency particulate air filters (2 in series), 4 - fans(3 in parallel, 1 backup)
2) Potential-to-emit abated (total effective dose equivalent to the maximally exposed individual): 4.0 E-04 mrem/yr
3) Stack Measurement: Continuous measurement

Project Title	Approval No.	Date Approved	NOC_ID
Removal of 3rd Stage HEPA Filter, 325 Building	RTAM	11/14/1995	127

Conditions (state only enforceable)

1) Control Technology: 2 - high efficiency particulate air filters (2 in series), 4 fans (3 in parallel, 1 backup).

300 EP-327-01-S

EP-327-01-S
327 BUILDING
Emission Unit ID: 407
FFCA Status: In Compliance.

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
Remaining areas of Building 327	Fan	1	2 in parallel (machine shop is power ventilated with a single fan to the main flow path of the remaining areas of building 327.)
Remaining areas of Building 327	HEPA	1	Single stage
Rm. 15 Hood and Cells	Fan	1	2 in parallel, one standby. Serves Rm. 15 and Cells
Rm. 15 Hood and Cells	Prefilter	1	Cells only
Rm. 15 Hood and Cells	HEPA	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4) & WAC 246-247-75(2)	Method 2 appendix A Method 114 appendix B 61.93(b)(2)(ii) ANSI N13.1	All radionuclides which could contribute 10% of the potential EDE.	Continuous

300 EP-331-01-V

EP-331-01-V
331 LIFE SCI LAB
Emission Unit ID: 412
FFCA Status: In Compliance.

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
Room 302	Fan	2	in parallel (fan common to glove box and hoods)
Rooms 101-107 fume hood/chambers	HEPA	1	
Rooms 101-107 glove boxes	HEPA	2	in series
3rd floor fume hood	HEPA	1	
Inhalation suite (glove boxes& fume hoods)	HEPA	2	in series
Room 302	HEPA	1	
Third Floor Change Rm	HEPA	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4) & WAC 246-247-075(2)	Appendix B, Method 114(3)	All radionuclides which could contribute 10% of the potential EDE.	Continuous

This Emission Unit has 2 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Life Sciences Laboratory I (Building 331) Modifications	AIR 98-108	1/21/1998	254

Conditions (state only enforceable)

1) Emission unit EP 331-01-V must use an isokinetic sampling probe with design specifications meeting ANSI N 13.1 (1969).

2) Stack emissions will be sampled for particulate matter containing alpha and beta activity using methods prescribed within Environmental Protection Agency Methods A-4 and B-4, and analyzed for gross alpha and gross beta activity, and specific radionuclides, as required.

Project Title	Approval No.	Date Approved	NOC_ID
HEPA Filter Bank Removal in the331 Building	RTAM	3/12/1996	143

300 P-340NTEX-001

340-NT-EX
340 BUILDING
Emission Unit ID: 423
FFCA Status: In Compliance.

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Moisture separator	1	Serves the vessel off-gas portion of the treatment system
	Fan	2	In parallel, (only one fan operates at a time, one is a backup)
	HEPA	2	In series. 3 parallel flow paths, (Minimum of 2 active flow paths providing 1 stage prefiltration and 2 stages HEPA filtration)
	Prefilter	1	3 parallel flow paths, (Minimum of 2 active flow paths providing 1 stage prefiltration and 2 stages HEPA filtration)

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4) & WAC 246-247-75(2)	Method 2 appendix A Method 114 appendix B 61.93(b)(2)(ii) ANSI N13.1	All radionuclides which could contribute 10% of the potential EDE.	Continuous

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
340-A Building Tank Sludge Cleanout	AIR 97-604	6/19/1997	228

Conditions (state only enforceable)

1) Only one tank solids removal campaign shall be performed during any annual period, which consists of the removal of all sludge in the subject tanks.

2) The ventilation system consists of 3 parallel flow paths. A minimum of two active flow paths is required each path shall include a minimum of one prefilter, two HEPA filters in series, and two exhaust fans (one of which will be a backup fan)

3) The total abated offsite dose from the 340-A Building Tank Sludge Cleanout activities shall not exceed 3.05E-07 mrem/year.

300 EP-3720-01-S

EP-3720-01-S
3720 BUILDING
Emission Unit ID: 419
FFCA Status: In Compliance.

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	2	1 operational, 1 backup
	HEPA	2	2 stages of HEPAs, two in parallel

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4) & WAC 246-247-75(2)	Method 2 appendix A Method 114 appendix B 61.93(b)(2)(ii) ANSI N13.1	All radionuclides which could contribute 10% of the potential EDE.	Continuous

Table 1.2 Requirements for minor point sources

100K 100KR-1706KE-001
1706KE
1706-KE Lab
Emission Unit ID: 168

Abatement Technology (state only enforceable)
Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	Intermittent operation
	HEPA	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

200 W-PORTEX 005
200 Area Interim Storage Area (ISA)
200 diffuse/fugitive emissions
Emission Unit ID: 454

Abatement Technology (state only enforceable)

Applicable Requirements:
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology	Required Number of Units	Additional Description/Conditions
	[WAC 246-247-010(4)] [WAC 246-247-040(4)]	[WAC 246-247-010(4)] [WAC 246-247-060(5)]	[WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure	Radionuclides Requiring Measurement	Sampling Frequency
	[WAC 246-247-040(5)] [WAC 173--401-615(1)]	[WAC 173-401-615(1)]	[WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3)			Annual

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Smear Survey

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
200 Area Interim Storage Area (ISA)	AIR 98-503	5/20/1998	272

Conditions (state only enforceable)

1) The NOC constitutes a contract between the department and the facility. Any changes must be approved by the department.

2) The department reserves the right at any time to require the licensee to provide for split or collocated sampling of this emission unit (WAC 246-247-075(10).

3) All conditions and limitations must be proceduralized prior to the implementation of this NOC.

4) Any deviation from the description of the modification of new construction, without approval of the department, may result in enforcement action under WAC 246-247-100.

5) Any deviation from required or recommended monitoring standards must be approved by the department.

6) The department reserves the right to conduct an environmental surveillance program around this emission unit and to require the facility to conduct or modify its own environmental monitoring program (WAC 246-247-075(9).

7) This project must be included in the next revision of the Air Operating Permit, if active at that time (WAC 246-247-060(1)(e).

8) There are no preoperational tests planned for this unit, so the requirement for notification at least seven days prior to such testing under WAC 246-247-060(4) will not apply.

200 W-PORTEX 028

241-TX-154 Diversion Box
All Plants
Emission Unit ID: 492

Abatement Technology (state only enforceable)

Applicable Requirements:
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology	Required Number of Units	Additional Description/Conditions
	[WAC 246-247-010(4)] [WAC 246-247-040(4)]	[WAC 246-247-010(4)] [WAC 246-247-060(5)]	[WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure	Radionuclides Requiring Measurement	Sampling Frequency
	[WAC 246-247-040(5)] [WAC 173--401-615(1)]	[WAC 173-401-615(1)]	[WAC 246-247-075(1)] [WAC 173-401-615(1)]

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Tank Farm 241-TX-154 Diversion Box	AIR 99-1011	10/29/1999	408

Conditions (state only enforceable)

1) The facility shall make requested documents available in a timely manner for review (WAC 246-247-080(10)).

2) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13) and WAC 246-247-075(6)). The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in the above cited regulation.

3) The facility must be able to demonstrate that workers associated with this emission unit are adequately trained in the use and maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures (WAC 246-247-075(12)).

4) Periodic confirmatory emission monitoring shall be verified using the following two methods: (1) Non destructive analysis to be performed at the end of the calendar year, and log is to be maintained with a record of the exhauster's activities for the pit work. This log shall include information as to location, start and stop time and date, total of hours of operation with purpose specified. Additionally, the ductwork, seams and potential release locations on the portable exhauster shall be smeared at the end of each day to demonstrate that no contamination is escaping. The results of this shall be entered as part of the exhauster's record log.

In the event that the exhauster is used on different emission units, the Department of Health reserves the right to request an nondestructive analysis/assay (NDA) after each exhauster job assignment (WAC 246-247-075(3)).

5) The department retains the right to conduct its own stack sampling, environmental monitoring, or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing (WAC 246-247-075(10) and (11)).

6) The facility shall notify the department at least seven days prior to any planned preoperational testing of the

emission unit's emission control, monitoring, or containment systems. The department reserves the right to observe such tests (WAC 246-247-060(4)).

7) U.S. DOE shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5)).

8) This approval, with its conditions and Limitations, must be included in the next revision of the Hanford Air Operating Permit (WAC 246-247-060(1)(e) and (2)(c)).

9) These Conditions and Limitations must be proceduralized prior to starting the activities described in the Notice of Construction.

10) (Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least five years (WAC 246-247-080(8)).

11) The required controls are as follows:
Abatement Control Technology:
1. The portable exhauster providing active ventilation within the bullpen shall consist of a pre-filter, one HEPA filter, and a blower that draws air through the filters and pushes air out an exhaust port.

As Low As Reasonably Achievable Control Technology:
1. Radiation control technicians shall inspect and approve required containment.
2. Pit work shall shut down (or not initiated) when sustained wind speeds exceed 25 miles per hour or are predicted to do so by Hanford Meteorological Station personnel for the period of planned work.
3. The opening of the bullpen shall not exceed an area one-third the size of a fully opened roof.
4. Affected transfer lines shall be flushed with cover blocks in place.
5. Jumpers or other instrumentation/equipment removed from the pit shall be drained of free liquid and decontaminated or contained before removal. The outer-most surface shall not exceed 1,000 disintegrations per minute/100 square centimeters beta/gamma and 20 disintegrations per minute/100 square centimeters beta/gamma and 20 disintegrations per minute/100 square centimeters alpha before removal from the bullpen.
6. Only blocks necessary to perform intended work shall be removed. At the end of the work shift, the cover blocks shall be re-installed unless waste in the pit is contained in transfer lines or other pit equipment.
7. Active ventilation of the bullpen shall be used after removal of the cover blocks and during work activities to minimize radiological releases. Air inflow shall be achieved by using a 1,000 cubic feet per minute exhauster.
8. The inlet and outlet of the ventilation system will be sealed with plastic when the ventilation system is not in operation.

12) All reports and records must be kept and reported according to 40 CFR 61, Subpart H (WAC 246-247-080(2)).

13) The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).

14) If the department finds that the emission unit described in this NOC is not in compliance with the standards in WAC 246-247-040 during construction (as described in this NOC or during operation) it reserves the right to require modifications to bring it into compliance (WAC 246-247-060(2)(d)).

15) The department reserves the right to inspect and audit this unit during construction and operation, including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations (WAC 246-247-080(1)).

16) (All measured or calculated emissions must be reported annually (WAC 246-247-080(3)).

17) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that lasts more than four hours, it must be reported to the department within 24 hours. Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in this approval (paragraph 5).

18) When this project is completed, via a report of closure, or operations cease, the facility shall notify the department, including whether or not any potential for airborne release occur (WAC 246-247-080(6)).

19) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections, as required by EPA (WAC 246-247-080(9)). At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the

inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance to have reasonable time to meet the requirements.

20) The approved process is limited to that listed below as documented in the NOC. No other processes are approved. Department inspectors will verify this condition.
Removal and/or installation of cover blocks:
Inspections:
Installation, disconnection, changing, leak testing, and cutting up jumpers/blanks or other pit equipment:
Repairing/replacing valves, jumpers, pumps, leak detectors, or other instrumentation/equipment:
Decontamination activities:
Applying fixative with cover blocks on or off:
Cleaning drains and checking the flow of drains:
Unplug transfer lines:

21) The radionuclides and annual possession quantities are limited to those stated in the following table.

22) To assure the intent of the ALARACT standard is sustained, and the adequacy of the design for the control technology equipment is maintained, continuous personnel coverage shall be employed while this equipment is in

23) This NOC is valid until July 14, 2004.

24) The total annual possession quantity is limited to 3.21E+03 curies.

25) The abated dose limit for this NOC shall not exceed 1.53E-02 mrem/yr to the MEI.

200 W-PORTEX 032
244-CR-VAULT activities
All Plants
Emission Unit ID: 497

Abatement Technology (state only enforceable)

Applicable Requirements:
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology	Required Number of Units	Additional Description/Conditions
	[WAC 246-247-010(4)] [WAC 246-247-040(4)]	[WAC 246-247-010(4)] [WAC 246-247-060(5)]	[WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure	Radionuclides Requiring Measurement	Sampling Frequency
	[WAC 246-247-040(5)] [WAC 173--401-615(1)]	[WAC 173-401-615(1)]	[WAC 246-247-075(1)] [WAC 173-401-615(1)]

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
244-CR Vault work activities	AIR 00-206	2/15/2000	424

Conditions (state only enforceable)

1) This approval, with its Conditions and Limitations, must be included in the next revision of the Hanford Air Operating Permit (WAC 246-247-060(1)(e) and (2)(c)) and will at that time, constitutes a revision of the Radioactive Air Emissions License.

2) The department reserves the right to inspect and audit this unit during construction and operation, including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations (WAC 246-247-080 (1)).

3) The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).

4) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections, as required by EPA (WAC 246-247-080(9)). At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet the requirements.

5) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that lasts more than four hours, it must be reported to the department within 24 hours. Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in this approval

6) When this project is completed, or operations cease, the facility shall notify the department and indicate whether or not any potential for airborne release occurred (WAC 246-247-080(6)).

7) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least 5 years (WAC 246-247-080 (8)).

8) All measured or calculated emissions must be reported annually (WAC 246-247-080(3)).

9) The facility shall make requested documents available in a timely manner for review (WAC 246-247-080(10)).

10) The facility must maintain a log in an approved format for this activity or emission unit (WAC 246-247-080(7)).

11) All reports and records must be kept and reported according to 40 CFR 61, Subpart H. (WAC 246-247-080(2)).

12) The required controls are as described: Pre-job and post-job radiation surveys by radiation protection technicians, radiation work permits, pit work is shut down or not initiated if wind speeds exceed 25mph, fixatives could be applied inside the pit with cover blocks on or off or accessible portions of the pit decontaminated to less than 100,000 dpm beta/gamma and 2000 dpm for alpha, when cover blocks are removed a handrail for fall protection is installed. The handrail must be draped in plastic forming a contamination barrier; affected transfer lines could be flushed with cover blocks in place with water before removing jumpers. Radiation control technicians monitor the affected work area while jumpers are being removed from nozzles. Additional controls will be used for any pit activity that has a potential for exposing additional waste to the pit environment, which would otherwise remain contained in transfer lines or their pit equipment. Primary activities, which would require these additional controls include jumper change outs, valve and nozzle replacements and cutting up contaminated equipment. The additional controls are: an open top bullpit designed to minimize the top opening, if the bullpen is to be left unattended at any time a temporary cover is placed over the pit or the cover blocks will be reinstalled. Active ventilation of the bullpen will be used after removal of the cover blocks during work activities to minimize radiological releases. Air inflow will be achieved by using a 1,000 cfm exhauster.

13) The facility must be able to demonstrate that the workers associated with this emission unit are adequately trained in the use and maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures (WAC 246-247-075(12)).

14) The abated dose limit for this NOC shall not exceed 5.7E-2 mrem/yr. to the MEI.

15) The department retains the right to conduct its own stack sampling, environmental monitoring or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing (WAC 246-247-075(10) and (11)).

16) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13) and WAC 246-247-075(6)). The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in the above cited regulation.

17) Periodic confirmatory samples consisting of contamination surveys during pit activities will be taken. Air samples will be taken at all times the bullpen is occupied and the exhauster is operating. Pre-job and post-job surveys will also be performed to verify containment.

In the event that the exhauster is used on different emission units, the Department of Health reserves the right to request an nondestructive analysis / assay (NDA) after each exhauster job assignment (WAC 246-247-075(3)).

18) This NOC approval includes the following activities which might be performed in the diversion box of the 244-CR-Vault; remove or install cover blocks, perform inspections, install, disconnect, change, and cut up jumpers/blanks or other pit equipment, repair/replace valves, jumpers, pumps, filters, leak detectors, or other instrumentation/equipment. Perform decontamination activities, apply fixative with cover blocks on or off, clear drains and check flow of drains, unplug transfer lines. Miscellaneous activities that will not increase emissions above the sum of a conservative concentration of particulate radionuclides potentially airborne due to the splashing of drain back to the pit plus the radionuclides partitioned from the remaining 10 gallons of liquid and solid waste after 490 gallons drains to the vault. The partitioning fraction used for the splashing of drain back is 8.0 E-05. This value is to be used to account for the fact that the drain back height into the vault will occur from less than three meters. A release fraction of 1.0E-03 was used for the 10 gallons of liquid remaining in the vault.

19) If the department finds that the emission unit described in this NOC is not in compliance with the standards in WAC 246-247-040 during construction or during operation, it reserves the right to require modifications to bring it into compliance (WAC 246-247-060(2)(d)).

20) These Conditions and Limitations must be proceduralized prior to starting the activities described in the Notice of

Construction.

21) U.S. DOE shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5)).

22) This NOC is valid through fiscal year 2005.

23) The facility shall notify the department at least seven days prior to any planned preoperational testing of the emission unit's emissions control, monitoring or containment systems. The department reserves the right to observe such tests (WAC 246-247-060(4)).

24) The possession quantity is limited 7.45E+3 curies.

200 P-276S141 001

Hexone Tanks
All Plants
Emission Unit ID: 482

Abatement Technology (state only enforceable)

Applicable Requirements:BARCT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology	Required Number of Units	Additional Description/Conditions
	[WAC 246-247-010(4)] [WAC 246-247-040(4)]	[WAC 246-247-010(4)] [WAC 246-247-060(5)]	[WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	HEPA		HEPA filtration

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure	Radionuclides Requiring Measurement	Sampling Frequency
	[WAC 246-247-040(5)] [WAC 173--401-615(1)]	[WAC 173-401-615(1)]	[WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3)			During characterization activities

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Existing near-facility monitoring stations.

200 W-PORTEX 011

Permacon Unit
All Plants
Emission Unit ID: 461

Abatement Technology (state only enforceable)

Applicable Requirements:
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology	Required Number of Units	Additional Description/Conditions
	[WAC 246-247-010(4)] [WAC 246-247-040(4)]	[WAC 246-247-010(4)] [WAC 246-247-060(5)]	[WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure	Radionuclides Requiring Measurement	Sampling Frequency
	[WAC 246-247-040(5)] [WAC 173--401-615(1)]	[WAC 173-401-615(1)]	[WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3)	Appendix B, Method 114(3)		Quarterly frequency revisited after a year for changes to annual.

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Quarterly for 2 weeks of operations

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Modular Containment (PermaCon) for Sampling Activities at the Central Waste Complex	RTAM	8/18/1998	292

Conditions (state only enforceable)

1) Emissions shall be vented through a 2,000 cfm or less testable HEPA filter exhauster.
2) A fixed head sampler, located inside the PermaCon near the exhaust stack, shall be used at least quarterly for a minimum of two weeks of operations to obtain samples of the airspace within the PermaCon unit during operation.

200 W-PORTEX-023

Portable Exhauster
All Plants
Emission Unit ID: 479

Abatement Technology (state only enforceable)

Applicable Requirements:
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	Intermittent operation
	HEPA	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3)	Appendix B, Method 114(3)	GROSS ALPHA/BETA	One week per quarter during operation

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Collect air samples on particulate air filters

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
219-S Waste Handling Facility Secondary Containment Upgrade (Project W-178)	NOC revision approval	1/20/1999	336

Conditions (state only enforceable)

1) The control equipment shall include an enclosure with an (intermittently operated) exhauster with HEPA filtration.

2) Periodic confirmatory measurement shall include sample collection on particulate air filters for a period of one week per quarter. Sample collection shall be performed during exhauster operation and analyzed for gross alpha/beta activity.

200 W-PORTEX 026

Portable Exhauster on Pit 244-TX DCRT
All Plants
Emission Unit ID: 490

Abatement Technology (state only enforceable)

Applicable Requirements:BARCT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology	Required Number of Units	Additional Description/Conditions
	[WAC 246-247-010(4)] [WAC 246-247-040(4)]	[WAC 246-247-010(4)] [WAC 246-247-060(5)]	[WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure	Radionuclides Requiring Measurement	Sampling Frequency
	[WAC 246-247-040(5)] [WAC 173--401-615(1)]	[WAC 173-401-615(1)]	[WAC 246-247-075(1)] [WAC 173-401-615(1)]

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Tank Farm Waste Transfer Pit 244-TX Double Contained Receiver Tank (DCRT). Corrects Letter AIR 99-805	AIR 99-1002	10/6/1999	403

Conditions (state only enforceable)

1) U.S. DOE shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5)).

2) These Conditions and Limitations must be proceduralized prior to starting the activities described in the Notice of Construction.

3) This approval, with its Conditions and Limitations, must be included in the next revision of the Hanford Air Operating Permit (WAC 246-247-060(1)(e) and (2)(c)), and will at that time, constitutes a revision of the Radiation Air Emissions License.

4) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections, as required by EPA (WAC 246-247-080(9)). At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet the requirements.

5) The facility must be able to demonstrate that the workers associated with this emission unit are adequately trained in the use and maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures (WAC 246-247-075(12)).

6) The required controls are as follows:

Abatement control technology:
The portable exhauster providing active ventilation within the bullpen shall consist of a pre-filter, one HEPA filter, and a blower that draws air through the filters and pushes air out an exhaust port.

Alaract:
Radiation control technicians shall inspect and approve required containment. Pit work shall be shut down (or not be initiated) when sustained wind speeds exceed 25 miles per hour or are predicted to do so by Hanford Meteorological Station personnel for the period of planned pit work. The opening of an open top bullpen shall not exceed an area one-third the size of a fully opened roof.
Affected transfer lines shall be flushed with cover blocks in place.
Jumpers or other instrumentation/equipment removed from the pit shall be drained of free liquid and decontaminated or contained before removal. The outer-most surface shall not exceed 1,000 disintegrations per minute/100 square centimeters beta/gamma and 20 disintegrations per minute/100 square centimeters alpha before removal from the bullpen.
Only blocks necessary to perform intended work shall be removed. At the end of the work shift, the cover blocks shall be re-installed unless waste in the pit is contained in transfer lines or other pit equipment.
Active ventilation of the bullpen shall be used after removal of the cover blocks and during work activities to minimize radiological releases. Air inflow shall be achieved by using a 1,000 cubic feet per minute exhauster.
The inlet and outlet of the ventilation system will be sealed with plastic when the ventilation system is not in operation.

7) The facility shall make requested documents available in a timely manner for review (WAC 246-247-080(10).

8) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that last more than four hours, it must be reported to the department within 24 hours. Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in this approval

9) The abated dose limit for approved pit activities shall not exceed 0.0236 mrem/yr to the MEI.

10) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13) and WAC 246-247-075(6)). The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in the above cited regulation.

11) The approved process for pit activities are limited to those listed below. No other processes are approved. Department inspectors will verify this condition.

Removal and/or installation of cover blocks:
Inspections:
Installation, disconnection, changing, leak testing, and cutting up jumpers/banks or other pit equipment:
Repairing/replacing valves, jumpers, pumps, leak detectors, or other instrumentation/Equipment:
Decontamination activities:
Applying fixative with cover blocks on or off:
Clearing drains and checking the flow of drains:
Unplug Transfer Lines:

12) The department reserves the right to inspect and audit this unit during construction and operation, including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations (WAC 246-247-080 (1)).

13) The radionuclides and annual possession quantities are limited to those stated in the following table:
SUMMARY OF OVERALL EMISSIONS FOR 244-TX PIT WORK contained in the NOC

14) Periodic confirmatory emission monitoring shall be verified using the following two methods. (1) Non destructive analysis to be performed at the end of the calendar year, and log is to be maintained with a record of the exhauster's activities for the pit work. This log shall include information as to location, start and stop time and date, total of hours of operation with purpose specified. Additionally, the ductwork, seams and potential release locations on the portable exhauster shall be smeared at the end of each day to demonstrate that no contamination is escaping. The results of this shall be entered as part of the exhauster's record log.

In the event that the exhauster is used on different emission units, the Department of Health reserves the right to request an nondestructive analysis / assay (NDA) after each exhauster job assignment (WAC 246-247-075(3)).

15) This NOC is valid until July 14, 2004.

16) If the department finds that the emission unit described in this NOC is not in compliance with the standards in WAC 246-247-040 during construction or during operation. The department reserves the right to require modifications to bring it into compliance (WAC 246-247-060(2)(d)).

17) The facility shall notify the department at least seven days prior to any planned preoperational testing of the emission unit's emissions control, monitoring or containment systems. The department reserves the right to observe such tests (WAC 246-247-060(4)).

18) To assure the intent of the ALARACT standard is sustained, and the adequacy of the design for the control technology equipment is maintained, continuous personnel coverage shall be employed while this equipment is in

19) The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).

20) All reports and records must be kept and reported according to 40 CFR 61, Subpart H. (WAC 246-247-080(2)).

21) All measured or calculated emissions must be reported annually (WAC 246-247-080(3)).

22) When this project is completed, or operations cease, the facility shall notify the department and indicate whether or not any potential for airborne release occur (WAC 246-247-080(6)).

23) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least 5 years (WAC 246-247-080 (8)).

24) The department retains the right to conduct its own stack sampling, environmental monitoring or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing (WAC 246-247-075(10) and (11)).

200 W-PORTEX 029

Tank Farm 241-S-151 Diversion Box
All Plants
Emission Unit ID: 493

Abatement Technology (state only enforceable)

Applicable Requirements:
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology	Required Number of Units	Additional Description/Conditions
	[WAC 246-247-010(4)] [WAC 246-247-040(4)]	[WAC 246-247-010(4)] [WAC 246-247-060(5)]	[WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure	Radionuclides Requiring Measurement	Sampling Frequency
	[WAC 246-247-040(5)] [WAC 173--401-615(1)]	[WAC 173-401-615(1)]	[WAC 246-247-075(1)] [WAC 173-401-615(1)]

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Tank Farm 241-S-151 Diversion Box	AIR 99-1010	10/28/1999	407

Conditions (state only enforceable)

1) The department retains the right to conduct its own stack sampling, environmental monitoring, or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing (WAC 246-247-075(10) and (11)).

2) All reports and records must be kept and reported according to 40 CFR 61, Subpart H (WAC 246-247-080(2)).

3) U.S. DOE shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5)).

4) The radionuclides and annual possession quantities are limited to those stated in the following table.

5) These Conditions and Limitations must be proceduralized prior to starting the activities described in the Notice of Construction.

6) This approval, with its conditions and Limitations, must be included in the next revision of the Hanford Air Operating Permit (WAC 246-247-060(1)(e) and (2)(c)).

7) If the department finds that the emission unit described in this NOC is not in compliance with the standards in WAC 246-247-040 during construction (as described in this NOC or during operation) it reserves the right to require modifications to bring it into compliance (WAC 246-247-060(2)(d)).

8) The facility shall notify the department at least seven days prior to any planned preoperational testing of the emission unit's emission control, monitoring, or containment systems. The department reserves the right to observe such tests (WAC 246-247-060(4)).

9) Periodic confirmatory emission monitoring shall be verified using the following two methods: (1) Non destructive analysis to be performed at the end of the calendar year, and log is to be maintained with a record of the exhauster's activities for the pit work. This log shall include information as to location, start and stop time and date, total of hours of operation with purpose specified. Additionally, the ductwork, seams and potential release locations on the portable exhauster shall be smeared at the end of each day to demonstrate that no contamination is escaping. The

results of this shall be entered as part of the exhauster's record log. In the event that the exhauster is used on different emission units, the Department of Health reserves the right to request an nondestructive analysis/assay (NDA) after each exhauster job assignment (WAC 246-247-075(3)).

10) The facility must be able to demonstrate that workers associated with this emission unit are adequately trained in the use and maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures (WAC 246-247-075(12)).

11) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13) and WAC 246-247-075(6)). The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in the above cited regulation.

12) The department reserves the right to inspect and audit this unit during construction and operation, including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations (WAC 246-247-080(1)).

13) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections, as required by EPA (WAC 246-247-080(9)). At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance to have reasonable time to meet the requirements.

14) To assure the intent of the ALARACT standard is sustained, and the adequacy of the design for the control technology equipment is maintained, continuous personnel coverage shall be employed while this equipment is in

15) When this project is completed, via a report of closure, or operations cease, the facility shall notify the department, including whether or not any potential for airborne release occur (WAC 246-247-080(6)).

16) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least five years (WAC 246-247-080(8)).

17)The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).

18) The facility shall make requested documents available in a timely manner for review (WAC 246-247-080(10)).

19) The approved process is limited to that listed below as documented in the NOC. No other processes are approved. Department inspectors will verify this condition.
Removal and/or installation of cover blocks:
Inspections:
Installation, disconnection, changing, leak testing, and cutting up jumpers/blanks or other pit equipment:
Repairing/replacing valves, jumpers, pumps, leak detectors, or other instrumentation/equipment:
Decontamination activities:
Applying fixative with cover blocks on or off:
Cleaning drains and checking the flow of drains:
Unplug transfer lines:

20) The required controls are as follows:
Abatement Control Technology:
1. The portable exhauster providing active ventilation within the bullpen shall consist of a pre-filter, one HEPA filter, and a blower that draws air through the filters and pushes air out an exhaust port.

As Low As Reasonably Achievable Control Technology:
1. Radiation control technicians shall inspect and approve required containment.
2. Pit work shall shut down (or not initiated) when sustained wind speeds exceed 25 miles per hour or are predicted to do so by Hanford Meteorological Station personnel for the period of planned work.
3. The opening of the bullpen shall not exceed an area one-third the size of a fully opened roof.
4. Affected transfer lines shall be flushed with cover blocks in place.
5. Jumpers or other instrumentation/equipment removed from the pit shall be drained of free liquid and decontaminated or contained before removal. The outer-most surface shall not exceed 1,000 disintegrations per

minute/100 square centimeters beta/gamma and 20 disintegrations per minute/100 square centimeters beta/gamma and 20 disintegrations per minute/100 square centimeters alpha before removal from the bullpen.
6. Only blocks necessary to perform intended work shall be removed. At the end of the work shift, the cover blocks shall be re-installed unless waste in the pit is contained in transfer lines or other pit equipment.
7. Active ventilation of the bullpen shall be used after removal of the cover blocks and during work activities to minimize radiological releases. Air inflow shall be achieved by using a 1,000 cubic feet per minute exhauster.
8. The inlet and outlet of the ventilation system will be sealed with plastic when the ventilation system is not in operation.

21) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that lasts more than four hours, it must be reported to the department within 24 hours. Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in this approval (paragraph 5).

22) The total annual possession quantity is limited to 3.21E+03 curies.

23) (13) All measured or calculated emissions must be reported annually (WAC 246-247-080(3)).

24) The abated dose limit for this NOC shall not exceed 1.53E-02 mrem/yr to the MEI.

25) (24) This NOC is valid until July 14, 2004.

200E P-204AR-001

296-A-26
204 AR Building
Emission Unit ID: 96

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	De-entrainer	1	
	Fan	1	
	HEPA	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

200E P-296P031-001

296-P-31
209 E CRITICALITY LAB
Emission Unit ID: 210

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	Parallel paths merge and pass through fan
	HEPA	8	2 banks of 4 HEPAs each
	Prefilter	4	1 bank

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

200E P-296AN-001

296-A-29
241-AN TANK FARM
Emission Unit ID: 227

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	2 parallel flow paths, 1 in operation at a
	HEPA	2	2 parallel flow paths with 2 HEPAs in series
	Prefilter	1	2 parallel flow paths
	Heater	1	2 parallel flow paths
	De-entrainer	1	2 parallel flow paths

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

This Emission Unit has 2 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Installation and Operation of a Waste Retrieval System in Tanks 241-AN-101,102,103, 104, 105, and 107.	AIR 00-701	7/9/2000	449

Conditions (state only enforceable)

1) All Conditions and Limitations must be proceduralized prior to the implementation of this Notice of Construction (NOC).

2) This approval to commence construction is valid for only two years from the date of approval. If construction is not commenced within two years of approval, the approval is void.

3) Any deviation from the description of the modification or new construction, without approval of the department, may result in enforcement action under WAC 246-247-100.

4) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13) and WAC 246-247-(6)). The emission data, including periodic confirmatory monitoring, must be reported in the Hanford Site Annual Air Emission Report.

5) No radionuclides other than those listed in the NOC may be emitted in any detectable concentrations (WAC 246-247-110(10)(11)(12)).

6) The department reserves the right at any time to require the licensee to provide for split or co-located sampling of

this project (WAC 246-247-075(10)).

7) The department reserves the right to conduct an environmental surveillance program around this emission unit and to require the facility to conduct or modify its own environmental monitoring program (WAC 246-247-075(9)).

8) The facility shall notify the department at least seven days prior to any pre-operational testing (cold or hot) of the monitoring or containment system involved in this project. The department reserves the right to observe any such testing (WAC 246-247-060(4)). Notification may be by phone, electronic mail or written correspondence.

9) This project must be included in the next revision of the Air Operating Permit if active at the time (WAC 246-247-060(1)(e)).

10) The NOC constitutes a contract between the department and the facility. Any changes must be approved by the department.

11) Any deviation from required or recommended monitoring standards must be approved by the department. The NOC makes a commitment on what standards (required or recommended) will be followed. At that point, the commitment is binding.

12) All records required by WAC 246-247 must be retrievable within 24 hours of the request, and must be stored onsite. All records shall be maintained for a minimum of five years (WAC 246-247-080(8)).

13) An ALARACT demonstration may be required at any time by the department (WAC 246-247-130).

14) Nothing may be inferred that is not specifically described in this NOC (WAC 246-247-060 and 110).

15) When this project is completed, and ceases to be an emission unit, a report of closure must be filled with the department (WAC 246-247-080(6)).

16) The project shall be fully accessible to department inspectors (WAC 246-247-080(9)).

17) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards of limitations in the license or that lasts more than four hours, it must be reported to the department within 24 hours. Applicable standards are included in WAC 246-247-040, unit specific emission limits, offsite dose standard, ALARACT or BARCT whichever is applicable, or any limitations included in this approval.

18) The unabated curies will not exceed the values for the radionuclides listed below:
Unabated curies for pipe cuts:
3H, 2.72E-04; 14C, 3.81E-05; 59Ni, 2.21E-06; 60Co, 1.46E-04; 63Ni, 2.20E-04; 79Se, 4.22E-06; 90Sr, 1.07E-01; 90Y, 1.07E-01; 93mNb, 1.49E-05; 93Zr, 2.04E-05; 99Tc, 2.25E-04; 106Ru, 1.08E-08; 113mCd, 1.09E-04; 125Sb, 2.56E-04; 126Sn, 6.39E-06; 129I, 2.12E-06; 134Cs, 4.01E-05; 137Cs, 4.47E-01; 151Sm, 1.49E-02; 152Eu, 7.84E-06; 154Eu, 5.83E-04; 155Eu, 9.11E-04; 226Ra, 1.76E-07; 227Ac, 1.09E-09; 228Ra, 3.95E-04; 229Th, 9.13E-09; 231Pa, 4.80E-09; 232Th, 4.47E-08; 232U, 1.22E-06; 233U, 4.66E-06; 234U, 1.06E-06; 235U, 4.16E-08; 236U, 5.49E-08; 237Np, 5.97E-06; 238Pu, 2.43E-06; 238U, 1.26E-06;
239Pu, 1.75E-06; 240Pu, 3.56E-07; 241Am, 7.03E-04; 241Pu, 2.04E-04; 242Cm, 1.90E-07; 242Pu, 9.57E-10;
243Am, 3.62E-09; 243Cm, 9.34E-07; 244Cm, 2.97E-06.

Unabated Curies for Pit Work/Equipment Installation and Removal:
3H, 2.31E-04; 14C, 3.24E-05; 59Ni, 1.88E-06; 60Co, 1.24E-04; 63Ni, 1.87E-04; 79Se, 3.59E-06; 90Sr, 9.08E-02; 90Y, 9.08E-02; 93mNb, 1.27E-05; 93Zr, 1.74E- 05; 99Tc, 1.92E-04; 106Ru, 9.17E-09; 113mCd, 9.26E-05; 125Sb, 2.18E-04; 126Sn, 5.44E-06; 129I, 1.80E-06; 134Cs, 3.41E-05; 137Cs, 3.80E-01; 151Sm, 1.26E-02; 152Eu, 6.67E-06; 154Eu, 4.96E-04; 155Eu, 7.75E-04; 226Ra, 1.50E-07; 227Ac, 9.26E-10; 228Ra, 3.36E-04; 229Th, 7.77E-09; 231Pa, 4.08E-09;
232Th, 3.80E-08; 232U, 1.04E-06; 233U, 3.96E-06; 234U, 9.01E-07; 235U, 3.54E-08; 236U, 4.67E-08; 237Np, 5.08E-06; 238Pu, 2.06E-06; 238U, 1.07E-06;
239Pu, 1.49E-06; 240Pu, 3.03E-07; 241Am, 5.98E-04; 241Pu, 1.74E-04;
242Cm, 1.62E-07; 242Pu, 8.14E-10; 243Am, 3.08E-09; 243Cm, 7.95E-07;
244Cm, 2.52E-06.

Unabated Curies for Soil Extraction (Guzzler):
90Sr, 1.01E-01; 90Y, 1.01E-01 and 241Am, 4.42 E-03.

Unabated Curies for Soil Extraction (Hand Digging):

90Sr, 2.55E-02; 90Y, 2.55E-02 and 241Am, 1.02 E-03.

19) The TEDE to the MEI from soil excavation by the Guzzler will not exceed 6.96E-02 mrem/year, and will be performed in accordance with the regulated Guzzler approval identified in (98-EAP-037). The APQ shall not exceed 1.15E-01 curies. The annual dose to the MEI and the APQ will be tracked on a WDOH approved log. Periodic confirmatory monitoring for soil excavation will consist of soil contamination surveys.

20) The TEDE to the MEI from pit work including equipment installation and removal will not exceed the calculated annual dose of 2.85E-02 mrem/year. The pit work will be performed in accordance with TWRS ALARACT Demonstration for Pit Access (6) and TWRS ALARACT Demonstration for Pit Work (14). When contamination levels inside the pit exceed those identified in the ALARACT Demonstrations a notification shall be made to the WDOH, identifying the additional controls to be added in accordance with the containment matrix guide from HNF-IP-0842. The APQ shall not exceed 5.77E+02 curies. The annual dose to the MEI and the APQ will be tracked on a WDOH approved log.

21) When a Portable/Temporary Radioactive Air Emission Unit (DOE/RL-96-75), or a HEPA Filtered Vacuum (DOE/RL-97-50) are used all Conditions and Limitations associated with those NOCs must be followed, all required logs must be maintained and emissions reported in the annual air emission report.

22) Total soil excavated during the project will not exceed 6,000 cubic yards, which includes approximately 3,600 cubic yards inside the tank farm.

23) Pipe cuts will be made with a sawzall/tri-tool or equivalent tool. If removable contamination levels are greater than 10,000 dpm/100 cm2 beta-gamma and 200 dpm/100 cm2 alpha, the cuts and welding preparation must be performed inside a glovebag.

24) Work in glovebags will not be performed if sustained wind speeds are greater than 30 miles per hour. This criterion applies to sustained wind speed as determined by the Hanford Meteorological Station

25) Removal of in-tank equipment will be performed in accordance with ALARACT Demonstration 13, TWRS ALARACT Demonstration for Installation, Operation, and Removal of Tank Equipment, and ALARACT 12 TWRS ALARACT Demonstration for Packaging and Transportation of Equipment and Vehicles.

26) To confirm low emissions during equipment removal and installation periodic confirmatory monitoring will be as outlined in ALARACT 13, in addition, periodic confirmatory monitoring for the Flexible Receiver Bagging Process will consist of taking a smear survey of the cut bag. Documentation of the survey will be maintained in a WDOH approved log.

27) Monitoring of diffuse and fugitive emissions from this activity will be accomplished through the use of Ambient Near Field Monitors N984, N972, N999 and N158.

28) The HEPA filter on the endcap of the Long Length Contaminated Equipment Disposal System shall be installed and maintained in accordance with manufactures recommendations.

29) Periodic confirmatory monitoring for use of the regulated guzzler, portable/temporary radioactive air emissions unit or a HEPA filtered vacuum will be as required by the approved NOC for that equipment.

30) Periodic confirmatory monitoring for the 296-A-29 stack will consist of collecting a two-week sample four times a year, and will be representative of operation of the waste retrieval system. In addition, to ensure the potential-to-emit from these proposed activities remain less than 0.1 mrem/year, a non-destructive analysis (NDA) of the 296-A-29 HEPA filters will be performed annually during waste retrieval system operation. A baseline NDA will be performed prior to operation of the waste retrieval system.

31) The annual abated emissions from the 296-A-29 to the MEI, from mixer pump operations shall be 2.06E-5

32) The TEDE to the MEI from transfer pipe cuts will not exceed 3.34E-02 mrem/year. The annual possession quantity (APQ) shall not exceed 6.79E+02 curies. The annual dose to the MEI and APQ will be tracked on a WDOH approved log.

33) The TEDE to the MEI from soil excavation by hand digging will not exceed the calculated annual dose of 1.61E-02 mrem/year, and will be performed in accordance with ALARACT 5TWRS ALARACT Demonstration for Soil Excavation (using hand tools). The APQ shall not exceed 2.65+01 curies. The annual dose to the MEI and the APQ will be tracked on a WDOH approved log.

Project Title	Approval No.	Date Approved	NOC_ID
Installation of a small mixer pump to support routine pH adjustment in Tank 107-AN.	RTAM	6/8/1994	38

Conditions (state only enforceable)

1) All mixing must be in-tank.
2) There shall be no measurable increase in air emissions downstream of the abatement system.
3) The pump must be <75 hp.
4) Installation of a small mixer pump to support routine pH adjustment. No impact on air emissions. Mixing with pump not considered routine.
5) The waste surface must remain quiescent during mixer pump action.
6) Increased PTE makes it a modification, but not a significant one.

200E P-296A030-001

296-A-30
241-AN TANK FARM
Emission Unit ID: 228

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	HEPA	4	1 stack ventilates 2 mirror trains of abatement systems
	Fan	2	1 in each train(one in operation at a time)
	Heater	2	1 in each train
	De-entrainer	2	1 in each train

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

200E P-296P041-001

296-P-41 (inactive)
241-AN TANK FARM
Emission Unit ID: 95

Abatement Technology (state only enforceable)

Applicable Requirements:BARCT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	
	HEPA	2	2 in series
	Prefilter	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

200E P-296AP-001

296-A-40
241-AP TANK FARM
Emission Unit ID: 204

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	2 parallel flow paths, 1 in operation at a
	HEPA	2	2 parallel flow paths with 2 HEPAs in series
	Prefilter	1	2 parallel flow paths
	Heater	1	2 parallel flow paths
	De-entrainer	1	2 parallel flow paths

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Installation and operation of Waste Retrieval System in Tanks 241-AP-102 and 241-AP-104	AIR 00-106	1/24/2000	421

Conditions (state only enforceable)

1) When this project is completed, or operations cease, the facility shall notify the department via a report of closure, including whether or not any potential for airborne releases occurred (WAC 246-247-080(6)).

2) All pit work must be performed in accordance with TWRS ALARACT Demonstrations 6 and 14 for Pit Access and, ALARACT Demonstrations for Pit Work.

3) 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.

4) If smeared surface shows removable contamination levels are equal to or greater than 10,000-dpm/100cm2 beta gamma and 200 dpm/100cm2 alpha it must be cut and prepared for welding inside of a glove bag. Expandable foam and fixatives may be used to fix contamination.

5) All construction approved in this NOC must be completed by 2011.

6) Glove bags will be removed before all welds.

7) An expandable plug must be placed when the riser is opened in order to maintain constant vapor space and material from falling into the tank.

8) Soil excavation is limited to approximately 1,000 cubic yards total of which 600 cubic yards inside the tank farm backfill must be made with original soil or addition of controlled density fill composed of sand, water, and a small amount of cement. Cuts to transfer line must be done in a glove bag.

9) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13) and WAC 246-247-075(6)). The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in, or equivalent to, those listed in the above cited regulation.

10) The department retains the right to conduct its own stack sampling, environmental monitoring or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing (WAC 246-247-075(10)).

11) Equipment removed from the tank is not to be decontaminated in the tank farm. If decontamination is needed it must be performed inside a decontamination tent.

12) Soil excavation emission controls during construction activities must be based on TWRS ALARACT Demonstration 5 for soil excavation (using hand tools), and must follow the radiological controls specified in that ALARACT.

13) Use of equipment and containers for removal, cleaning, decontamination, transport, storage and burial of in-tank components and soil are approved.

14) TEDE to the Maximally Exposed Individual (MEI) unabated dose from all construction activities is 0.042 millirem per year. The abated offsite dose from mixer pump operation is 2.17 E-05 millirem per year.

15) Sample collection flow rate shall be approximately 120?12 cubic feet per hour.

16) All reports and records must be kept and reported according to 40 CFR 61, Subpart H (WAC 246-247-080(2)).

17) Periodic confirmatory measurements for the AP Tank Farms existing 296-A-40 stack shall consist of a two-week sample collected four times a year.

18) 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 NOC approval.

19) The facility shall make requested documents available for timely review (WAC 246-247-080(10)).

20) In tank emission controls for the installation and removal of equipment activities must be based on TWRS ALARACT Demonstration 13 for installation, Operation and Removal of Tank Equipment, and must follow the radiological controls specified in that ALARACT.

21) Flexible bagging process of equipment shall be performed as outlined in the NOC. All equipment shall be double bagged. Disposal Long Length Contained Equipment (LLCE) Disposal System waste packaging process is used after the equipment is bagged. A vent penetration is made at the top of the end cap to the container. The vent must be fitted with or piped to a high-efficiency particulate air filter (HEPA).

22) Performance of miscellaneous activities on support of construction and operation activities will not increase emissions above those estimated in this NOC.

23) The following equipment is approved to be removed for AP-102: mixer pump, transfer pump, and drop-leg jumper.

24) Approval is given to remove jumpers: the central pump pit cover blocks and pump pit cover blocks of these pits.

25) The work approved is limited to the installation and operation of Waste Retrieval System Tanks 241-AP-102 and 241-AP-104. It includes removal of existing equipment, installation of new equipment and construction of an annex to the 241-AP-71 instrument building and construction of a new pump pit in the AP Tank Farm

26) All HEPAs must be individually tested annually (per ASME 510) to a minimum efficiency of 99.95% for the removal of particulate with a median diameter of 0.3 microns.

27) The department reserves the right to inspect and audit this unit during construction and operation, including all activities, equipment, operations, procedures, documents, data, and other records related to compliance with the regulations (WAC 246-247-080(1)).

28) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that

last more than four hours, it must be reported to the department within 24 hours. Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), ALARACT (paragraph 4) or BARCT (paragraph 3), whichever is applicable, or any limitations included in this approval (paragraph 5).

29) U.S. DOE shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5).

30) These conditions and limitations must be proceduralized prior to starting the activities described in the Notice of Construction.

31) If the department finds that the emission unit described in this NOC is not in compliance with the standards in WAC 245-247-040 during construction (as described in this NOC, or during operation) it reserves the right to require modifications to bring it into compliance (WAC 246-247-060-(2)(d)).

32) Removals of about 32 feet of existing eight inch diameter annulus ventilation piping.

33) All measured or calculated emissions must be reported annually (WAC 246-247-080(3)).

34) (Installation of jumpers inside existing AP02A, AP02D, and new AP04A, AP04D, and new pit covers In the AP tank farm pits.

35) The following equipment is approved to be removed for AP- 104: transfer pump, a slurry distributor, and relocation of a drip tube assembly to a different riser (AP04D).

36) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections, as required by EPA (WAC 246-247-080(9)). At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet the requirements.

37) Removal of approximately 15 linear feet of existing two-inch waste line.

38) Construction of a Caustic Supply Dilution System to be constructed outside of the AP tank farm fence as described in the NOC. The Caustic Supply Dilution System must be isolated to prevent any backflow or radioactive material of the caustic feed tank. This system will not handle radioactive waste outside the tank farm.

39) The facility must be able to demonstrate that the workers associated with this emission unit are adequately trained in the use an maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures (WAC 246-247-075(12)).

40) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least 5 years (WAC 246-247-080(8)).

41) Installation of double contained waste transfer piping and diluent piping to and from the process pits and installation of approximately 32 feet of eight-inch diameter annulus ventilation piping. These 1,400 linear feet of piping will be installed about five feet underground.

42) The new equipment to be installed is to include: a 300-horse power motor, spray wash system on each riser, one decant/transfer pump and one closed circuit television system in each tank.

43) The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).

44) This approval, with its Conditions and Limitations, must be included in the next revision of the Hanford Air Operating Permit (WAC 246-247-060(1)(e) and (2)(c)), and will at that time, constitute a revision of the Radioactive Air Emissions License.

200E P-296A041-001
296-A-41
241-AP TANK FARM
Emission Unit ID: 205

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	2 parallel flow paths, minimum of 1 in operation at a time; annulus exhauster
	HEPA	2	2 parallel flow paths with 2 HEPAs in series
	Heater	1	2 parallel flow paths with 1 heater

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

200E P-296AW-001

296-A-27
241-AW TANK FARM
Emission Unit ID: 150

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	2 parallel flow paths, 1 in operation at a
	HEPA	2	2 parallel flow paths with 2 HEPAs in series
	Prefilter	1	2 parallel flow paths
	Heater	1	2 parallel flow paths
	De-entrainer	1	2 parallel flow paths

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

200E P-296A028-001

296-A-28
241-AW TANK FARM
Emission Unit ID: 156

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Heater	2	1 for each train
	De-entrainer	2	1 for each train
	Fan	2	1 for each train
	HEPA	4	In series (1 stack ventilates 2 mirror trains of abatement systems)

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

200E P-296A018-001

296-A-18
241-AY/AZ TANK FARM
Emission Unit ID: 217

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Heater	1	
	Fan	1	Annulus exhauster AY 101, intermittent operations.
	HEPA	2	In series

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

200E P-296A019-001

296-A-19
241-AY/AZ TANK FARM
Emission Unit ID: 218

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Heater	1	
	Fan	1	Annulus exhauster
	HEPA	2	In series

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

200E P-296A020-001

296-A-20
241-AY/AZ TANK FARM
Emission Unit ID: 174

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	Non-Operational	This unit is inactive and will require an NOC to resume operation or a report of closure to deregister.
	HEPA	Non-Operational	This unit is inactive and will require an NOC to resume operation or a report of closure to deregister.

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

200E P-296A043-001

296-A-43
241-AY/AZ TANK FARM
Emission Unit ID: 216

Abatement Technology (state only enforceable)

Applicable Requirements:BARCT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	2 parallel flow paths; only 1 flow path normally operates at a time; either fan can be used with either filter train.
	HEPA	1	2 parallel flow paths; only 1 flow path normally operates at a time
	Prefilter	1	2 parallel flow paths; only 1 flow path normally operates at a time

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3)	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

200E W-PORTEX 022

241-ER-152 Pit
241-ER
Emission Unit ID: 477

Abatement Technology (state only enforceable)

Applicable Requirements:
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology	Required Number of Units	Additional Description/Conditions
	[WAC 246-247-010(4)] [WAC 246-247-040(4)]	[WAC 246-247-010(4)] [WAC 246-247-060(5)]	[WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure	Radionuclides Requiring Measurement	Sampling Frequency
	[WAC 246-247-040(5)] [WAC 173--401-615(1)]	[WAC 173-401-615(1)]	[WAC 246-247-075(1)] [WAC 173-401-615(1)]

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
NDA after each job; or maintain operating logs once per year if not used on different jobs

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Tank Farm Waste Transfer Pits 241-ER-152 and 244-A Lift Station	AIR 99-204	2/12/1999	340

Conditions (state only enforceable)

1) These Conditions and Limitations must be proceduralized prior to starting the activities described in the Notice of Construction.

2) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13) and WAC 246-247-075(6)). The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in, or equivalent to, those listed in the above cited regulation.

3) The emission limits for each pit may not cause an offsite dose to exceed 2.45E-02 mrem/yr to the MEI.

4) If flushing pressure is expected to exceed 50 psig, the department must be notified and assured that proper hoses, couplings and fittings are appropriate for the pressure used. Between 50 and 120 psig, only a notification is required. Anything above 120 psig requires approval from the department.

5) The annual possession quantity is limited to 3.92E+03 curies per pit.

6) The approved process is limited to that described in the NOC and as clarified in the faxed response to department questions and comments dated February 10, 1999. No other processes are approved. Department inspectors will verify this condition.

7) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections, as required by EPA (WAC 246-247-080(9)). At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet the requirements.

8) The required controls are approved as clarified in the February 10, 1999 faxed response to department questions and

comments. The pit must not be left unattended when the pit is open, without some cover (as described in the response to question 11 in the department's comments),

9) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least 5 years (WAC 246-247-080(8)).

10) The department retains the right to conduct its own stack sampling, environmental monitoring or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing (WAC 246-247-075(10) and (11)).

11) The facility must maintain a log in an approved format for this activity or emission unit if the latter monitoring method is used (WAC 246-247-080(7)).

12) All measured or calculated emissions must be reported annually (WAC 246-247-080(3)).

13) When this project is completed, or operations cease, the facility shall notify the department via a report of closure, including whether or not any potential for airborne releases occurred (WAC 246-247-080(6)).

14) U.S. DOE shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5).

15) This approval, with its Conditions and Limitations, constitutes and amendment to the Department's Radioactive Air Emission License. This amendment must be included in the next revision of the Hanford Air Operating Permit (WAC 246-247-060(1)(e) and (2)(c).

16) The department reserves the right to inspect and audit this unit during construction and operation, including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations (WAC 246-247-080(1).

17) The facility shall notify the department at least seven days prior to any planned preoperational testing of the emission unit's emissions control, monitoring or containment systems (if conducted). The department reserves the right to observe such tests (WAC 246-247-060(4).

18) The facility shall make requested documents available in a timely manner for review. (WAC 246-247-080(10)).

19) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that last more than four hours, it must be reported to the department within 24 hours. Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in the approval

20) The facility must be able to demonstrate that the workers associated with this emission unit are adequately trained in the use an maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures (WAC 246-247-075(12).

21) All commitments made in the clarification fax of February 10, 1999 are required.

22) The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).

23) All reports and records must be kept and reported according to 40 CFR 61, Subpart H (WAC 246-247-080(2)).

24) Periodic confirmatory sampling is required. It must consist of non-destructive analysis (NDA) after each work package. An acceptable alternative is the maintenance of logs and NDA once a year, unless the exhauster is used on another emission unit during that year. In the event the exhauster is used on different emission units, an NDA will be required after each job (WAC 246-247-075(3)).

25) This NOC is valid until January 1, 2005, when it expires (only for the activities described in this NOC and the clarification fax of February 10, 1999).

26) If the department finds that the emission unit described in this NOC, is not in compliance with the standards in WAC 245-247-040 during construction ,as described in this NOC, or during operation, it reserves the right to require modifications to bring it into compliance (WAC 246-247-060-(2)(d)).

200E P-242A-001

296-A-21
242-A Evaporator
Emission Unit ID: 141

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	2 parallel flow paths (Minimum 1 parallel path in operation)
	HEPA	2	2 parallel flow paths with 2 HEPAs in series
	Prefilter	1	2 parallel flow paths with 1 prefilter

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

200E P-242A-002

296-A-22
242-A Evaporator
Emission Unit ID: 142

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	Fan operates during 242-A processing.
	HEPA	2	In series
	Heater	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3)	During campaigns: Method 2 appendix A Method appendix B 61.93(b)(2)(ii) ANSI N13.1: During non-campaigns Appendix B, Method 114(3)	Total ALPHA, TOTAL BETA, 137Cs, 90Sr, 239Pu, 238Pu, 241Am	Non-campaign: 4 weeks per year Campaign: one sample in the quarter prior to each campaign; one during each campaign; one sample during the quarter following the campaign.

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample; Continuous monitoring during campaigns.

This Emission Unit has 2 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Revision to AIR 98-704	AIR 98-808	8/24/1998	296

Conditions (state only enforceable)

1) Monitoring for I-129 needs to occur only when this isotope exceeds 10% of the PTE.
2) Sampling for total alpha, total beta, Cs-137, Sr-90, Pu-239, Pu-238, I-129, Am-241 and any other specific radionuclides contributing to 10% of the potential-to-emit for each campaign.

Project Title	Approval No.	Date Approved	NOC_ID
Downgrade of 296-A-22 Evaporator emission unit from a NESHAP stack to a non-designated stack	AIR 98-704	7/9/1998	284

Conditions (state only enforceable)

1) Periodic confirmatory monitoring requirements during years with campaigns include:

A minimum of one sample in a quarter prior to each campaign

A minimum of one sample during the campaign runs

A minimum of one sample during the quarter proceeding the campaign runs

2) Periodic confirmatory monitoring requirements during years with no campaigns include:

A total of four weeks of sampling data for each non-operating year.

Analysis for total alpha, total beta, and Cs-137

3) The monitoring system must be NESHAPs compliant and operating in compliance with NESHAPs and WAC 246-247 designated stack requirements when it is operating.

200E P-244AR-002

296-A-13
244-AR SLUDGE VAULT
Emission Unit ID: 211

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	Non-Operational	
	HEPA	Non-Operational	
	Prefilter	Non-Operational	
	Heater	Non-Operational	
	Prefilter	Non-Operational	
			(This unit is inactive and will require an NOC to resume operation or a report of closure to deregister this emission unit).

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3)	Appendix B, Method 114(3)	This unit is nonoperational and will require an NOC to operate or report of closure to deregister	This unit is passively ventilated.

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

200E P-2025E ETF

296-E-1
Effluent Treatment Facility(ETF)
Emission Unit ID: 301

Abatement Technology (state only enforceable)

Applicable Requirements:BARCT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
Building Ventilation System	Fan	2	Serves both areas
Building Ventilation System	HEPA	2	3 parallel flowpaths each with 1 filter and 1 fan; minimum 2 in operation.
Vessel Off-Gas System	Fan	1	
Vessel Off-Gas System	HEPA	3	1 heater and 2 filters in series, with 2 parallel fans (minimum of 1 in operations). VOG discharges into Building Ventilation

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Monitoring stations N498, N499, N972, and N999

This Emission Unit has 2 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
200 Area Effluent Treatment Facility (ETF) and Load-In Station, and Liquid Effluent Retention Facility (LERF) (Emission Point: 296-E-1)	NOC revision approval	1/19/1999	331

Conditions (state only enforceable)

1) WDOH Conditions and Limitations dated 1/14/97 (RTAM) are applicable. There are no new WDOH conditions that apply to this NOC.

Project Title	Approval No.	Date Approved	NOC_ID
200 Area Effluent Treatment Facility (ETF) and Load-In Station, and Liquid Effluent Retention Facility (LERF) (Emission Point: 296-E-1)	RTAM	1/14/1997	211

Conditions (state only enforceable)

1) Monitoring: The ETF exhaust is monitored by periodic confirmatory samples on a quarterly basis using monitoring stations N498, N499, N972, and N999.
2) ETF Load in station and LERF =2.50 E-02 mrem/yr to the MEI.
3) ETF abated emissions: 1.25 E-5 mrem/yr.
4) Emissions from the ETF load in station and the LERF are diffuse and fugitive emissions (i.e., not a point source) which will be measured by Near Facility Environmental Monitoring.
5) The 200 area ETF was designed and constructed to be a flexible wastewater treatment facility, and to provide the Hanford Site with the with the capability to treat waste waters generated during cleanup

200E P-242AL42-001

LERF Basin #42
Liquid Effluent Retention Facility (LERF)
Emission Unit ID: 148

Abatement Technology (state only enforceable)

Applicable Requirements:BARCT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Charcoal filter	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3)	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	Air- every 2 weeks continuous deposition annually

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Environment Sampling; Monitoring stations N498, N499, N972, and N999

This Emission Unit has 2 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
200 Area Effluent Treatment Facility (ETF) and Load-In Station, and Liquid Effluent Retention Facility (LERF) (Emission Point: 296-E-1)	NOC revision approval	1/19/1999	331

Conditions (state only enforceable)

1) WDOH Conditions and Limitations dated 1/14/97 (RTAM) are applicable. There are no new WDOH conditions that apply to this NOC.

Project Title	Approval No.	Date Approved	NOC_ID
200 Area Effluent Treatment Facility (ETF) and Load-In Station, and Liquid Effluent Retention Facility (LERF) (Emission Point: 296-E-1)	RTAM	1/14/1997	211

Conditions (state only enforceable)

1) (2)Monitoring: The ETF exhaust is monitored by periodic confirmatory samples on a quarterly basis.
2) (1)The 200 area ETF was designed and constructed to be a flexible wastewater treatment facility, and to provide the Hanford Site with the with the capability to treat waste waters generated during cleanup
3) (4)ETF abated emissions: 1.25 E-5 mrem/yr.
4) (3)Emissions from the ETF load in station and the LERF are diffuse and fugitive emissions (i.e., not a point source) which will be measured by Near Facility Environmental Monitoring.
5) (5)ETF Load in station and LERF =2.50 E-02 mrem/yr to the MEI.

200E P-242AL43-001

LERF Basin #43
Liquid Effluent Retention Facility (LERF)
Emission Unit ID: 147

Abatement Technology (state only enforceable)

Applicable Requirements:BARCT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Charcoal filter	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3)	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	Air- every 2 weeks continuous deposition annually

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Environment Sampling; Monitoring stations N498, N499, N972, and N999

This Emission Unit has 2 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
200 Area Effluent Treatment Facility (ETF) and Load-In Station, and Liquid Effluent Retention Facility (LERF) (Emission Point: 296-E-1)	NOC revision approval	1/19/1999	331

Conditions (state only enforceable)

1) WDOH Conditions and Limitations dated 1/14/97 (RTAM) are applicable. There are no new WDOH conditions that apply to this NOC.

Project Title	Approval No.	Date Approved	NOC_ID
200 Area Effluent Treatment Facility (ETF) and Load-In Station, and Liquid Effluent Retention Facility (LERF) (Emission Point: 296-E-1)	RTAM	1/14/1997	211

Conditions (state only enforceable)

1) (1)The 200 area ETF was designed and constructed to be a flexible wastewater treatment facility, and to provide the Hanford Site with the with the capability to treat waste waters generated during cleanup

2) (2)Monitoring: The ETF exhaust is monitored by periodic confirmatory samples on a quarterly basis.

3) (3)Emissions from the ETF load in station and the LERF are diffuse and fugitive emissions (i.e., not a point source) which will be measured by Near Facility Environmental Monitoring.

4) (4)ETF abated emissions: 1.25 E-5 mrem/yr.

5) (5)ETF Load in station and LERF =2.50 E-02 mrem/yr to the MEI.

200E P-242AL44-001

LERF Basin #44
Liquid Effluent Retention Facility (LERF)
Emission Unit ID: 146

Abatement Technology (state only enforceable)

Applicable Requirements:BARCT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Charcoal filter	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3)	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	Air- every 2 weeks continuous deposition annually

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Environment Sampling; Monitoring stations N498, N499, N972, and N999

This Emission Unit has 2 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
200 Area Effluent Treatment Facility (ETF) and Load-In Station, and Liquid Effluent Retention Facility (LERF) (Emission Point: 296-E-1)	NOC revision approval	1/19/1999	331

Conditions (state only enforceable)

1) WDOH Conditions and Limitations dated 1/14/97 (RTAM) are applicable. There are no new WDOH conditions that apply to this NOC.

Project Title	Approval No.	Date Approved	NOC_ID
200 Area Effluent Treatment Facility (ETF) and Load-In Station, and Liquid Effluent Retention Facility (LERF) (Emission Point: 296-E-1)	RTAM	1/14/1997	211

Conditions (state only enforceable)

1) (1)The 200 area ETF was designed and constructed to be a flexible wastewater treatment facility, and to provide the Hanford Site with the with the capability to treat waste waters generated during cleanup

2) (2)Monitoring: The ETF exhaust is monitored by periodic confirmatory samples on a quarterly basis.

3) (3)Emissions from the ETF load in station and the LERF are diffuse and fugitive emissions (i.e., not a point source) which will be measured by Near Facility Environmental Monitoring.

4) (4)ETF abated emissions: 1.25 E-5 mrem/yr.

5) (5)ETF Load in station and LERF =2.50 E-02 mrem/yr to the MEI.

200E P-296A010-001

296-A-10
PUREX
Emission Unit ID: 384

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	Inactive
	HEPA	1	1 bank

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	1 week sample / year (when operating)

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Reactivation of PUREX Storage Tunnel Number 2.	AIR 99-1205	12/20/1999	417

Conditions (state only enforceable)

1) All transfers of additional radioactive materials from various onsite facilities to the PUREX Tunnel must take place during the period in fiscal years 2000 through 2010.

2) The rail car may remain in the rail cut, with appropriate postings, or could be moved just inside the exterior door into the outer area of the PUREX Tunnel while waiting the next transfer. Only two SWDBs are allowed on a single rail car. The rail cars must not have any dispersible contamination on them. If they do, they must be stored inside the tunnel doors and cannot be held outside.

3) If the stack is opened for any three-month period between transfers an NDA analysis of the filters is required. Environmental air samplers N158, N985, N970, N957, N969, N977 and N978 may not be removed without DOH approval.

4) Up to 3.5 million curries of radioactive waste can be placed into the remaining 12 rail car positions of the PUREX Tunnel over the next 10 years. Up to 1 percent (35 thousand curies) of the additional waste can be transuranic.

5) Stack 296-A-10 HEPAs must be tested and determined to be operational prior to transfer of waste. This includes testing and nondestructive analysis/assay (NDA) of the testing of the high-efficiency particulate air (HEPA) filters on the tunnel exhauster as a baseline for determination of filter loading after the placement was completed.

6) All measured or calculated emissions must be reported annually (WAC 246-247-080(3)).

7)This approval, with its Conditions and Limitations, must be included in the next revision of the Hanford Air Operating Permit (WAC 246-247-060(1)(e) and (2)(c)).

8) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13) and WAC 246-247-075(6)). The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in, or equivalent to, those listed in the above cited regulation.

9) The total unabated dose due to emissions from the 296-A-10 stack (including current inventory, placement of rail cars into the PUREX Tunnel, and proposed increase in inventory) cannot exceed 7.8E-04 mrem per year to the MEI.

10) The facility must be able to demonstrate that the workers associated with this emission unit are adequately trained in the use an maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures (WAC 246-247-075(12).

11) The department reserves the right to inspect and audit this unit during construction and operation, including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations (WAC 246-247-080(1).

12) When this project is completed, or operations cease, the facility shall notify the department via a report of closure, and indicate whether or not any potential for airborne release occurred (WAC 246-247-080(6)).

13) The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).

14) U.S. DOE shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5)).

15) These Conditions and Limitations must be proceduralized prior to starting the activities described in the Notice of Construction.

16) The total abated dose limit is 3.9E-07 mrem per year to the MEI.

17) Periodically smears will be taken of the SWDBs during transfer operations prior to insertion into the tunnel. Records of smears, HEPA tests and NDA analysis must be made available to DOH upon request.

18) This unit must be fully accessible to Department of Health inspectors. Inspectors must be able to verify that the stack is operational or capped and sealed when the tunnel is shut down. Access must be given to the department for unannounced inspections, as required by EPA (WAC 246-247-080(9)). At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet the requirements.

19) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that last more than four hours, it must be reported to the department within 24 hours. Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in the approval (paragraph 5) (WAC 246-247-080(5)).

20) The facility shall make requested documents available for timely review (WAC 246-247-080(10)).

21) Each SWDB container must be equipped with a minimum of two NucFil® filters in series. If the container has dispersible material, it must have three NucFil® filters. A maximum of twelve rail cars containing waste may be added to the tunnel.

22) Periodic confirmatory measurements to confirm low emissions from the 296-A-10 stack will be performed by NDA. NDA provides detection of cesium-137 loaded on HEPA filters. The loading of strontium-90, plutonium-239/240 and americium-241 on the HEPA filters will be calculated from

ratios with cesium-137 from reported 1995 actual emissions. NDA methodology for the 296-A-10 stack is provided in 97-EAP-225.

23) The stack will operate during waste placement. Depending on the length of time before the next transfer, the stack should be shutdown and capped between transfers, especially if the next transfer is not expected for a year or more. If the next transfer is expected within the same year, the stack can be operated between transfers. Testing of the HEPA filters will be performed annually. NDA would be required each year when a rail car is placed in the tunnel, or when the stack is uncapped and used for powered ventilation. During years in which no waste is placed in the PUREX Tunnel
and the 296-A-10 stack is capped (weather tight), testing of the HEPAs and NDA analysis would not be required until the stack is reactivated for the next transfer.

24) The required average stack flow rate is 2.0 cubic meters per second. The stack must have a single stage of HEPA filters (3x3) with a particulate removal efficiency of at least 99.95 percent.

25) The department retains the right to conduct its own stack sampling, environmental monitoring or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing (WAC 246-247-075(10) and (11).

26) If the department finds that the emission unit described in this NOC is not in compliance with the standards in WAC 246-247-040 during construction or during operation, the department reserves the right to require modifications to bring it into compliance (WAC 246-247-060(2)(d)).

27) The sampling system will be upgraded to include the installation of test ports that will conform to 40 CFR 60, Appendix A

28) All containers must meet transportation requirements to be moved by truck to the PUREX Tunnel rail cut. A mobile crane will be used to transfer the SWDB from the truck to the rail car. The impact liner and overpack must be free of loose contamination before it can be reused for subsequent transfers.

29) The processes will consist of receiving up to 3.5 million curries of radioactive waste loaded into 22-ton steel waste disposal boxes (SWDBs). The SWDBs will be transferred by truck, transferred onto rail cars, and placed into the PUREX Tunnel.

30) The steel waste disposal boxes (SWDBs) are engineered to minimize emissions during the loading, transportation, and transfer processes. Only waste received in SWDBs will be placed in the PUREX Tunnel. Dispersible waste must be contained in engineered containers placed (maximum of eight) in the rectangular grout container. Nondispersible waste (e.g., filters, ion exchange columns,
cut-up metal tanks and racks, etc.) must be held directly inside the rectangular grout container.
Alternate packaging for receipt/storage, must provide equivalent or greater degree of airborne control, and be approved by WDOH before use.

31) All reports and records must be kept and reported according to 40 CFR 61, Subpart H (WAC 246-247-080(2)). Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least five years (WAC 246-247-080(8)

32) If the tunnel is opened for more than three months between transfers an NDA of the filters is required.

200W P-296S016-001

296-S-16
222-S LABORATORY COMPLEX
Emission Unit ID: 337

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	
	HEPA	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

200W S-296S021-001

296-S-21
222-S LABORATORY COMPLEX
Emission Unit ID: 254

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
Backup Exhaust	Fan	1	Operates independently or in parallel with primary exhaust
Primary Exhaust	Fan	3	In parallel, serves both hot cell addtion & main lab.
222S Lab Complex	HEPA	1	For both primary and backup exhaust systems
222-S Lab Hot Cells	HEPA	3	In series for both the primary and backup exhaust systems

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3)	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week samples/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
222-S Lab Hot Cell Expansion	AIR-Feb11	2/28/1992	10

Conditions (state only enforceable)

1) The source term shall not exceed 7.84E-2 curies of SR-90 and 3.92E-2 curies of CS-137. If the project exceeds this projected source term, additional notification will be required.

2) HEPA filters shall be tested in place to ensure that they remove at least 99.95 percent of particles ranging in size from 0.1 micron to 3.0 micron.

3) Exhaust air shall pass through existing HEPAs in the 222-SC and 222-SB facilities prior to discharge to the atmosphere.

200W S-296S023-001

296-S-23
222-S LABORATORY COMPLEX
Emission Unit ID: 438

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	
	HEPA	2	In series
	Prefilter	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	1 every 2 years

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
NDA

This Emission Unit has 2 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
219-S to 204-AR Truck Transfers	NOC revision approval	1/19/1999	332

Conditions (state only enforceable)

1) Complete and submit log sheets of waste transfers. Estimated emissions will be excluded from the log sheets as truck transfer emissions are exhausted to the existing stack.

Project Title	Approval No.	Date Approved	NOC_ID
219-S to 204-AR Truck Transfers	AIR 91-1101	11/12/1991	8

Conditions (state only enforceable)

1) The dose to the maximally exposed individual (MEI) shall not exceed 0.039 mrem/year.

200W P-296SX-001

296-S-15
241-SX TANK FARM
Emission Unit ID: 64

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	1 flow path
	HEPA	2	1 flow path
	Prefilter	1	1 flow path

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

This Emission Unit has 4 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Saltwell Pumping Tanks 241-SX-101, 241-SX-102, 241-SX-103, and 241-SX-105	AIR 00-108	2/9/2000	423

Conditions (state only enforceable)

1) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least five years (WAC 246-247-080 (8)).

2) The facility shall make requested documents available for timely review (WAC 246-247-080(10)).

3) The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).

4) The total unabated emissions are limited to 2.03E-02 mrem/yr.

5) If the department finds that the emission unit described in this NOC is not in compliance with the standards in WAC 246-247-040 during construction (as described in the NOC or during operation)it reserves the right to require modifications to bring it into compliance (WAC 246-247-060(2)(d)).

6) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that lasts more than four hours, it must be reported to the department within 24 hours. Applicable standards(WAC 246-247-040)include unit specific emission limits (paragraph 5), the offsite dose standard(paragraph 1), BARCT(paragraph 3)or ALARACT(paragraph 4), whichever is applicable, or any limitations included in this

7) All measured or calculated emissions must be reported annually (WAC 246-247-080(3)).

8) All reports and records must be kept and reported according to 40 CFR 61, Subpart H. (WAC 246-247-080(2)).

9) The department reserves the right to inspect and audit this unit during operation. This includes all activities, equipment, operation procedures, documents, data, and other records related to compliance with the regulations (WAC 246-247-080 (1)).

10) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13) and WAC 246-247-075(6)). The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in the above cited regulation.

11) The facility must be able to demonstrate that the workers associated with this emission unit are adequately trained in the use and maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures (WAC 246-247-075(12)).

12) Approved saltwell pumping activities include the following: installation of the saltwell screen, installation of jet pump, flushing the transfer lines, transferring of the liquid waste (via the pumping process), addition of limited amounts of water to prevent plugging of the saltwell screen and transfer line, and miscellaneous activities that will not increase emissions.

13) Unabated alpha emissions are limited to 1.04 E-04 Ci/yr., beta emissions are limited to 6.33E-03 Ci/yr., and Cs-137 emissions are limited to 8.68E-04 Ci/yr.

14) The facility shall notify the department at least seven days prior to any planned preoperational testing of the emission unit's emission control, monitoring or containment systems. The department reserves the right to observe such tests (WAC 246-247-060(4)).

15) The average stack flow rate of 2.8 cubic meters per second. Testing of the HEPA filters will be performed annually.

16) The total abated emissions are limited to 1.02E-05 mrem/yr.

17) When this project is completed, or operations cease, the facility shall notify the department via a report of closure, and indicate whether or not any potential for airborne release occurred (WAC 246-247-080(6)).

18) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections, as required by EPA (WAC 246-247-080(9)). At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet the requirements.

19) The department retains the right to conduct its own stack sampling, environmental monitoring or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing (WAC 246-247-075(10).

20) U.S. DOE shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5)).

21) These Conditions and Limitations must be proceduralized prior to starting the activities described in the Notice of Construction.

22) This approval, with its Conditions and Limitations, must be included in the next revision of the Hanford Air Operating Permit (WAC 246-247-060(1)(e) and (2)(c)) and will at that time, constitute a revision of the Radioactive Air Emissions License.

23) The work approved in this NOC is limited to saltwell pumping in tanks 241-SX-101, 241-SX-102, 241-SX-103 and 241-SX-105 in the 241-SX-Tank Farm.

Project Title	Approval No.	Date Approved	NOC_ID
Saltwell Pumping of tank 241-SX-106	RTAM	7/2/1998	283

Project Title	Approval No.	Date Approved	NOC_ID
241-SX-104 Saltwell Pumping, Phase I		3/12/1998	263

Project Title	Approval No.	Date Approved	NOC_ID
Rotary Mode Core Sampling (RMCS) Systems at 241-SX	AIR 97-1101	11/13/1997	242

Conditions (state only enforceable)

1) The process description in Section 6.0, with the equipment described, is the only activity and equipment approved. The sequence of events to protect the air pathway must be followed. No processes are approved, unless described in this section.

2) Due to uncertainties in tank content and to assure that conditions are adequately monitored, the SX exhauster must be continuously sampled whenever samples are being collected under the umbrella of the NOC in rotary mode.

3) The existing sampling system may be used, providing it successfully passes an inspection by the department. That inspection can be arranged as soon as the project is ready to proceed. The sampling system must be isokinetic or subisokinetic.

4) Only those activities described specifically in this NOC may be conducted. No inferences to other projects will be allowed.

5) This project is only approved for the 241-SX-101 through 105 tanks, in any combination, not to exceed eight cores per year. No other tanks in the SX Tank Farm may be sampled under this NOC;, since no data for those tanks is

6) The offsite projected abated dose to the Maximally Exposed Individual was verified with CAP-88 PC, after several conversations with Hanford staff to assure us that we were using the same parameters. The CAP-88 run in the NOC was the mainframe version, using parameters that the department has not approved. The officially accepted calculation for verification is the PC version, which is the only version we have. All issues between the two versions were satisfactorily resolved for this project.

7) Health physics and existing near field monitoring must be routinely performed to verify that no fugitive emissions occur. The fan or fans must be operated sufficiently to ensure that tank pressure is maintained below atmospheric pressure. If negative pressure is lost in the tank being sampled in rotary mode, the drill system must be shut down.

8) All activities associated with this approval must be proceduralized prior to beginning the project.

9) Records must clearly indicate when core samples are being collected in rotary mode versus push mode.

10) The offsite dose limit for this project, added to current SX Tank Farm emissions, may not exceed 2.0 E-6 mrem/year to the maximally exposed individual.

11) The SX tank being sampled during rotary mode core sampling must be actively ventilated at all times.

12) Abated emissions of each radionuclide are limited to those in Table 8. No radionuclide that is not listed in this table may be emitted in any detectable concentrations (using current laboratory detection methods).

13) The HEPA filters must be successfully demonstrated to have passed an efficiency test prior to operating the RMCS in rotary mode. It must be at least 99.95% efficient (for 0.3 micron median diameter particles).

14) During push mode sampling, periodic confirmatory sampling may be conducted; in the manner currently documented in the Air Operating Permit for 296-S-15.

200W P-296P022-001

296-P-22
241-SY TANK FARM
Emission Unit ID: 53

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	
	HEPA	2	2 in series
	Prefilter	1	
	Heater	Non-Operational	
	Moisture Separator	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

200W P-296SY-001

296-P-23
241-SY TANK FARM
Emission Unit ID: 56

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	
	HEPA	2	In series
	Prefilter	1	
	Heater	Non-Operational	
	De-entrainer	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

This Emission Unit has 2 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
241-SY-101 Crust Growth Near Term Mitigation	Shortform Approval	4/23/1999	358

Conditions (state only enforceable)

1) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections. At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet the requirements.

2) The department reserves the right to inspect and audit this unit during construction and operation, including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations.

3) All reports and records must be kept and reported according to 40 CFR 61, Subpart H.

4) The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in, or equivalent to, those listed in

the above cited regulation.

5) The facility must maintain a log in an approved format for this activity or emission unit.
6) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that last more than four hours, it must be reported to the department within 24 hours. (Note: Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in the approval (paragraph 5)).
7) The abated emission limit is: 1.89E-05 mrem/yr to the MEI.
8) The process is limited to the exact description described in the NOC.
9) The required controls are: _As per NOC.
10) The radionuclides re limited to: As per NOC
11) When this project is completed, or operations cease, the facility shall notify the department via a report of closure, including whether or not any potential for airborne releases occurred.
12) U.S. DOE shall comply with all requirements and limitations of this license.
13) The facility must be able to demonstrate that the workers associated with this emission unit are adequately trained in the use an maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures.
14) The department may require an ALARACT demonstration at any time.
15) The annual possession quantity is limited to: As per NOC.
16) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least 5 years.
17) This approval, with its conditions and limitations, constitutes and amendment to the Department's Radioactive Air Emission License. This amendment must be included in the next revision of the Hanford Air Operating Permit.
18) U.S. DOE shall monitor this project or emission unit as follows: As stated in this NOC and the original NOC titled Mixer pump test in tank 241-SY-101.
19) The facility shall make requested documents available in a timely manner for review.
20) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13) and WAC 246-247-075(6)).
21) All measured or calculated emissions must be reported annually.
22) The department retains the right to conduct its own stack sampling, environmental monitoring or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing.
23) Periodic confirmatory sampling is required. It must consist of: As described in the NOC, the task specific confirmatory monitoring called out in the TWRS ALARACT Demonstration.
24) If the department finds that the emission unit described in this NOC, is not in compliance with the standards in WAC 245-247-040 during construction ,as described in this NOC, or during operation, it reserves the right to require modifications to bring it into compliance.

Project Title	Approval No.	Date Approved	NOC_ID
241-SY-101Tank Mixer Pump Replacement	AIR 95-203	2/21/1995	62

Conditions (state only enforceable)

1) Process Description: This NOC describes the activities required to safely remove and replace the mixer pump in 101-SY in the event of pump failure, and assesses the potential for increased air emissions associated with those
2) Monitoring System: The flexible receiver system contains a gamma detection system to monitor the deacon process. HPT coverage will monitor radiation levels outside the tank.

3) Control System: Potential emissions are to be controlled by a flush and decontamination system and a flexible receiver system which maintains tank containment during pump decon and removal, prevents waste spills while pump is maneuvered into

4) Dose: 2.0 E-06 mrem/yr.

200W P-296P028-001

296-P-28
241-SY TANK FARM
Emission Unit ID: 54

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	Backup exhauster, intermittent operation
	HEPA	2	2 in series
	Prefilter	1	
	Heater	Non-Operational	
	De-entrainer	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

200W W-PORTEX 020

296-P-43
241-SY TANK FARM
Emission Unit ID: 57

Abatement Technology (state only enforceable)

Applicable Requirements:BARCT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	Fan is in operational standby
	HEPA	2	HEPAs in series
	Heater	1	
	Prefilter	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3)	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 weeks/year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Active ventilation: continuous during operation.

This Emission Unit has 2 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Portable Exhauster Use On Single Shell (SST) Tanks During Saltwell Pumping, addition of tanks 241-A-101, 241-U-102, Rev. 4	NOC revision approval	7/31/1999	380

Conditions (state only enforceable)

1) Conditions of AIR 98-1207 apply to portable exhauster use on single shell tanks 241-A-101 and 241-U-102.

Project Title	Approval No.	Date Approved	NOC_ID
Portable Exhauster Use On Single Shell (SST) Tanks During Saltwell Pumping, Rev 2	AIR 98-1207	12/16/1998	327

Conditions (state only enforceable)

1) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least 5 years (WAC 246-247-080(8)).

2) The facility shall make requested documents available in a timely manner for review. (WAC 246-247-080(10)).

3) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements, they must be given to the department when they are known to allow for unannounced inspections as required by EPA (WAC 246-247-080(9)).

4) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that

last more than four hours, it must be reported to the department within 24 hours. (Note: Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in the approval (paragraph 5)).

5) Periodic confirmatory sampling is required on passively ventilated tanks. It is outlined in the draft Air Operating Permit. It must consist of annual verification of smearable levels of activity on the inside surface of the ducting downstream of the HEPA filter or on the outside of the screen covering the outlet of the vent, if one exists.

6) All portable exhausters used in the salt-well pumping must meet the requirements specified in 40 CFR 61, Subpart H and associated requirements.

7) All measured or calculated emissions must be reported annually (WAC 246-247-080(3)).

8) This approval, with its Conditions and Limitations, constitutes and amendment to the Department's Radioactive Air Emission License. This amendment must be included in the next revision of the Hanford Air Operating Permit WAC 246-247-060(1)(e) and (2)(c).

9) All reports and records must be kept and reported according to 40 CFR 61, Subpart H (WAC 246-247-080(2)).

10) The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).

11) Portable exhausters will be available during transfer and used when flammable gases concentrations exceed 25 percent of the lower flammability limit (LFL) during salt-well pumping.

12) All other commitments made in the NOC are considered requirements. Any deviation from those commitments must be approved by the department.

13) The department reserves the right to inspect and audit this unit during construction and operation, including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations (WAC 246-247-080(1).

14) All proportional activities described in the NOC must be satisfactorily completed prior to waste transfer.

15) When this project is completed, or operations cease, the facility shall notify the department via a report of closure, including whether or not any potential for airborne releases occurred (WAC 246-247-080(6)).

16) The department retains the right to conduct its own stack sampling, environmental monitoring or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing (WAC 246-247-075(10) and (11).

17) The facility must be able to demonstrate that the workers associated with this emission unit are adequately trained in the use an maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures (WAC 246-247-075(12).

18) These Conditions and Limitations must be proceduralized prior to starting the activities described in the Notice of Construction. All activities are limited to these tanks. 241-AX-101, 241-BY-105, 241-BY-106, 241-S-101, 241-S-102, 241-S-103, 241-S-106, 241-S-107, 241-S-109, 241-S-111, 241-S-112, 241-U-103, 241-U-105, 241-U-106, 241-U-107, 241-U-108, 241-U-109, 241-U-111

19) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13) and WAC 246-247-075(6)). The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in, or equivalent to, those listed in the above cited regulation.

20) U.S. DOE shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5).

200W W-PORTEX 024

296-P-44
241-SY TANK FARM
Emission Unit ID: 58

Abatement Technology (state only enforceable)

Applicable Requirements:BARCT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	Fan is in operational stand-by
	HEPA	2	2 HEPAs in series
	Heater	1	
	Prefilter	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3)	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 weeks/year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Active ventilation: continuous during operation.

This Emission Unit has 2 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Portable Exhauster Use On Single Shell (SST) Tanks During Saltwell Pumping, addition of tanks 241-A-101, 241-U-102, Rev. 4	NOC revision approval	7/31/1999	380

Conditions (state only enforceable)

1) Conditions of AIR 98-1207apply to portable exhauster use on single shell tanks 241-A-101 and 241-U-102.

Project Title	Approval No.	Date Approved	NOC_ID
Portable Exhauster Use On Single Shell (SST) Tanks During Saltwell Pumping, Rev 2	AIR 98-1207	12/16/1998	327

Conditions (state only enforceable)

1) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least 5 years (WAC 246-247-080(8)).

2) Portable exhausters will be available during transfer and used when flammable gases concentrations exceed 25 percent of the lower flammability limit (LFL) during salt-well pumping.

3) The facility must be able to demonstrate that the workers associated with this emission unit are adequately trained in the use an maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures (WAC 246-247-075(12).

4) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this

unit (WAC 246-247-075(13) and WAC 246-247-075(6)). The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in, or equivalent to, those listed in the above cited regulation.

5) The department reserves the right to inspect and audit this unit during construction and operation, including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations (WAC 246-247-080(1).

6) The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).

7) All reports and records must be kept and reported according to 40 CFR 61, Subpart H (WAC 246-247-080(2)).

8) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements, they must be given to the department when they are known to allow for unannounced inspections as required by EPA (WAC 246-247-080(9)).

9) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that last more than four hours, it must be reported to the department within 24 hours. (Note: Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in the approval (paragraph 5)).

10) All proportional activities described in the NOC must be satisfactorily completed prior to waste transfer.

11) The department retains the right to conduct its own stack sampling, environmental monitoring or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing (WAC 246-247-075(10) and (11).

12) All other commitments made in the NOC are considered requirements. Any deviation from those commitments must be approved by the department.

13) All measured or calculated emissions must be reported annually (WAC 246-247-080(3)).

14) The facility shall make requested documents available in a timely manner for review. (WAC 246-247-080(10)).

15) Periodic confirmatory sampling is required on passively ventilated tanks. It is outlined in the draft Air Operating Permit. It must consist of annual verification of smearable levels of activity on the inside surface of the ducting downstream of the HEPA filter or on the outside of the screen covering the outlet of the vent, if one exists.

16) All portable exhausters used in the salt-well pumping must meet the requirements specified in 40 CFR 61, Subpart H and associated requirements.

17) This approval, with its Conditions and Limitations, constitutes and amendment to the Department's Radioactive Air Emission License. This amendment must be included in the next revision of the Hanford Air Operating Permit (WAC 246-247-060(1)(e) and (2)(c).

18) These Conditions and Limitations must be proceduralized prior to starting the activities described in the Notice of Construction. All activities are limited to these tanks. 241-AX-101, 241-BY-105, 241-BY-106, 241-S-101, 241-S-102, 241-S-103, 241-S-106, 241-S-107, 241-S-109, 241-S-111, 241-S-112, 241-U-103, 241-U-105, 241-U-106, 241-U-107, 241-U-108, 241-U-109, 241-U-111

19) When this project is completed, or operations cease, the facility shall notify the department via a report of closure, including whether or not any potential for airborne releases occurred (WAC 246-247-080(6)).

20) U.S. DOE shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5).

200W W-PORTEX 025

296-P-45
241-SY TANK FARM
Emission Unit ID: 50

Abatement Technology (state only enforceable)

Applicable Requirements:BARCT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	Fan is in operational stand-by
	HEPA	2	2 HEPAs in series
	Heater	1	
	Prefilter	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3)	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 weeks/year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Active ventilation: continuous during operation.

This Emission Unit has 2 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Portable Exhauster Use On Single Shell (SST) Tanks During Saltwell Pumping, addition of tanks 241-A-101, 241-U-102, Rev. 4	NOC revision approval	7/31/1999	380

Conditions (state only enforceable)

1) Conditions of AIR 98-1207apply to portable exhauster use on single shell tanks 241-A-101 and 241-U-102

Project Title	Approval No.	Date Approved	NOC_ID
Portable Exhauster Use On Single Shell (SST) Tanks During Saltwell Pumping, Rev 2	AIR 98-1207	12/16/1998	327

Conditions (state only enforceable)

1) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least 5 years (WAC 246-247-080(8)).

2) Portable exhausters will be available during transfer and used when flammable gases concentrations exceed 25 percent of the lower flammability limit (LFL) during salt-well pumping.

3) The facility must be able to demonstrate that the workers associated with this emission unit are adequately trained in the use an maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures (WAC 246-247-075(12).

4) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this

unit (WAC 246-247-075(13) and WAC 246-247-075(6)). The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in, or equivalent to, those listed in the above cited regulation.

5) The department reserves the right to inspect and audit this unit during construction and operation, including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations (WAC 246-247-080(1).

6) The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).

7) All reports and records must be kept and reported according to 40 CFR 61, Subpart H (WAC 246-247-080(2)).

8) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements, they must be given to the department when they are known to allow for unannounced inspections as required by EPA (WAC 246-247-080(9)).

9) All proportional activities described in the NOC must be satisfactorily completed prior to waste transfer.

10) When this project is completed, or operations cease, the facility shall notify the department via a report of closure, including whether or not any potential for airborne releases occurred (WAC 246-247-080(6)).

11) All measured or calculated emissions must be reported annually (WAC 246-247-080(3)).

12) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that last more than four hours, it must be reported to the department within 24 hours. (Note: Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in the approval (paragraph 5)).

13) The facility shall make requested documents available in a timely manner for review. (WAC 246-247-080(10)).

14) The department retains the right to conduct its own stack sampling, environmental monitoring or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing (WAC 246-247-075(10) and (11).

15) All other commitments made in the NOC are considered requirements. Any deviation from those commitments must be approved by the department.

16) Periodic confirmatory sampling is required on passively ventilated tanks. It is outlined in the draft Air Operating Permit. It must consist of annual verification of smearable levels of activity on the inside surface of the ducting downstream of the HEPA filter or on the outside of the screen covering the outlet of the vent, if one exists.

17) All portable exhausters used in the salt-well pumping must meet the requirements specified in 40 CFR 61, Subpart H and associated requirements.

18) This approval, with its Conditions and Limitations, constitutes and amendment to the Department's Radioactive Air Emission License. This amendment must be included in the next revision of the Hanford Air Operating Permit (WAC 246-247-060(1)(e) and (2)(c).

19) These Conditions and Limitations must be proceduralized prior to starting the activities described in the Notice of Construction. All activities are limited to these tanks. 241-AX-101, 241-BY-105, 241-BY-106, 241-S-101, 241-S-102, 241-S-103, 241-S-106, 241-S-107, 241-S-109, 241-S-111, 241-S-112, 241-U-103, 241-U-105, 241-U-106, 241-U-107, 241-U-108, 241-U-109, 241-U-111

20) U.S. DOE shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5).

200W S-296S025 001

296-S-25
241-SY TANK FARM
Emission Unit ID: 59

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	Emission unit operates intermittently
	HEPA	2	In series
	Prefilter	1	
	Heater	1	Heater runs intermittently due to temperature Regulation
	De-entrainer	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

200W W-PORTEX 027

241-UX-154 Diversion Box
241-U TANK FARM
Emission Unit ID: 344

Abatement Technology (state only enforceable)

Applicable Requirements:ALARCT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	
	HEPA	1	
	Prefilter	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3)			NDA of filter at the end of the calendar year; smear seams and potential release locations at the end of each day

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
NDA; operating log; smear seams and potential release locations on the portable exhauster

This Emission Unit has 2 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
NOC Revision to AIR 99-1003 Tank Farm Waste Transfer Pit 244-TX DCRT	NOC Revision to AIR 99-1003	9/5/2000	492

Conditions (state only enforceable)

1) Primary Controls (The following activities require pre-job and post-job radiation surveys, and 25 mph wind speed controls)
   * Perform remote inspections with cover blocks on
   * Perform decontamination of pit surfaces or pit contents with cover blocks on
   * Apply fixative with cover blocks on
   * Flush drains and check flow of drains with cover blocks on

2) Secondary Controls (The following activities require installation of a fall protection handrail draped in plastic forming a contamination barrier around the top of the pit)
   * Remove/replace cover blocks
   * Perform inspections with cover blocks off
   * Perform decontamination of pit contents with cover blocks off
   * Apply fixative with a hand held sprayer with cover blocks off
   * Flush drains and check flow of drains with cover blocks off
   * Repair/replace/move leak detectors or other pit instrumentation/equipment with cover blocks off

3) Tertiary Controls (The following activities require installation of a fall protection handrail draped in plastic forming a contamination barrier around the top of the open pit and a bullpen with an operating portable exhauster)

* Removal of cover blocks and performing

- Install, disconnect, change or cut up jumpers/blanks, valves or nozzles

Project Title	Approval No.	Date Approved	NOC_ID
Tank Farm 241-UX-154 Diversion Box	AIR 99-1003	10/6/1999	401

Conditions (state only enforceable)

1) The department retains the right to conduct its own stack sampling, environmental monitoring or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing (WAC 246-247-075(10).

2) This approval, with its Conditions and Limitations, must be included in the next revision of the Hanford Air Operating Permit (WAC 246-247-060(1)(e) and (2)(c)), and will at that time, constitutes a revision of the Radiation Air Emissions License.

3) If the department finds that the emission unit described in this NOC is not in compliance with the standards in WAC 246-247-040 during construction (as described in this NOC or during operation), it reserves the right to require modifications to bring it into compliance (WAC 246-247-060(2)(d)).

4) The facility must be able to demonstrate that the workers associated with this emission unit are adequately trained in the use and maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures (WAC 246-247-075(12)).

5) The facility shall notify the department at least seven days prior to any planned preoperational testing of the emission unit's emissions control, monitoring or containment systems. The department reserves the right to observe such tests (WAC 246-247-060(4)).

6) The required controls are as follows:
Abatement control technology:
The portable exhauster providing active ventilation within the bullpen shall consist of a pre-filter, one HEPA filter, and a blower that draws air through the filters and pushes air out an exhaust port.
Alaract:
Radiation control technicians shall inspect and approve required containment;
Pit work shall be shut down (or not be initiated) when sustained wind speeds exceed 25 miles per hour or are predicted to do so by Hanford Meteorological Station personnel for the period of planned pit work;
The opening of the bullpen shall not exceed an area one-third the size of a fully opened roof;
Affected transfer lines shall be flushed with cover blocks in place;
Jumpers or other instrumentation/equipment removed from the pit shall be drained of free liquid and decontaminated or contained before removal. The outer-most surface shall not exceed 1,000 disintegrations per minute/100 square centimeters beta/gamma and 20 disintegrations per minute/100 square centimeters alpha before removal from the bullpen;
Only blocks necessary to perform intended work shall be removed. At the end of the work shift, the cover blocks shall be re-installed unless waste in the pit is contained in transfer lines or other pit equipment;
Active ventilation of the bullpen shall be used after removal of the cover blocks and during work activities to minimize radiological releases. Air inflow shall be achieved by using a 1,000 cubic feet per minute exhauster;
The inlet and outlet of the ventilation system will be sealed with plastic when the ventilation system is not in operation;

7) This license approval is valid until July 14, 2004.

8) The facility shall make requested documents available in a timely manner for review (WAC 246-247-080(10).

9) The abated dose limit shall not exceed 1.53E-02 mrem/yr. to the MEI.

10) To assure the intent of the ALARACT standard is sustained, and the adequacy of the design for the control technology equipment is maintained, continuous personnel coverage shall be employed while this equipment is in

11) The total annual possession quantity is limited to 3.28E+03 curies.

12) The process for approved activities are limited to those listed below. No other processes are approved. Department inspectors will verify this condition.

Removal and/or installation of cover blocks:
Inspections:
Installation, disconnection, changing, leak testing, and cutting up jumpers/blanks or other pit equipment:
Repairing/replacing valves, jumpers, pumps, leak detectors, or other instrumentation/Equipment:
Decontamination activities:
Applying fixative with cover blocks on or off:
Clearing drains and checking the flow of drains:
Unplug Transfer Lines:

13) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections, as required by EPA (WAC 246-247-080(9)). At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet the requirements.

14) The radionuclides and annual possession quantities are limited to those stated in the following table.

SUMMARY OF OVERALL EMISSIONS FOR 241-UX-154 PIT WORK

ISOTOPE	ANNUAL POSSESSION QUANTITY, CURIES	UNABATED RELEASE, CURIES	UNABATED OFFSITE DOSE, MILLREM/YEAR	PERCENT OF OFFSITE DOSE
3H	6.30E-01	6.17E-05	1.23E-09	0.00%
14C	9.48E-02	9.29E-06	1.86E-08	0.00%
59Ni	1.53E-02	1.50E-06	3.61E-10	0.00%
60Co	4.30E-01	4.22E-05	8.01E-06	0.05%
63Ni	1.45E+00	1.43E-04	2.85E-08	0.00%
79Se	9.26E-03	9.08E-07	9.08E-08	0.00%
90Y	6.94E+02	6.80E-02	1.77E-05	0.12%
90Sr	6.94E+02	6.80E-02	5.99E-03	39.18%
93mNb	3.35E-02	3.29E-06	2.27E-30	0.00%
93Zr	4.49E-02	4.40E-06	4.38E-09	0.00%
99Tc	6.70E-01	6.57E-05	1.18E-06	0.01%
106Ru	1.95E-05	1.91E-09	2.25E-11	0.00%
113mCd	2.37E-01	2.32E-05	2.32E-06	0.02%
125Sb	4.63E-01	4.54E-05	9.52E-07	0.01%
126Sn	1.39E-02	1.36E-06	5.03E-08	0.00%
129I	1.30E-03	1.27E-07	9.65E-09	0.00%
134Cs	7.20E-03	7.06E-07	5.51E-08	0.00%
137Cs	9.43E+02	9.24E-02	1.94E-03	12.70%
137mBa	8.91E+02	8.74E-02	7.52E-15	0.00%
151Sm	3.27E+01	3.21E-03	1.86E-06	0.01%
152Eu	1.30E-02	1.27E-06	2.42E-07	0.00%
154Eu	4.49E+00	4.40E-04	6.60E-05	0.43%
155Eu	9.72E-01	9.53E-05	6.00E-07	0.00%
226Ra	1.09E-06	1.07E-10	3.86E-11	0.00%
228Ra	3.83E-04	3.76E-08	5.64E-09	0.00%
227Ac	5.38E-06	5.27E-10	5.80E-09	0.00%
229^{Th}	8.96E-06	8.78E-10	1.05E-08	0.00%
232Th	3.16E-05	3.09E-09	1.92E-08	0.00%
231Pa	1.14E-05	1.12E-09	9.98E-09	0.00%
232U	2.27E-03	2.23E-07	1.91E-06	0.01%

233U	8.69E-03	8.52E-07	2.04E-06	0.01%
234U	9.52E-03	9.34E-07	2.24E-06	0.01%
235U	3.76E-04	3.68E-08	8.47E-08	0.00%
236U	4.91E-04	4.81E-08	1.11E-07	0.00%
238U	7.56E-03	7.41E-07	1.56E-06	0.01%
237Np	2.41E-03	2.37E-07	2.11E-06	0.01%
238Pu	1.45E-01	1.42E-05	8.39E-05	0.55%
239Pu	2.39E+00	2.34E-04	1.50E-03	9.80%
240Pu	4.29E-01	4.20E-05	2.69E-04	1.76%
241Pu	5.45E+00	5.35E-04	5.35E-05	0.35%
242Pu	1.28E-04	1.26E-08	7.68E-08	0.00%
241Am	5.55E+00	5.45E-04	5.34E-03	34.91%
243Am	6.57E-05	6.44E-09	6.31E-08	0.00%
242Cm	4.78E-03	4.69E-07	1.50E-07	0.00%
243Cm	4.60E-04	4.51E-08	2.97E-07	0.00%
244Cm	1.06E-02	1.04E-06	5.40E-06	0.04%
TOTAL	**3.28E+03**	**3.21E-01**	**1.53E-02**	**100.00%**

15) When this project is completed, or operations cease, the facility shall notify the department and indicate whether or not any potential for airborne release occur (WAC 246-247-080(6)).

16) The department reserves the right to inspect and audit this unit during construction and operation, including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations (WAC 246-247-080 (1)).

17) All reports and records must be kept and reported according to 40 CFR 61, Subpart H. (WAC 246-247-080(2)).

18) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least 5 years (WAC 246-247-080 (8)).

19) If there is an unexpected release of radioactivity or is there is a shutdown or other condition that, if it were allowed to persist, would result in emissions or radionuclides in excess of any standards or limitations in the license or that lasts more than four hours, it must be reported to the department within 24 hours. Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in the approval

20) All measured or calculated emissions must be reported annually (WAC 246-247-080(3)).

21) The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).

22) Periodic confirmatory emission monitoring shall be verified using the following two methods. (1) Non destructive analysis to be performed at the end of the calendar year, and log is to be maintained with a record of the exhauster's activities for the pit work. This log shall include information as to location, start and stop time and date, total of hours of operation with purpose specified. Additionally, the ductwork, seams and potential release locations on the portable exhauster shall be smeared at the end of each day to demonstrate that no contamination is escaping. The results of this shall be entered as part of the exhauster's record log.

In the event that the exhauster is used on different emission units, the Department of Health reserves the right to request an nondestructive analysis / assay (NDA) after each exhauster job assignment (WAC 246-247-075(3)).

23) These Conditions and Limitations must be proceduralized prior to starting the activities described in the Notice of Construction.

24) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13) and WAC 246-247-075(6)). The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in the above cited regulation.

25) U.S. DOE shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5)).

200W P-242S-001

296-S-18
242-S Evaporator
Emission Unit ID: 163

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	2 parallel flow paths
	HEPA	2	2 in parallel with 2 in series
	Prefilter	1	2 in parallel

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

200W P-242T-001

296-T-17

242-T Evaporator

Emission Unit ID: 162

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT

ALARACT [WAC 246-247-040(4)]

BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	2 in parallel
	HEPA	4	2 trains with 2 parallel flow paths with 2 HEPAs in series (Minimum of 1 train operates at a time)
	Heater	Non-Operational	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

200W CWC

Central Waste Complex
Central Waste Complex
Emission Unit ID: 439

Abatement Technology (state only enforceable)

Applicable Requirements:
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology	Required Number of Units	Additional Description/Conditions
	[WAC 246-247-010(4)] [WAC 246-247-040(4)]	[WAC 246-247-010(4)] [WAC 246-247-060(5)]	[WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure	Radionuclides Requiring Measurement	Sampling Frequency
	[WAC 246-247-040(5)] [WAC 173--401-615(1)]	[WAC 173-401-615(1)]	[WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3)	Appendix B, Method 114(3)		Near field ambient monitoring program

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Environment Sampling; Ambient air monitors N-449, N-457, N-964, and N-433

This Emission Unit has 2 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Modification to Central Waste Complex (CWC) Radioactive Air Emission NOC for Vented Containers	NOC revision approval	1/4/2000	419

Conditions (state only enforceable)

1) Weekly smear sampling of 30 NucFil® filters is no longer required.
2) Periodic confirmatory measurement is a quarterly air sample collected for a two-week interval.

Project Title	Approval No.	Date Approved	NOC_ID
Modification to Central Waste Complex (CWC) Radioactive Air Emission NOC for Vented Containers	RTAM	8/24/1998	295

Conditions (state only enforceable)

1) The process is limited to the exact description described in this NOC.
2) The facility must be able to demonstrate that the workers associated with this emission unit are adequately trained in the use an maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures.
3) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that last more than four hours, it must be reported to the department within 24 hours. (Note: Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in the approval (paragraph 5)).
4) Container inventory shall be tracked (logged) using the SWITS database.
5) The department retains the right to conduct its own stack sampling, environmental monitoring or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing.

6) Periodic confirmatory sampling is required. It must consist of: As in Section 9 of the referenced NOC.

7) The facility shall make requested documents available in a timely manner for review.

8) If a positive smear is detected (>20dpm/100cm2 alpha and > 10,000 dpm/100cm2 for beta/gamma) while performing the routine survey as in Attachment A, the department shall be notified.

9) The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in the above cited regulation.

10) U.S. DOE shall comply with all requirements and limitations of this license.

11) The facility must maintain a log in an approved format for this activity or emission unit.

12) U.S. DOE shall monitor this project or emission unit as follows: See other conditions.

13) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13) and WAC 246-247-075(6)).

14) The radionuclides are limited to: As in Section 8 of this NOC.

15) Ambient air monitors N-449, N-457, N-964, N-433 shall be maintained for the duration of this project as monitors for diffuse fugitive emissions

16) The annual possession quantity is limited to: As in Section 9 of this NOC.

17) The department may require an ALARACT demonstration at any time.

18) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least 5 years.

19) This approval, with its conditions and limitations, constitutes an amendment to the Department's Radioactive Air Emissions License. This amendment must be included in the next revision of the Hanford Air Operation Permit.

20) The abated emission limit is 2.4E-5 mrem/yr to the MEI.

21) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections. At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet the requirements.

22) The required controls are: As in Section 6 of this NOC.

23) When this project is completed, or operations cease, the facility shall notify the department via a report of closure, including whether or not any potential for airborne release occur.

24) All reports and records must be kept and reported according to 40 CFR 61, Subpart H.

25) The department reserves the right to inspect and audit this unit during construction and operation, including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations.

26) All measured or calculated emissions must be reported annually.

200W P-296Z014-001

296-Z-14
PLUTONIUM FINISHING PLANT(Z PLANT)
Emission Unit ID: 391

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	2 fans, 1 fan is backup
	HEPA	2	3 parallel paths of 2 HEPAs in series, minimum of 1 path in operation

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

200W P-296Z015-001

296-Z-15
PLUTONIUM FINISHING PLANT(Z PLANT)
Emission Unit ID: 387

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	
	HEPA	1	
	Prefilter	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA	One 4 week period per year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Plutonium Finishing Plant Low-Level Waste Treatment Facility	AIR 92-710	7/30/1992	11

Conditions (state only enforceable)

1) Abated dose to the MEI is not expected to exceed 9.7E-05 mrem/yr.
2) Monitoring: shall use record sampler. The sampler probe and system design is to be consistent with ANSI N13.1 guidance for sampling particulate matter.
3) Process Description: PFP Liquid Low Level Waste Treatment Facility prior to discharge to crib 216-Z-20 Crib.
4) Control System: The ventilation system shall consist HEPA filters to control particulate radionuclides, which shall remove at least 99.95 percent.

200W P-296Z003-001

296-Z-3
PLUTONIUM FINISHING PLANT(Z PLANT)
Emission Unit ID: 386

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	2	2 parallel paths with minimum of 1 path in operation
	HEPA	2	2 parallel paths with 2 HEPAs in series, minimum of 1 path in operation
	Prefilter	2	In parallel
	Heater	1	
	Demister	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

200W P-296Z005-001

296-Z-5
PLUTONIUM FINISHING PLANT(Z PLANT)
Emission Unit ID: 389

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	HEPA	2	
	Fan	2	2 parallel flow paths with 2 fans in parallel

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Plutonium Finishing Plant W-460 "Plutonium Stabilization and Handling"	AIR 00-709	7/20/2000	450

Conditions (state only enforceable)

1) The annual possession quantities for all construction activities associated with the 296-Z-5 stack are limited to 1.2 E-5 curies for all radionuclides combined. The 296-Z-5 stack must remain operational during all construction

2) The 2736-ZB building will exhaust out of the existing 296-Z-5 stack through two stages of individually testable HEPA filters. They will have a minimum efficiency of 99.95% for particulate with a median diameter of 0.3

3) All differential pressure magnehelic gauges associated with 296-Z-5, 296-Z-7 and 296-Z-6 HEPA filters must be calibrated annually.

200W P-296Z006-001

296-Z-6
PLUTONIUM FINISHING PLANT(Z PLANT)
Emission Unit ID: 390

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	
	HEPA	2	2 stages for process operations

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Plutonium Finishing Plant W-460 "Plutonium Stabilization and Handling"	AIR 00-709	7/20/2000	450

Conditions (state only enforceable)

1) The only modification approved for the 2736–Z Building is the replacement of the current shelving for new larger units to store the new 3013 compliant cans. Only the new 3013 cans (considered sealed sources) are approved for long-term storage in the 2736-Z building. No modifications are to be made to the ventilation system that exhausts through the minor 296-Z-6 stack.

2) All differential pressure magnehelic gauges associated with 296-Z-5, 296-Z-7 and 296-Z-6 HEPA filters must be calibrated annually.

200W P-291S001-001

291-S-1
S PLANT (REDOX)
Emission Unit ID: 332

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	2	In parallel, only 1 operates at a time
	Sandfilter	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	1 week sample / year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

200W P-296T011-001

296-T-11
Solid Waste Management Facilities (TRUSAF)
Emission Unit ID: 61

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	One fan serves both 296-T-11 and
	HEPA	2	2 stage, last stage 4 in parallel (HEPA's serve both 296-T-11 and 296-T-12

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

200W P-296T012-001

296-T-12
Solid Waste Management Facilities (TRUSAF)
Emission Unit ID: 60

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	One fan serves both 296-T-11 and
	HEPA	2	2 stage, last stage 4 in parallel (HEPA's serve both 296-T-11 and 296-T-12

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

200W P-291T001-001

291-T-1
T PLANT COMPLEX
Emission Unit ID: 314

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	3	2 in series, 1 parallel (two fans operate while the third fan is a backup)
	HEPA	2	In series
	Prefilter	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

200W P-296T007-001

296-T-7
T PLANT COMPLEX
Emission Unit ID: 315

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	
	HEPA	1	
	Prefilter	1	
	Heater	1	
	Demister	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
T Plant Complex Secondary Containment and Leak Detection Upgrades	RTAM	6/12/1996	164

Conditions (state only enforceable)

1) Approval of T Plant secondary and leak detection upgrades to allow increased decontamination activities within the 2706-T building, and to initiate decon activities in the 2706-TA building and construct the 2706-TB holding tanks.

200W P-291U001-001

291-U-1
U PLANT
Emission Unit ID: 310

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	2	In parallel
	Sandfilter	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	1 week sample / year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

200W P-213W-001

296-W-3
WASTE COMPACTER
Emission Unit ID: 308

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	Non-Operational	This unit is inactive and will require an NOC to resume operation or a report of closure to deregister.
	HEPA	Non-Operational	This unit is inactive and will require an NOC to resume operation or a report of closure to deregister.

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

300 EP-305B-01-S

305 B Building
305 B BUILDING
Emission Unit ID: 197

Abatement Technology (state only enforceable)

Applicable Requirements:BARCT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	
	HEPA	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	2 week sample/year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

This Emission Unit has 2 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Modification of Annual Possession Quantity for 305B Building (modifies AIR 95-811)	AIR 98-1007	10/8/1998	319

Conditions (state only enforceable)

1) The department retains the right to conduct its own stack sampling, environmental monitoring or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing.

2) The process is limited to the exact description described in the NOC.

3) The required controls are: HEPA Filters (Two) Fume Hood and Room Exhaust.

4) This approval, with its conditions and limitations, constitutes an amendment to the Department's Radioactive Air Emissions License. This amendment must be included in the next revision of the Hanford Air Operating Permit.

5) The facility must be able to demonstrate that the workers associated with this emission unit are adequately trained in the use and maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures.

6) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that lasts more than four hours, it must be reported to the department within 24 hours. (Note: Applicable

standards(WAC 246-247-040)include unit specific emission limits (paragraph 5), the offsite dose standard(paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), or any limitations included in this approval(paragraph 5)).

7) U.S. DOE shall monitor this project or emission unit as follows: Continuous

8) The radionuclides re limited to: As listed in the NOC Letter # 98-EAP-455

9) The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in the above cited regulation.

10) The facility must maintain a log in an approved format for this activity or emission unit.

11) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13) and WAC 246-247-075(6)).

12) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections. At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet the requirements.

13) The abated emission limit is 1.56E-05 mrem/yr to the MEI.

14) The department may require an ALARACT demonstration at any time.

15) When this project is completed, or operations cease, the facility shall notify the department via a report of closure, including whether or not any potential for airborne release occur.

16) The department reserves the right to inspect and audit this unit during operation and operation including all activities, equipment, operation procedures, documents, data, and other records related to compliance with the

17) All measured or calculated emissions must be reported annually.

18) The annual possession quantity is limited to: NOC Letter # 98-EAP-455

19) If the department finds that the emission unit described in this NOC is not in compliance with the standards in WAC 246-247-040 during construction (as described in the NOC or during operation it reserves the right to require modifications to bring it into compliance.

20) All reports and records must be kept and reported according to 40 CFR 61, Subpart H.

21) U.S. DOE shall comply with all Conditions and Limitations of this license.

22) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least 5 years.

23) The facility shall make requested documents available in a timely manner for review.

Project Title	Approval No.	Date Approved	NOC_ID
305-B Building Modification	AIR 95-811	8/25/1995	105

Conditions (state only enforceable)

1) Control Technology 1 - high efficiency particulate air filter, 1 - fan

2) Potential-to-emit abated (total effective dose equivalent to the maximally exposed individual) 3.0 E-04 mrem/yr

3) Stack measurement - Periodic confirmatory measurements - 2 week sample/year

300 EP-306W-03-V

306 W Building
306-W MATLS DEV LAB
Emission Unit ID: 348

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	
	HEPA	2	In Series

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	2 week sample/year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
X-Ray and Low Level Waste Repackaging in the 306W Building	Shortform Approval	8/4/1997	233

Conditions (state only enforceable)

1) The exhaust air from the building will be HEPA filtered
2) Perform periodic monitoring

300 P-309PRTR-001

309-PRTR
309 Plutonium Recycle Test Reactor
Emission Unit ID: 195

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	Intermittent operation
	HEPA	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	1 per year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Smear Survey

This Emission Unit has 2 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Decontamination and Stabilization Activities For 309 Plutonium Recycle Test Reactor	NOC revision approval	9/8/1999	391

Conditions (state only enforceable)

1) WDOH Conditions and Limitations dated 8/18/98 (Shortform approval) are applicable. There are no new WDOH conditions that apply to this NOC.

Project Title	Approval No.	Date Approved	NOC_ID
Decontamination and Stabilization Activities For 309 Plutonium Recycle Test Reactor	Shortform Approval	8/18/1998	291

Conditions (state only enforceable)

1) Monitor emission using the existing 309-PR-TR stack sampling system.
2) Emissions shall be exhausted through the 309-PR-TR stack having a single stage of HEPA filtration with a minimum efficiency of 99.95 percent for 0.3 micron diameter particles.

300 EP-318-01-S

EP-318-01-S
318 Building
Emission Unit ID: 175

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology	Required Number of Units	Additional Description/Conditions
	[WAC 246-247-010(4)] [WAC 246-247-040(4)]	[WAC 246-247-010(4)] [WAC 246-247-060(5)]	[WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
			No controls

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure	Radionuclides Requiring Measurement	Sampling Frequency
	[WAC 246-247-040(5)] [WAC 173--401-615(1)]	[WAC 173-401-615(1)]	[WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	2 week sample/year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

This Emission Unit has 2 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Building 318 Modification and stack relocation	Shortform Approval	1/6/1998	251

Conditions (state only enforceable)

1) Unabated dose is 3.74E-07 mrem/year
2) Abated dose is 3.74E-07 mrem/year
3) Periodic confirmatory measurement = 2 week sample/year
4) There are no stack controls on the building exhaust
5) Annual possession quantity of radionuclides: inventory unchanged

Project Title	Approval No.	Date Approved	NOC_ID
Removal of HEPA Filtration in the 318 Building	RTAM	12/7/1995	131

300 EP-320-01-S

EP-320-01-S
320 Building
Emission Unit ID: 358

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	3	2 In parallel, 1 backup
	HEPA	2	In series

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	2 week sample/year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

300 EP-320-02-S

EP-320-02-S
320 Building
Emission Unit ID: 355

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	
	HEPA	2	In series

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	2 week sample/year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

300 EP-320-03-S

EP-320-03-S
320 Building
Emission Unit ID: 356

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	
	HEPA	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	2 week sample/year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

300 EP-320-04-S

EP-320-04-S
320 Building
Emission Unit ID: 357

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	
	HEPA	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	2 week sample/year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

300 EP-323-01-S

EP-323-01-S
323 MECH PROPERTIES
Emission Unit ID: 359

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
Equipment Room	HEPA	1	
Hot Cell	HEPA	2	In series
	Fan	1	Common to both areas

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	2 week sample/year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

300 EP-326-01-S

EP-326-01-S
326 MATERIAL SCIENCE LAB
Emission Unit ID: 362

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
Hot cells and hoods	HEPA	1	
Hoods, SEM	HEPA	2	In series
	Fan	3	In parallel, common to both areas

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	2 week sample/year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

This Emission Unit has 2 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Xenon Research Activities in the Materials Sciences Laboratory (326 Building)	Shortform Approval	10/17/2000	493

Conditions (state only enforceable)

1) U.S. DOE shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5)).

2) This approval, with its Conditions and Limitations, constitutes and amendment to the Department's Radioactive Air Emission License. This amendment must be included in the next revision of the Hanford Air Operating Permit.

3) If the department finds that the emission unit described in this NOC, is not in compliance with the standards in WAC 245-247-040 during construction (as described in this NOC, or during operation, it reserves the right to require modifications to bring it into compliance.

4) The facility shall notify the department at least seven days prior to any planned preoperational testing of the emission unit's emissions control, monitoring or containment systems. The department reserves the right to

5) Periodic confirmatory sampling is required: Periodic monitoring in accordance with stack EP-326-01-S. It is understood that this stack is currently be monitored on a continuous basis. It is also understood that this stack is registered with the Department of Health as a minor stack.

6) The department retains the right to conduct its own stack sampling, environmental monitoring or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing.

7) The facility must be able to demonstrate that the workers associated with this emission unit are adequately trained in

the use an maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures.

8) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13)and WAC 246-247-075(6)).

9) The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in, or equivalent to, those listed in the above cited regulation.

10) The department reserves the right to inspect and audit this unit during construction and operation, including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations.

11) The department may require an ALARACT demonstration at any time.

12) All reports and records must be kept and reported according to 40 CFR 61, Subpart H.

13) All measured or calculated emissions must be reported annually.

14) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that last more than four hours, it must be reported to the department within 24 hours. (Note: Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in the approval (paragraph 5)).

15) When this project is completed, or operations cease, the facility shall notify the department via a report of closure, including whether or not any potential for airborne releases occur.

16) The facility must maintain a log in an approved format for this activity or emission unit.

17) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least 5 years.

18) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections. At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet the requirements.

19) The facility shall make requested documents available in a timely manner for review.

20) The process is limited to the exact description in the NOC.

21) The required controls are: As described in Section 6. Proposed Controls.

22) The radionuclides are limited to: Those described in Section 10. Annual Possession Quantity..

23) The annual possession quantity is limited to: See Section 10 Annual Possession Quantity

24) The abated emission limit is: 4.54E-07 mrem/yr to the MEI.

Project Title	Approval No.	Date Approved	NOC_ID
Moving the Radon Generator Project from the 329 Building to the 326 Building.	RTAM	3/21/2000	467

300 EP-327-02-V

EP-327-02-V
327 BUILDING
Emission Unit ID: 408

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Prefilter	1	Serves compactor area.
	Fan	1	
	HEPA	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3)	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	One 4-week sample per year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sampling

300 EP-329-01-S

EP-329-01-S
329 BUILDING
Emission Unit ID: 366

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	2	2 in parallel, 1 Standby (3 total)
	HEPA	2	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)

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	2 week sample/year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
329 Building, Chemical Sciences Laboratory	AIR 95-205	2/24/1995	64

300 EP-331G-01-S

EP-331G-01-S
331 Building
Emission Unit ID: 342

Abatement Technology (state only enforceable)

Applicable Requirements:
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology	Required Number of Units	Additional Description/Conditions
	[WAC 246-247-010(4)] [WAC 246-247-040(4)]	[WAC 246-247-010(4)] [WAC 246-247-060(5)]	[WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure	Radionuclides Requiring Measurement	Sampling Frequency
	[WAC 246-247-040(5)] [WAC 173--401-615(1)]	[WAC 173-401-615(1)]	[WAC 246-247-075(1)] [WAC 173-401-615(1)]

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Registration of Existing Stacks at the 331-G Building	RTAM	1/16/1998	252

Conditions (state only enforceable)

1) Unabated dose is 1.90E-08 mrem/year
2) Annual emissions estimates are based on engineering calculations; no monitoring because quantity too small to
3) Abated dose is 1.90E-10 mrem/year
4) Radionuclides of concern include 14C, 3H, 32P, and 35S (radioactive tracers).
5) A single stage HEPA filter is installed at each stack
6) Annual possession quantity limited to: Total 4.25E-03 Ci

300 EP-331G-02-S

EP-331G-02-S
331 Building
Emission Unit ID: 343

Abatement Technology (state only enforceable)

Applicable Requirements:
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology	Required Number of Units	Additional Description/Conditions
	[WAC 246-247-010(4)] [WAC 246-247-040(4)]	[WAC 246-247-010(4)] [WAC 246-247-060(5)]	[WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure	Radionuclides Requiring Measurement	Sampling Frequency
	[WAC 246-247-040(5)] [WAC 173--401-615(1)]	[WAC 173-401-615(1)]	[WAC 246-247-075(1)] [WAC 173-401-615(1)]

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Registration of Existing Stacks at the 331-G Building	RTAM	1/16/1998	252

Conditions (state only enforceable)

1) Abated dose is 1.90E-10 mrem/year
2) Radionuclides of concern include 14C, 3H, 32P, and 35S (radioactive tracers).
3) Unabated dose is 1.90E-08 mrem/year
4) Annual possession quantity limited to: Total 4.25E-03 Ci
5) A single stage HEPA filter is installed at each stack
6) Annual emissions estimates are based on engineering calculations; no monitoring because quantity too small to

300 EP-331-02-S

EP-331-02-S (inactive)
331 LIFE SCI LAB
Emission Unit ID: 509

Abatement Technology (state only enforceable)

Applicable Requirements:BARCT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology	Required Number of Units	Additional Description/Conditions
	[WAC 246-247-010(4)] [WAC 246-247-040(4)]	[WAC 246-247-010(4)] [WAC 246-247-060(5)]	[WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure	Radionuclides Requiring Measurement	Sampling Frequency
	[WAC 246-247-040(5)] [WAC 173--401-615(1)]	[WAC 173-401-615(1)]	[WAC 246-247-075(1)] [WAC 173-401-615(1)]

This Emission Unit has 2 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Portable Radon Research Facility	AIR 96-506	5/15/1996	158

Conditions (state only enforceable)

1) The potential to emit form the Radon Generating Facility must not, when added to another source term, affect the NESHAPS status of the emission unit without writing a new NOC to DOH and to the EPA

2) All controls, or equivalent, committed to in the original NOC are require. If changes are planned, approval must be sought from DOH

Project Title	Approval No.	Date Approved	NOC_ID
331 Building Radon Research Facility	AIR 95-803	8/8/1995	95

Conditions (state only enforceable)

1) Control Technology: 2 - high efficiency particulate air filters (2 in series); 3 fans (2 in parallel, 1 backup); Additional controls: in-line HEPA, dehumidifier, and charcoal beds

2) Process description: This project primarily focuses on radon exposures of animals and addresses the major biologic effects and factors influencing risks of indoor radon exposures. Both invitro and invivo experiments are performed using laboratory animals and cell lines. The radon generator contains approximately 1 Ci of a radium chloride solution, which will generate up to 130 uCi/minute of Rn-222. The radon is routed directly to HEPA filters and charcoal columns of the radon-holdup system. Exhaust form the radon holdup system is routed to the building exhaust that is HEPA filtered.

3) Stack measurement: Continuous measurement. Additional measurement: Radon

4) Potential-to-emit abated (total effective dose equivalent to the maximally exposed individual): 7.0 E-03 mrem/yr.

300 P-340DECON-001

340 Decon
340 BUILDING
Emission Unit ID: 422

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Moisture separator	1	Serves the decon sump
	Fan	1	
	HEPA	2	In series, both HEPA filters are tested as a single unit
	Prefilter	1	3 in parallel, Change Room doesn't pass through prefilter

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 weeks/year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

300 P-340BBLDG-001

340-B-BLDG (inactive)
340 BUILDING
Emission Unit ID: 424

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	Fan operates intermittently
	HEPA	1	2 in parallel (minimum of 1 active flow path providing 1 stage of HEPA filtration)
	Prefilter	1	In parallel (minimum of 1 active flow path providing 1 stage of HEPA filtration)

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	monitoring not currently performed	4 weeks/year (inactive)

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

300 EP-3730-01-S

EP-3730-01-S
3730 GAMMA IRRAD FAC
Emission Unit ID: 417

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	
	HEPA	2	In series

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	2 week sample/year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

300 EP-3020-01-S

EP-3020-01-S
EMSL
Emission Unit ID: 307

Abatement Technology (state only enforceable)

Applicable Requirements:BARCT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	
	HEPA	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	2 week sample/year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

This Emission Unit has 2 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Environmental Molecular Sciences Laboratory (EMSL) Uranyl nitrate hexahydrate project	Shortform Approval	12/16/1997	248

Conditions (state only enforceable)

1) Unabated emissions will be reported annually using mass balance (engineering calculations)
2) No periodic confirmatory measurement is required.
3) Abated dose: 6.8E-09 mrem/yr to the MEI
4) The annual possession quantities of depleted uranium (uranyl nitrate hexahydrate) - [234U, 235U, and 238U]for each calendar year cannot be exceeded without approval from Health. [The estimated annual quantities are 6.48 nCi for Calendar Year (CY) 1997, 19.2 nCi for Fiscal Year (FY) 1998, and 19.2 nCi for FY 1999.]
5) The exhausted air from the evacuated cryostat chamber will be HEPA filtered and tied directly into the building exhaust of stack #4.
6) Unabated dose: 6.8E-07 mrem/yr to the MEI

Project Title	Approval No.	Date Approved	NOC_ID
Environmental Molecular Sciences Lab (EMSL) Construction	AIR 94-803	8/2/1994	41

Conditions (state only enforceable)

1) Potential-to-emit abated (total effective dose equivalent to the maximally exposed individual) 2.6 E-03 mrem/yr.
2) Stack Measurement - Periodic Confirmatory Measurements - 2 week sample/year
3) Control Technology 1 - high efficiency particulate air filter, 1- fan.

300 S-RCF-EX 002

RCF-2-EX
Radiological counting facility
Emission Unit ID: 184

Abatement Technology (state only enforceable)

Applicable Requirements:BARCT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	
	HEPA	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3)	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	quarterly

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Relocating RCF from 100-N to 300 Area	AIR 00-407	5/4/2000	490

1. U.S. DOE shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5)).
2. These Conditions and Limitations must be proceduralized prior to starting the activities described in the revised Notice of Construction.
3. This approval, with its Conditions and Limitations, must be included in the next revision of the Hanford Air Operating Permit (WAC 246-247-060(1)(e) and (2)(c)), and will at that time, constitute a revision of the Radioactive Air Emissions License.
4. If the department finds that the emission unit described in this NOC ,is not in compliance with the standards in WAC 246-247-040 during construction or during operation, it reserves the right to require modifications to bring it into compliance (WAC 246-247-060(2)(d)).
5. The facility shall notify the department at least seven days prior to any planned preoperational testing of the emission unit's emissions control, monitoring or containment systems. The department reserves the right to observe any such testing (WAC 246-247-060(4)). Notification may be by phone, electronic mail or written correspondence.
6. This NOC approval includes the following activities which might be performed in the RCF which include sample preparation, evaporation of liquids, wet ball milling of soils and other solids, mounting of air filters and other smears. Sample preparation activities may be conducted in a HEPA filtered ventilated enclosure depending on the sample activity level or contaminates determined by field screening. All samples requiring invasive preparation techniques will be handled in the sample preparation room of the MO-432 Trailer, which is exhausted through the HEPA filtered emission unit RCF-2-EX that contains a HEPA filter.
7. The department retains the right to conduct its own stack sampling, environmental monitoring or other testing, as required around this unit to assure compliance. If the

department so decides, the facility must make provision for such testing (WAC 246-247-075(10) and (11)).
8. The emission controls shall include a single HEPA filter in the exhaust duct of the MO-423 Trailer. The exhaust is then pulled through a fan and exits through a rigid duct. The flow rate shall be 600 to 650 CFM. The HEPA filter shall be efficiency tested annually or after modification or maintenance to the system that violates the integrity of the airflow. The HEPA filters shall be changed as necessary due to pressure gauge readings falling outside the operating range or with the failure of the annual efficiency test (WAC 246-247-075(3)).
9. The facility must be able to demonstrate that the workers associated with this emission unit are adequately trained in the use and maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures (WAC 246-247-075(12)).
10. The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13) and WAC 246-247-075(6)). The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in the above cited regulation.
11. The department reserves the right to inspect and audit this unit during construction and operation, including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations (WAC 246-247-080(l)).
12. The department may require an ALARACT demonstration at any time (WAC 246-247-080(I)).
13. All reports and records must be kept and reported according to 40 CFR 61, Subpart H (WAC 246-247-080(2)).
14. All measured or calculated emissions must be reported annually (WAC 246-247-080(3)).
15. If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that lasts more than four hours, it must be reported to the department within 24 hours. Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph I), BARCT (paragraph 3) or ALARACT (paragraph 4) whichever is applicable, or any limitations included in this approval (paragraph 5).
16. When this project is completed, or operations cease, the facility shall notify the department and indicate whether or not any potential for airborne release occurred (WAC 246-247-080(6)).
17. Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least five years (WAC 246-247-080(8)).
18. This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections, as required by EPA (WAC 246-247-080(g)). At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet the requirements.
19. The facility shall make requested documents available in a timely manner for review (WAC 246-247-080(10)).
20. This facility must maintain a log in an approved format for this activity or emission unit (WAC 246-247-080(7)).
21. The abated dose limit for this NOC shall not exceed 7.07E-07 mrem/yr. to the MEI.
22. Monitoring shall consist of periodic confirmatory monitoring. The samples shall be taken quarterly and sent for analysis.

400 P-437-002

437-1-61
437 Maintenance and Storage (MASF)
Emission Unit ID: 399

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	Intermittent operation
	HEPA	1	16 Parallel flow paths, each path provides 1 prefilter minimum of 1 in operation; intermittent operation
	Prefilter	1	16 Parallel flow paths, each path provides 1 prefilter minimum of 1 in operation intermittent operation

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

400 P-437MN&ST-001

437-MN&ST
437 Maintenance and Storage (MASF)
Emission Unit ID: 385

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
Contaminated Equipment Repair	HEPA	1	2 in parallel
Contaminated Equipment Repair	Prefilter	1	
Waste Tank 1 & 2 Vents	HEPA	1	1 stage with 2 parallel flowpaths
Radiological Waste Tank Room Ventilation	HEPA	1	
Radiological Waste Tank Room Ventilation	Prefilter	1	
Liquid Radioactive Waste Loadout Facility Ventilation	HEPA	1	
Liquid Radioactive Waste Loadout Facility Ventilation	Prefilter	1	
Decon 1 & 2	HEPA	1	2 parallel flow paths, minimum of one HEPA operational
Shipping Cask Maintenance and Decon Glove Box	HEPA	1	2 parallel flow paths, minimum of one HEPA operational
Shipping Cask Maintenance and Decon Glove Box	Prefilter	1	
	Fan	2	In parallel, serves all MN&ST, intermittent use

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

400 Sodium Storage Facility

FFTF-402-1
FAST FLUX TEST FACILITY COMPLEX
Emission Unit ID: 398

Abatement Technology (state only enforceable)

Applicable Requirements:
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology	Required Number of Units	Additional Description/Conditions
	[WAC 246-247-010(4)] [WAC 246-247-040(4)]	[WAC 246-247-010(4)] [WAC 246-247-060(5)]	[WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure	Radionuclides Requiring Measurement	Sampling Frequency
	[WAC 246-247-040(5)] [WAC 173--401-615(1)]	[WAC 173-401-615(1)] TOTAL ALPHA TOTAL BETA	[WAC 246-247-075(1)] [WAC 173-401-615(1)]

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Construction and Operation of Sodium Storage Facility	AIR 95-204	2/24/1995	65

400 P-FFTFCBEX-001

FFTF-CB-EX
FAST FLUX TEST FACILITY COMPLEX
Emission Unit ID: 397

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
Access Control Area Process	Fan	2	2 in parallel, one leg has 2 in series, intermittent use
Access Control Area Process	HEPA	1	Emergency standby
Access Control Area Process Operations	Prefilter	1	Emergency standby
Bldg 405 Process Operations	Fan	2	In parallel (intermittent use)
Bldg 405 Process Operations	HEPA	1	Emergency standby
Bldg 405 Process Operations	Prefilter	1	Emergency standby

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA Tritium	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

400 P-FFTFHTTR-001

FFTF-HT-TR
FAST FLUX TEST FACILITY COMPLEX
Emission Unit ID: 396

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	2	In parallel, intermittent use
	Fan (Booster)	1	Emergency standby
	HEPA	1	Emergency standby
	Prefilter	1	Emergency standby

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

400 P-FFTFRESB-001

FFTF-RE-SB
FAST FLUX TEST FACILITY COMPLEX
Emission Unit ID: 395

Abatement Technology (state only enforceable)

Applicable Requirements:ALARACT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	Intermittent use No other controls

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
FFTF Ion Exchange Resin Columns Changeout	AIR 97-1203	12/10/1997	246

600 S-6266-001

696-W-1

Waste Sampling and Characterization Facility WSCF
Emission Unit ID: 62

Abatement Technology (state only enforceable)

Applicable Requirements:BARCT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	2	In parallel
	HEPA	2	In parallel
	Prefilter	2	In parallel

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Waste Sampling & Characterization Facility	AIR 00-802	8/10/2000	451

Conditions (state only enforceable)

1) U.S. DOE shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5)).

2) These Conditions and Limitations must be proceduralized prior to starting the activities described in the Notice of Construction before the specified activity is to begin. Copies of these procedures must be provided to the department before starting these activities.

3) This approval, with its Conditions and Limitations must be included in the next revision of the Hanford Air Operating Permit (WAC 246-247-060(1)(e) and (2)(c)) and will at that time, constitute a revision of the Radioactive Air Emissions License.

4) If the department finds that the emission unit described in this NOC is not in compliance with the standards in WAC 246-247-040 during construction (as described in the NOC or during operation it reserves the right to require modifications to bring it into compliance (WAC 246-247-060(2)(d)).

5) The facility shall notify the department at least seven days prior to any planned preoperational testing of the emission unit's emissions control, monitoring or containment systems. The department reserves the right to observe such tests (WAC 246-247-060(4)).

6) The U.S. DOE shall monitor these emission units as follows: 696-W-1 and 696-W-2 emission units shall be monitored periodically. The periodic sampling shall consist of a sample being drawn a minimum of two weeks per quarter. Periodic radiological surveys of swipes or surfaces associated with 600 J NONPOINT 033, J NONPOINT 023, 600 J NONPOINT 031, and 600 J NONPOINT 030 must be conducted to verify compliance.

7) The department reserves the right to conduct its own environmental monitoring or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing (WAC 246-247-075(10)).

8) The facility must be able to demonstrate that the workers associated with these emission units are adequately trained in the use and maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures (WAC 246-247-075(12)).

9) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from these units (WAC 246-247-075(13) and WAC 246-247-075(6)). The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in the above-cited regulation.

10) The department reserves the right to inspect and audit this unit during construction and operation including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations (WAC 246-247-080(1)). Periodic inspections will occur.

11) The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).

12) All reports and records must be kept and reported according to 40 CFR 61, Subpart H. (WAC 246-247-080(2)).

13) All measured or calculated emissions must be reported annually (WAC 246-247-080(3)).

14) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that lasts more than four hours, it must be reported to the department within 24 hours. Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in this approval

15) When this project is completed, or operations cease, the facility shall notify the department via a report of closure, and indicate whether or not any potential for airborne release occurred (WAC 246-247-080(6)).

16) The facility must maintain a log in an approved format by the department for the surveys and smears required in approval condition number six.

17) Records must be readily (promptly) available for these units. These records must be maintained onsite, and must be retained for at least five years (WAC 246-247-080(8)).

18) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections, as required by EPA (WAC 246-247-080(9)). At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet the requirements.

19) The facility shall make requested documents available in a timely manner for review (WAC 246-247-080(10)).

20) The Waste Sampling Characterization Facility is limited to the following process descriptions for emission unit.

* WSCF provides analytical services to support chemical and radiological analyses conducted on a variety of solid, liquid, and vapor media, as required by the Resource Conservation and Recovery Act (RCRA) of 1976, Comprehensive Environmental Response, Compensation, and Liability Act of 1980, Safe Drinking Water Act of 1974, Toxic Substance Control Act of 1976, Clean Water Act of 1977, and the Clean Air Act of 1990 requirements.

WESF consists of the following:

* 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. Wastewater 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 wastewater drums are moved to various locations with WSCF.

* 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.

* Environmental data including a computer center - This is a non-radiological building and will not be addressed further.

* Environmental Sample Archive Building (600 J non-point 032) - This building provides for controlled storage, indexing, categorizing 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.

* Mobile Laboratory Storage Facility (600 J non-point 031) - 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 a calibration laboratory instrumentation used in the mobile laboratories, and a sample preparation area for adding chemical buffers and preservatives to sample containers. This building also provides for temporary storage of drums, or other waste packages contained with low levels of radioactive material. Less than 100 drums are stored at any one time.

* Solid Waste Storage Building (600 J non-point 030) - This open-sided building provides for temporary storage of drums or other low-level waste packages. Less than 100 drums are stored at any one time.

* Contaminated Liquid Waste Retention Vault (600 J non-point 033) - This 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 for temporary storage of drums, or other waste packages contaminated with low levels of radioactive material. Less than 100 drums are stored at any one time.

* 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 bunghole or other opening, and flexible hose transfers the liquid to the tanker.

* Sample Equipment Cleaning Facility - This facility includes a calibration and laboratory equipment room equipped with a fume hood for solvent cleaning of tools used for collecting samples from the field. This is a non-radiological facility and will not be addressed further.

21.) The radiological control technology requirements are as follows:

* 696-W-1 shall have a pre-filter and a HEPA filter before entering the exhaust stack. The flow rate shall be kept in a range of 54,000 CFM plus or minus 10%. When the ventilation system exits the analytical laboratory building and divides into legs, each leg must consist of a damper, a pre-filter, a HEPA filter bank (4x3), a damper, and a fan. The pre-filter must be a high-density micro media with an average efficiency of 25 to 30 percent. The HEPA filter assembly housings must have bagout provisions. The pre-filter housing must be designed for ease of filter change without increased dust loading on the HEPA filters. Two 50% capacity exhaust fans are installed and operate with parallel under normal power.

* 696-W-2 stack operates a ventilation system that splits into two legs. Each leg of the parallel system must consist of a damper, a pre-filter, a HEPA filter bank (4x3), and a damper. The installed filtration system provides a minimum of 99.95% collection efficiency. After the air passes through the parallel system, the legs join together and pass through the fan. The airflow is divided into two paths, with 10% of the airflow exhausting directly to the stack, and the other 90% of flow recycling back into the building. The damper and fan regulate the flow.

* 600 J non-point 032 will control emissions by the structure itself.

* 600 J non-point 031 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.

* 600 J non-point 030 will control emissions by controlling the waste packages. Minimize the external contamination in accordance with established radiation control procedures.

* 600 J non-point 033 will control emissions by having a passive vent HEPA type high efficiency filter on each tank.

* 600 J non-point portable tanker source will control emissions by passively venting the portable tanker.

21) The annual possession quantity for each building is as follows:

* 696-W-1 stack can handle 0.33 curies per year of plutonium 239 and 6.80 curies per year of strontium 90.

* 696-W-2 stack can handle 0.33 curies per year of plutonium 239 and 6.80 curies per year of strontium 90.

* 600 J non-point 032 can handle 0.33 curies per year of plutonium 239 and 6.80 curies per year of strontium 90.

* 600 J non-point 031 can handle 0.33 curies per year of plutonium 239 and 6.80 curies per year of strontium 90.

* 600 J non-point 030 the annual possession quantity for this emission unit must abide by the vented container Notice of Construction.

22) The abated and unabated emission limits are as follows:

* 696-W-1 Stack:
Unabated: 3.3 E-4 Ci/yr Pu-239, 6.8 E-3 Ci/yr Sr-90
Abated: 1.7 E-7 Ci/yr Pu-239, 3.4 E-6 Ci/yr Sr-90

* 696-W-2 Stack:
Unabated: 3.3 E-4 Ci/yr Pu-239, 6.8 E-3 Ci/yr Sr-90
Abated: 1.7 E-7 Ci/yr Pu-239, 3.4 E-6 Ci/yr Sr-90

* 600 J Non-Point 032:
Unabated: 3.3 E-4 Ci/yr Pu-239, 6.8 E-3 Ci/yr Sr-90
Abated: 3.3 E-6 Ci/yr Pu-239, 6.8 E-5 Ci/yr Sr-90

* 600 J Non-Point 031:
Unabated: 3.3 E-4 Ci/yr Pu-239, 6.8 E-3 Ci/yr Sr-90
Abated: 3.3 E-7 Ci/yr Pu-239, 6.8 E-6 Ci/yr Sr-90

* 600 J Non-Point 033:
Unabated: 3.3 E-4 Ci/yr Pu-239, 6.8 E-3 Ci/yr Sr-90
Abated: 3.3 E-6 Ci/yr Pu-239, 6.8 E-5 Ci/yr Sr-90

* 600 J Non-Point Source, Portable Tanker:
Unabated: 3.3 E-4 Ci/yr Pu-239, 6.8 E-3 Ci/yr Sr-90
Abated: 3.3 E-4 Ci/yr Pu-239, 6.8 E-3 Ci/yr Sr-90

23) The annual possession quantity of plutonium and strontium are considered conservative and noted that these radionuclides representative types of alpha and beta radiation that this facility expects to handle. The facility needs to verify annually that plutonium and strontium are the most conservative radionuclides this facility handles.

600 S-6266-002

696-W-2
Waste Sampling and Characterization Facility WSCF
Emission Unit ID: 63

Abatement Technology (state only enforceable)

Applicable Requirements:BARCT
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
	Fan	1	An additional standby fan recirculates the air flow back to Bldg. 6266 or can vent it to the atmosphere.
	HEPA	2	In parallel
	Prefilter	2	In parallel

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Record Sample

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Waste Sampling & Characterization Facility	AIR 00-802	8/10/2000	451

Conditions (state only enforceable)

1) This approval, with its Conditions and Limitations must be included in the next revision of the Hanford Air Operating Permit (WAC 246-247-060(1)(e) and (2)(c)) and will at that time, constitute a revision of the Radioactive Air Emissions License.

2) If the department finds that the emission unit described in this NOC is not in compliance with the standards in WAC 246-247-040 during construction (as described in the NOC or during operation it reserves the right to require modifications to bring it into compliance (WAC 246-247-060(2)(d)).

3) The facility shall notify the department at least seven days prior to any planned preoperational testing of the emission unit's emissions control, monitoring or containment systems. The department reserves the right to observe such tests (WAC 246-247-060(4)).

4) The U.S. DOE shall monitor these emission units as follows: 696-W-1 and 696-W-2 emission units shall be monitored periodically. The periodic sampling shall consist of a sample being drawn a minimum of two weeks per quarter. Periodic radiological surveys of swipes or surfaces associated with 600 J NONPOINT 033, J NONPOINT 023, 600 J NONPOINT 031, and 600 J NONPOINT 030 must be conducted to verify compliance.

5) The department reserves the right to conduct its own environmental monitoring or other testing, as required around

this unit to assure compliance. If the department so decides, the facility must make provision for such testing (WAC 246 247-075(10)).

6) The facility must be able to demonstrate that the workers associated with these emission units are adequately trained in the use and maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures (WAC 246-247-075(12)).

7) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from these units (WAC 246-247-075(13) and WAC 246-247-075(6)). The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in the above-cited regulation.

8) The department reserves the right to inspect and audit this unit during construction and operation including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations (WAC 246-247-080(1)). Periodic inspections will occur.

9) The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).

10) All reports and records must be kept and reported according to 40 CFR 61, Subpart H. (WAC 246-247-080(2)).

11) All measured or calculated emissions must be reported annually (WAC 246-247-080(3)).

12) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that lasts more than four hours, it must be reported to the department within 24 hours. Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in this approval

13) When this project is completed, or operations cease, the facility shall notify the department via a report of closure, and indicate whether or not any potential for airborne release occurred (WAC 246-247-080(6)).

14) The facility must maintain a log in an approved format by the department for the surveys and smears required in approval condition number six.

15) Records must be readily (promptly) available for these units. These records must be maintained onsite, and must be retained for at least five years (WAC 246-247-080(8)).

16) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections, as required by EPA (WAC 246-247-080(9)). At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet the requirements.

17) The facility shall make requested documents available in a timely manner for review (WAC 246-247-080(10)).

18) The Waste Sampling Characterization Facility is limited to the following process descriptions for emission unit.

* WSCF provides analytical services to support chemical and radiological analyses conducted on a variety of solid, liquid, and vapor media, as required by the Resource Conservation and Recovery Act (RCRA) of 1976, Comprehensive Environmental Response, Compensation, and Liability Act of 1980, Safe Drinking Water Act of 1974, Toxic Substance Control Act of 1976, Clean Water Act of 1977, and the Clean Air Act of 1990 requirements.

WESF consists of the following:

* 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. Wastewater 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 wastewater drums are moved to various locations with WSCF.

* 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.

* Environmental data including a computer center - This is a non-radiological building and will not be addressed further.

* Environmental Sample Archive Building (600 J non-point 032) - This building provides for controlled storage, indexing, categorizing 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.

* Mobile Laboratory Storage Facility (600 J non-point 031) - 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 a calibration laboratory instrumentation used in the mobile laboratories, and a sample preparation area for adding chemical buffers and preservatives to sample containers. This building also provides for temporary storage of drums, or other waste packages contained with low levels of radioactive material. Less than 100 drums are stored at any one time.

* Solid Waste Storage Building (600 J non-point 030) - This open-sided building provides for temporary storage of drums or other low-level waste packages. Less than 100 drums are stored at any one time.

* Contaminated Liquid Waste Retention Vault (600 J non-point 033) - This 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 for temporary storage of drums, or other waste packages contaminated with low levels of radioactive material. Less than 100 drums are stored at any one time.

* 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 bunghole or other opening, and flexible hose transfers the liquid to the tanker.

* Sample Equipment Cleaning Facility - This facility includes a calibration and laboratory equipment room equipped with a fume hood for solvent cleaning of tools used for collecting samples from the field. This is a non-radiological facility and will not be addressed further.

19) The radiological control technology requirements are as follows:

* 696-W-1 shall have a pre-filter and a HEPA filter before entering the exhaust stack. The flow rate shall be kept in a range of 54,000 CFM plus or minus 10%. When the ventilation system exits the analytical laboratory building and divides into legs, each leg must consist of a damper, a pre-filter, a HEPA filter bank (4x3), a damper, and a fan. The pre-filter must be a high-density micro media with an average efficiency of 25 to 30 percent. The HEPA filter assembly housings must have bagout provisions. The pre-filter housing must be designed for ease of filter change without increased dust loading on the HEPA filters. Two 50% capacity exhaust fans are installed and operate with parallel under normal power.

* 696-W-2 stack operates a ventilation system that splits into two legs. Each leg of the parallel system must consist of a damper, a pre-filter, a HEPA filter bank (4x3), and a damper. The installed filtration system provides a minimum of 99.95% collection efficiency. After the air passes through the parallel system, the legs join together and pass through the fan. The airflow is divided into two paths, with 10% of the airflow exhausting directly to the stack, and the other 90% of flow recycling back into the building. The damper and fan regulate the flow.

* 600 J non-point 032 will control emissions by the structure itself.

* 600 J non-point 031 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.

* 600 J non-point 030 will control emissions by controlling the waste packages. Minimize the external contamination in accordance with established radiation control procedures.

* 600 J non-point 033 will control emissions by having a passive vent HEPA type high efficiency filter on each tank.

600 J non-point portable tanker source will control emissions by passively venting the portable tanker.

20) The annual possession quantity for each building is as follows:

* 696-W-1 stack can handle 0.33 curies per year of plutonium 239 and 6.80 curies per year of strontium 90.

* 696-W-2 stack can handle 0.33 curies per year of plutonium 239 and 6.80 curies per year of strontium 90.

* 600 J non-point 032 can handle 0.33 curies per year of plutonium 239 and 6.80 curies per year of strontium 90.

* 600 J non-point 031 can handle 0.33 curies per year of plutonium 239 and 6.80 curies per year of strontium 90.

* 600 J non-point 030 the annual possession quantity for this emission unit must abide by the vented container Notice of Construction.

21) The abated and unabated emission limits are as follows:

* 696-W-1 Stack:
Unabated: 3.3 E-4 Ci/yr Pu-239, 6.8 E-3 Ci/yr Sr-90
Abated: 1.7 E-7 Ci/yr Pu-239, 3.4 E-6 Ci/yr Sr-90

* 696-W-2 Stack:
Unabated: 3.3 E-4 Ci/yr Pu-239, 6.8 E-3 Ci/yr Sr-90
Abated: 1.7 E-7 Ci/yr Pu-239, 3.4 E-6 Ci/yr Sr-90

* 600 J Non-Point 032:
Unabated: 3.3 E-4 Ci/yr Pu-239, 6.8 E-3 Ci/yr Sr-90
Abated: 3.3 E-6 Ci/yr Pu-239, 6.8 E-5 Ci/yr Sr-90

* 600 J Non-Point 031:
Unabated: 3.3 E-4 Ci/yr Pu-239, 6.8 E-3 Ci/yr Sr-90
Abated: 3.3 E-7 Ci/yr Pu-239, 6.8 E-6 Ci/yr Sr-90

* 600 J Non-Point 033:
Unabated: 3.3 E-4 Ci/yr Pu-239, 6.8 E-3 Ci/yr Sr-90
Abated: 3.3 E-6 Ci/yr Pu-239, 6.8 E-5 Ci/yr Sr-90

* 600 J Non-Point Source, Portable Tanker:
Unabated: 3.3 E-4 Ci/yr Pu-239, 6.8 E-3 Ci/yr Sr-90
Abated: 3.3 E-4 Ci/yr Pu-239, 6.8 E-3 Ci/yr Sr-90

22) The annual possession quantity of plutonium and strontium are considered conservative and noted that these radionuclides representative types of alpha and beta radiation that this facility expects to handle. The facility needs to verify annually that plutonium and strontium are the most conservative radionuclides this facility handles.

23) U.S. DOE shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5)).

24) These Conditions and Limitations must be proceduralized prior to starting the activities described in the Notice of Construction before the specified activity is to begin. Copies of these procedures must be provided to the department before starting these activities.

Hanford Sitewide W-PORTEX 021

Guzzler use on the Hanford Site
GUZZLER
Emission Unit ID: 476

Abatement Technology (state only enforceable)

Applicable Requirements:
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology	Required Number of Units	Additional Description/Conditions
	[WAC 246-247-010(4)] [WAC 246-247-040(4)]	[WAC 246-247-010(4)] [WAC 246-247-060(5)]	[WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure	Radionuclides Requiring Measurement	Sampling Frequency
	[WAC 246-247-040(5)] [WAC 173--401-615(1)]	[WAC 173-401-615(1)]	[WAC 246-247-075(1)] [WAC 173-401-615(1)]

This Emission Unit has 2 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Use of the Guzzler Vacuum Excavation System for Radiologically Limited Activities on the Hanford Site.	AIR 98-1215	12/18/1998	328

Conditions (state only enforceable)

1) U.S. DOE shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5).

2) These Conditions and Limitations must be proceduralized prior to starting the activities described in the Notice of Construction.

3) This approval, with its Conditions and Limitations, constitutes and amendment to the Department's Radioactive Air Emission License. This amendment must be included in the next revision of the Hanford Air Operating Permit (WAC 246-247-060(1)(e) and (2)(c). **Obsolete at permit issuance.**

4) If the department finds that the emission unit described in this NOC, is not in compliance with the standards in WAC 246-247-040 during construction as described in this NOC, or during operation, it reserves the right to require modifications to bring it into compliance (WAC 246-247-060(2)(d)).

5) The facility shall notify the department at least seven days prior to any planned preoperational testing of the emission unit's emissions control, monitoring or containment systems (if conducted). The department reserves the right to observe such tests (WAC 246-247-060(4)).

6) U.S. DOE shall monitor this project or emission unit as follows: In addition to the surveys described in this NOC periodic confirmatory measurements are required. This may include but not limited to NDA testing of the HEPA filters when the HEPA filters are replaced and annually screening the HEPA filtration system using gamma spectroscopy (WAC 246-247-075(8)).

7) The department retains the right to conduct its own stack sampling, environmental monitoring or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing (WAC 246-247-075(10)).

8) The facility must be able to demonstrate that the workers associated with this emission unit are adequately trained in the use an maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures (WAC 246-247-075(12)).

9) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13) and WAC 246-247-075(6)). The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in, or equivalent to, those listed in the above cited regulation.

10) The department reserves the right to inspect and audit this unit during construction and operation, including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations (WAC 246-247-080(1)).

11) The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).

12) All reports and records must be kept and reported according to 40 CFR 61, Subpart H (WAC 246-247-080(2)).

13) All measured or calculated emissions must be reported annually (WAC 246-247-080(3)).

14) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that last more than four hours, it must be reported to the department within 24 hours. Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in the approval (paragraph 5) (WAC 246-247-080(5)).

15) When the Guzzler ceases operations in conjunction with this NOC, the facility shall notify the department via a report of closure, including whether or not any potential for airborne releases occurred (WAC 246-247-080(6)).

16) The facility must maintain a log in an approved format for this activity or emission unit (WAC 246-247-080(7)).

17) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least 5 years (WAC 246-247-080(8)).

18) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections as required by EPA (WAC 246-247-080(9)). At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors immediately, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet the requirements.

19) The facility shall make requested documents available in a timely manner for review. (WAC 246-247-080(10)).

20) The Guzzler is a self contained vacuum type equipment system allowing soil to be slowly dumped from the collection tank by controlling the raising and lowering speed of the tank. Soil from contaminated areas will be cleaned and excavated using the Guzzler. In some cases, however, an area may be physically in accessible for the regulated Guzzler. In those instances, the cleaning or excavation, as well as any backfilling activities will be completed using backhoes, loaders, compactors with plates, and/or picks an shovels, as appropriate.

21) The Guzzler filtration system must consist of a collection tank and plate separator device, cyclone separators; baghouse systems (99% efficient) with 72 bags each, equipped with a cyclic bag cleaning air blow-back system; micro-strainer device; and a HEPA filter system consisting of three in place tested HEPA filters in parallel (99.95% efficient system). The air lance system located on the Guzzler must be utilized when the system is operating. During the use of the Guzzler and soil excavation the hand held water mister must be used to control the generation of dust. During cleaning or excavation, the oil will be surveyed by Health Physicist Technicians (HPTs) over every linear and vertical foot prior to excavation or cleaning.

22) The following are the allowable radionuclides: Sr-90, CS-137, Cs-134, Th-232, U-234, U-235, U-238, Eu-154, Eu-155, Ru-106, Sn-113, Sb-125, Am-241, Pu-238, Pu-239, Pu-240, and Pu-241. If any other radionuclides are suspected or verified through soil analysis the department must be notified.

23) The annual possession quantities are not to exceed the limits for each area described in enclosure 3 of this NOC.

24) The following are the annual emission limits for the NOC: 100 AREA For Guzzler Cleaning/Excavation: 1.44E-3mrem Sr-90 3.4E-2mrem Am-241 For Backfilling: 1.44E-6mrem Sr-90 3.45E-5mrem Am-241 200AREA For Guzzler Cleaning/Excavation: 9.81E-4mrem Sr-90 2.34E-2mrem Am-241 For Backfilling: 9.81E-7mrem Sr-90 2.34E-5mrem Am-241 300 AREA For Guzzler Cleaning/Excavation: 1.95E-2mrem Sr-90 8.3E-3mrem U-234 For Backfilling: 1.95E-5mrem Sr-90 8.3E-6mrem U-234 400 AREA For Guzzler Cleaning/Excavation: 4.25E-4mrem Sr-90 8.34E-3mrem Pu-239 For Backfilling: 4.25E-7mrem Sr-90 8.34E-6mrem Pu-239

25) All soil excavation activities operating under this NOC must cease operations when sustained wind conditions reach or exceed 20 miles per hour.

Project Title	Approval No.	Date Approved	NOC_ID
Guzzler Excavation and Backfilling Activities in Support of the 200 East Area A Farm Complex	Short Form NOC	12/23/1997	250

Conditions (state only enforceable)

1) HPT field surveys every vertical and linear foot of excavation.

2) Aerosol testing and NDA of Guzzler HEPA filters, annually.

Hanford Sitewide W-PORTEX 007

HEPA vacuums
PTREAU
Emission Unit ID: 455

Abatement Technology (state only enforceable)

Applicable Requirements:
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology	Required Number of Units	Additional Description/Conditions
	[WAC 246-247-010(4)] [WAC 246-247-040(4)]	[WAC 246-247-010(4)] [WAC 246-247-060(5)]	[WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure	Radionuclides Requiring Measurement	Sampling Frequency
	[WAC 246-247-040(5)] [WAC 173--401-615(1)]	[WAC 173-401-615(1)]	[WAC 246-247-075(1)] [WAC 173-401-615(1)]

This Emission Unit has 3 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Clarification for HVU NOC Approval Conditions (AIR 99-1103), HEPA Filtered Vacuum Radioactive Air Emission Units, Revision 1	RTAM	2/15/2000	425

Conditions (state only enforceable)

1) Monitoring requirements are as follows: In the event that the exhauster is used on different emission units Department of Health reserves the right to request an 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. One of the following methods may be chosen for actual emissions reporting, results of smears on the exhaust ports, maximum contamination level encountered or analysis results, area cleaned, air emission source constituents if other than plutonium 239 and strontium 90 potential radionuclide releases.

2) The abated does limit for this NOC shall not exceed 2.5 E-05 mrem/yr to the MEI for each facility as described in the NOC. The unabated dose limit calculated for each facility is 4.97E-02 mrem/yr.

3) 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 (including the special cases listed in Appendix C) and the other is to reduce fixed contamination. Soil matrices are excluded from this NOC.

4) The required possession quantity is APQ's calculated for a maximum annual combined use of HVU's by an individual facility or activity. APQ's are based on hypothetical worst-case source terms that all HVU's at an individual facility combined could handle during a year and remain below 0.05 mrem per year unabated dose.

Project Title	Approval No.	Date Approved	NOC_ID
HEPA Filtered Vacuum Radioactive Air Emission Units, Revision 1	AIR 99-1103	11/4/1999	410

Conditions (state only enforceable)

1) The facility shall notify the department at least seven days prior to any planned preoperational testing of the emission unit's emission control, monitoring, or containment systems. The department reserves the right to observe such tests (WAC 246-247-060(4)).

2) If the department finds that the emission unit described in this NOC is not in compliance with the standards in WAC 246-247-040 during construction (as described in this NOC or during operation) it reserves the right to require modifications to bring it into compliance (WAC 246-247-060(2)(d)).

3) These Conditions and Limitations must be proceduralized prior to starting the activities described in the Notice of Construction.

4) This approval, with its Conditions and Limitations, must be included in the next revision of the Hanford Air Operating Permit (WAC 246-247-060(1)(e) and (2)(c)), and will at that time, constitute a revision of the Radioactive Air Emissions License.

5) U.S. DOE shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5)).

6) The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).

7) The required controls are as 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% for particles of 0.3 micron median diameter. 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.

8) All reports and records must be kept and reported according to 40 CFR 61, Subpart H (WAC 246-247-080(2)).

9) The facility shall make requested documents available in a timely manner for review (WAC 246-247-080(10)).

10) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections, as required by EPA (WAC 246-247-080(9)). At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance to have reasonable time to meet the requirements.

11) The department retains the right to conduct its own stack sampling, environmental monitoring, or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing (WAC 246-247-075(10) and (11)).

12) The facility must be able to demonstrate that workers associated with this emission unit are adequately trained in the use and maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures (WAC 246-247-075(12)).

13) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that lasts more than four hours, it must be reported to the department within 24 hours. Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in this approval

14) The Facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13) and WAC 246-247-075(6)). The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in the above cited regulations.

15) The department reserves the right to inspect and audit this unit during construction and operation, including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations (WAC 246-247-080(1)).

16) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least five years (WAC 246-247-080(8)).

17) All measured or calculated emissions must be reported annually (WAC 246-247-080(3)).

Project Title	Approval No.	Date Approved	NOC_ID
HEPA vacuums dedicated for use in routine cleanup	ERC Team Meeting Minutes, CCN 053924	10/24/1997	239

Conditions (state only enforceable)

1) Logs must be kept up to date, and are auditable.

Hanford Sitewide PTREAUs

type-1, type-2, type-3

PTREAU

Emission Unit ID: 447

Abatement Technology (state only enforceable)

Applicable Requirements:BARCT

ALARACT [WAC 246-247-040(4)]

BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology [WAC 246-247-010(4)] [WAC 246-247-040(4)]	Required Number of Units [WAC 246-247-010(4)] [WAC 246-247-060(5)]	Additional Description/Conditions [WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]
type-2 and type-3	Charcoal filter	1	
type-2 and type-3	HEPA	1	
type-1	HEPA	1	

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure [WAC 246-247-040(5)] [WAC 173--401-615(1)]	Radionuclides Requiring Measurement [WAC 173-401-615(1)]	Sampling Frequency [WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	Annual, unless otherwise specified by the NOC.

This Emission Unit has 2 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Clarification for PTRAEU NOC Approval Conditions (AIR 99-1102)	RTAM	2/15/2000	426

Conditions (state only enforceable)

1) A copy of the log will be submitted annually to the WDOH on June 30. The June submittals will consist of PTRAEU operations from January through December for the previous year. The estimated emissions from the units will be reviewed as directed by DOE/RL and summarized in the annual radioactive air emissions report for the

Project Title	Approval No.	Date Approved	NOC_ID
Portable/Temporary Radionuclide Airborne Emissions Units (PTRAEU), Revision 2	AIR 99-1102	11/4/1999	411

Conditions (state only enforceable)

1) The department reserves the right to inspect and audit this unit during construction and operation, including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations (WAC 246-247-080(1)).

2) All measured or calculated emissions must be reported annually (WAC 246-247-080(3)).

3) Ductwork, seams, and potential release locations on the portable exhauster are to be monitored on a routine basis for potential radionuclide releases and noted on the log sheets (e.g., post-survey results negative). These routine checks should be kept as retrievable records.

4) This approval, with its conditions and Limitations, must be included in the next revision of the Hanford Air Operating Permit (WAC 246-247-060(1)(e) and (2)(c)).

5) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13) and WAC 246-247-075(6)). The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in the above cited regulation.

6) These Conditions and Limitations must be proceduralized prior to starting the activities described in the Notice of Construction.

7) Monitoring requirements are as follows: In the event that the exhauster is used on different emission units Department of Health reserves the right to request an 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 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.

8) The department retains the right to conduct its own stack sampling, environmental monitoring, or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing (WAC 246-247-075(10) and (11)).

9) U.S. DOE shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5)).

10) The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).

11) The facility shall notify the department at least seven days prior to any planned preoperational testing of the emission unit's emission control, monitoring, or containment systems. The department reserves the right to observe such tests (WAC 246-247-060(4)).

12) The facility must be able to demonstrate that workers associated with this emission unit are adequately trained in the use and maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures (WAC 246-247-075(12)).

13) If the department finds that the emission unit described in this NOC is not in compliance with the standards in WAC 246-247-040 during construction (as described in this NOC or during operation) it reserves the right to require modifications to bring it into compliance (WAC 246-247-060(2)(d)).

14) The abated dose limit for this NOC shall not exceed 1.91E-05 mrem/yr to the MEI.

15) The approved process is limited to the following:

1. Type I units that are vacuums and are to be used as ventilation units. If the vacuum is used in any other manner WDOH must approve its use under a separate application before the activity commences.
2. Type II units decrease the chance of unintentional cross contamination and are sample preparation units. These units enable the removal of material from core barrels, homogenize the material, and fill prescribed sample containers for onsite and offsite analysis.
3. Type III units are used for sample screening and analysis and provide preliminary screening of samples to determine potential problem areas. They also screen samples requiring further in depth analysis. 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 the preparation of radioactive standards to be used for instrument calibration.

16) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that lasts more than four hours, it must be reported to the department within 24 hours. Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in this approval (paragraph 5).

17) The facility shall make requested documents available in a timely manner for review (WAC 246-247-080(10)).

18) 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 calculated

19) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections, as required by EPA (WAC 246-247-080(9)). At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the

inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance to have reasonable time to meet the requirements.

20) All reports and records must be kept and reported according to 40 CFR 61, Subpart H (WAC 246-247-080(2)).

21) The required controls are as described as follows:

Type I units shall be equipped with a HEPA Filter. Some also will be equipped with an additional HEPA Filter in series, charcoal absorbers, or moisture separators.

Type II and Type III have an exhaust system consisting of a single stage HEPA filter followed by an activated charcoal absorber.

22) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least five years (WAC 246-247-080(8)).

Hanford Sitewide Vented Containers

Vented Containers
PTREAU
Emission Unit ID: 448

Abatement Technology (state only enforceable)

Applicable Requirements:
ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area	Description of Abatement Technology	Required Number of Units	Additional Description/Conditions
	[WAC 246-247-010(4)] [WAC 246-247-040(4)]	[WAC 246-247-010(4)] [WAC 246-247-060(5)]	[WAC 246-247-010] [WAC 246-247-040(4)] [WAC 246-247-060(5)]

Monitoring Requirements (state and federally enforceable)

Federal and State Regulatory Requirements	Monitoring and Testing Procedure	Radionuclides Requiring Measurement	Sampling Frequency
	[WAC 246-247-040(5)] [WAC 173--401-615(1)]	[WAC 173-401-615(1)]	[WAC 246-247-075(1)] [WAC 173-401-615(1)]
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	Air - every 2 weeks continuous/deposition - annually

Sampling Requirements [WAC 246-247-075(5), WAC 173-401-615(1)]:
Environment Sampling

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Sitewide Vented Container Storage	NOC	9/19/1996	188

Conditions (state only enforceable)

1) Containers other than drums are also approved if they meet the conditions of this NOC.

2) Establishes a categorical As Low As Reasonably Achievable Control Technology (ALARACT) demonstration for existing Hanford Site vented containers.

3) NucFil(TM) filter or an equivalent filter shall be BARCT, and ALARACT. Vent clips are accepted as ALARCT for existing systems to date, however when conditions require repackaging vent clips shall be replaced by NucFil(TM) or equivalent filters.

4) The vented container Lat 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.

5) 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/yr to the MEI).

6) These containers are used for storing mixed and or radioactive waste generated on or off Hanford Site.

7) WDOH accepts vent clips as ALARACT since they are no longer installed.

8) 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.

9) The estimated unabated and abated TEDE to the MEI per container is 1.5 E-5 and 5.1 E-9 mrem/yr, respectively.

10) The annual possession quantity for each vented container varies. The maximum quantity per container is based on preventing nuclear criticality, which is managed by: (i)controlling the amount of fissionable material in each container, (ii)container spacing requirements, (iii)container segregation. The annual possession quantity for this categorical approval is accepted due to the variability of waste types.

Table 1.3 Requirements for non-point sources

State only enforceable applicable abatement technology requirements
ALARACT [WAC 246-247-040(4)] or BARCT [WAC 246-247-040(3)]
[WAC 246-247-010(4)]
[WAC 246-247-040(5)

State and federally enforceable applicable monitoring requirements
40 CFR 61.93(b)(4)(I) & WAC 246-247-075(3)

NON-POINT EMISSION UNITS

200 diffuse/fugitive emissions

200 Area Emissions
Emission Unit ID: 486

This Emission Unit has 5 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Waste transfer from the Vit Plant to LERF and TEDF under project W-519.	AIR 00-706	7/24/2000	487

Conditions (state only enforceable)

1) U.S. DOE shall comply with all Conditions and Limitations of this NOC (WAC 246-247-060(5)).

2) These conditions and limitations must be proceduralized prior to the implementation of this NOC.

3) This approval with its conditions and Limitations must be included in the next revision of the Hanford Air Operating Permit (WAC 246-247-060(1)(e) and (2)(c)).

4) The licensed emissions allowed by this approval are only those associated with the construction activities related to the installation of the Liquid Effluent Transfer System (LETS) and its tie-ins to the Liquid Effluent Retention Facility (LERF) and the PC5000 waste transfer line.

5) This license does not provide the operating approval that shall be required prior to use of the LETS by the LERF and the Treatment and Immobilization Facility (Vitrification Plant). The LETS shall be dependent on the operation of the Vitrification Plant and its use shall be addressed in the permitting documentation for this facility. As there are no emission points along the transfer piping, the potential new emissions shall add potential to emit to LERF, which shall also require modification approval prior to its use of LETS. The LETS shall also provide tie-in to waste water feed line to the 200 Area Treated Effluent Disposal Facility (TEDF), from the Vitrification Plant. This NOC does not request that TEDF be a registered emission unit, nor to be allowed to receive radioactive potential-to-emit. This condition shall be associated with the LEF and the Vitrification Plant for the Hanford Air Operating Permit until the appropriate permitting revisions and approvals for the operation of the LETS are obtained (WAC 246-247-060(1)(e) and (2)(c)).

6) If the department finds that the emission unit described in this NOC is not in compliance with the standards in WAC 246-247-040 during construction , the department reserves the right to require modifications to bring it into compliance (WAC 246-247-060(2)(d)).

7) The department reserves the right to inspect and audit this unit during construction, including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations (WAC

8) The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).

9) All reports and records must be kept and reported according to 40 CFR 61, Subpart H. (WAC 246-247-080(2)).

10) For this activity the estimated emission levels are too low to measure using conventional stack sampling methods. The emissions of this NOC are based on and calculated from a maximum threshold contamination levels and a

maximum volume of contaminated soil. For the reporting requirements of WAC 246-247-080(3), all results of the thus low emissions, shall be reported annually in the Hanford Site Air Emissions Report.

11) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any Conditions or Limitations in this NOC approval or that lasts more than four hours, it must be reported to the department within 24 hours. Applicable standards(WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard(paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in this approval (paragraph 5).

12) The facility must maintain a log in an approved format for this activity to track the total volume of contaminated soil (to ensure that the contaminated soil volumes in conjunction with their respective contamination levels do not exceed the approved estimated potential-to-emit). This amount is an important factor in the approved method to verify the low emissions for this activity.

13) All records required by WAC 246-247 must be retrievable within 24 hours of the request, and must be stored onsite. All records shall be maintained for a minimum of five years (WAC 246-247-080(8)).

14) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections, as required by EPA (WAC 246-247-080(9)). At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet the requirements.

15) The facility shall make requested documents available for timely review (WAC 246-247-080(10)).

16) Construction and tie-in condition or limitation: Controlled use of the Guzzler Vacuum Excavation System for radiologically activities shall meet the conditions, controls, monitoring requirements and limitations of "Guzzler Vacuum Excavation System for Radiologically Limited Activities on the Hanford Site" approval letter # AIR 98-1215, dated December 18, 1998; or the latest approved version for this emission unit.

17) Construction and tie-in condition or limitation: After backfilling, the area shall be surveyed to verify that radiological contamination levels on the soil surface are less than 5,000 dpm/100 cm2 beta-gamma and less than 100 dpm/100 cm2 alpha. If contamination is present on the surface above these levels, it will be removed and containerized for disposal or covered or fixed to provide containment of the contamination.

18) Construction and tie-in condition or limitation: As the potential unabated offsite dose associated with this activity is calculated to be less than 0.1 millirem per year, in accordance with 40 CFR 61, Subpart H, periodic confirmatory measurements (PCM) shall be made to verify emissions. The PCM shall consist of the radiological soil contamination surveys. Soil surveys for radioactive contamination will be performed for beta/gamma. If beta/gamma contamination is detected, surveys for alpha contamination will also be performed. This method of PCM is intended to demonstrate that compliance can be maintained administratively as the performed surveys shall limit activities with a potential-to-emit below the maximum threshold contamination work levels. As the emission estimates are based and calculated from the maximum threshold contamination levels and the maximum volume of contaminated soil, the true emissions shall inherently be below the estimated emissions.

19) Construction and tie-in condition or limitation: During tie-in activities, if removable contamination levels around the flange after reduction efforts are greater than 10,000 dpm/100 cm2 beta gamma and 200 dpm/100 cm2 alpha, the work shall be performed in a glove bag.

20) Construction and tie-in condition or limitation: If a Portable/Temporary Radioactive Air Emission Unit (PTRAEU) is used during tie-in activities, the conditions, controls, monitoring requirements and limitations of (PTRAEU), Revision 2" approval letter # AIR 99-1102, dated November 4, 1999, shall be required; or the latest approved version for this emission unit.

21) Construction and tie-in condition or limitation: If a HEPA Filtered Vacuum Radioactive Air Emission Unit (HEPA VAC) is used during tie-in activities, the conditions, controls, monitoring requirements and limitations of the HEPA VAC, Revision 1," approval letter # AIR 99-1103, dated November 4, 1999, shall be required; or the latest approved version for this emission unit.

22) Construction and tie-in condition or limitation: The following radionuclides are allowed by this approval and may also contribute to the gross alpha and gross beta-gamma measurements (conservatively represented by Sr-90 and Am-241 estimate): H-3, C-14, Co-60, Se-79, Sr-90, Nb-94, Te-99, I-129, Cs-134, Cs-137, Ce-144, Eu-155,

Ra-226, U-234, Np-237, Pu-238, Pu-239, Pu-241, Am-241, Cm-244. If any other radionuclides are suspected or verified through soil analysis the department must be notified.

23) Construction and tie-in condition or limitation: Source term contribution is limited from the Guzzler at: 1.92 E-01 curies Sr-90, and 1.28 E-03 curies Am-241. Source term contribution from conventional excavation is limited to : 6.3 E-02 curies Sr-90, and 1.46 E-03 curies Am-241. Total source term contribution is limited to 2.55 E-01 curies Sr-90 and 2.74 E-03 curies Am-241.

24) Construction and tie-in condition or limitation: The abated dose limit for this NOC shall not exceed 5.1 E-02 mrem/yr to the MEI, 15,990 meters east-southeast at Energy Northwest (CAP88 run for a new MEI location) and 6.37 E-02 mrem/yr to the MEI at 20,000 meters east-southeast (using dose conversion factors HNF-3602, Volume 1: Calculating Potential to Emit releases and Doses for FEMPs and NOCs, July 1999, J.S. Hill, P.D. Rittman, Fluor Daniel Hanford, Inc., Richland, Washington.

25) Construction and tie-in condition or limitation: 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 >20 mph.

26) Construction and tie-in condition or limitation: Work with glove bags shall not be performed if sustained wind speeds are greater than 30 mph.

27) Construction and tie-in condition or limitation: Excavation activities will be stopped if evenly distributed contamination with detection readings greater than 500,000 dpm/100 cm2 beta-gamma or greater than 200 dpm/100 cm2 above background alpha is encountered. Excavation will not continue until a review of the work and encountered conditions has been performed and it has been determined that no threat to worker safety or the environment exists, or until proper controls (i.e., removal and disposal, water, fixatives, covers, etc.) have been put in place to mitigate any further threat; and the WDOH has been contacted and briefed of the situation.

28) Construction and tie-in condition or limitation: When this project is completed the facility shall notify the department via a report of closure whether or not any potential for airborne release occurred. When the operation of the final use of the Guzzler, PTRAEU, or a HEPA VAC, ceases in conjunction with this NOC, the facility shall notify the department via a report of closure, including whether or not any potential for airborne releases occurred via any of these categorical emission units (WAC 246-247-080(6)).

Project Title	**Approval No.**	**Date Approved**	**NOC_ID**
NOC Revision to AIR 00-604 Categorical Tank Farm Facility Entry and Surveillance	NOC revision to AIR 00-604	7/12/2000	491

Conditions (state only enforceable)

1) The facility will maintain a log of all work packages, which are used for building access under this NOC (AIR

2) In addition to those approved activities referenced in the AIR 00-604 conditions, the following activities are also approved:
* 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.
* 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.

3) The annual possession quantity for each facility entry may not exceed 2.2E-9 Ci Alpha, 3.3E-5 Ci Beta and 2.38E-7 Ci from cesium. If sample results after entry show that these values have been exceeded, WDOH is to be notified within 24 hours of receipt of the sample results.

4) Facility personnel will determine APQ tracking methodology as required to comply with the AIR 00-604 approval conditions. APQ will be tracked on the same log sheet used to comply with WAC 246-247-080(7) as specified in the AIR 00-604 approval conditions.

Project Title	**Approval No.**	**Date Approved**	**NOC_ID**
Vapor Sampling of Miscellaneous Underground Units with No Known Path of Ventilation	NOC Revision Form	6/21/2000	469

Conditions (state only enforceable)enforceable)

1) Vapor space sampling will follow the controls identified in ALARACT 8, with the exception of bulleted items 4 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.

Project Title	Approval No.	Date Approved	NOC_ID
Categorical Tank Farm Facility Entry and Surveillance	AIR 00-604	6/21/2000	486

Conditions (state only enforceable)enforceable)

1) U.S. DOE shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5)).

2) These Conditions and Limitations must be proceduralized prior to starting the activities described in the Notice of Construction.

3) This approval, with its Conditions and Limitations, constitutes an amendment to the Department's Radioactive Air Emissions License. This amendment must be included in the next revision of the Hanford Air Operating Permit (WAC 246-247-060(1)(e) and (2)(c)).

4) If the department finds that the emission unit described in this NOC, is not in compliance with the standards in WAC 246-247-040 during construction (as described in the NOC, or during operation it reserves the right to require modifications to bring it into compliance (WAC 246-247-060(2)(d)).

5) The facility shall notify the department at least seven days prior to any planned preoperational testing of the emission units, emissions control, monitoring or containment systems. The department reserves the right to observe such tests (WAC 246-247-060(4)).

6) The U.S. DOE shall monitor this project or emission unit as follows: The Department of Health grants approval for the use of the Radiological Containment Matrix Procedure HNF-IP-0842 VII, Radiological Control 3.1. This approval is only granted for this specific NOC within the tank farms and may not be applied to any other NOC with out prior approval from the department.

7) The department retains the right to conduct its own environmental monitoring or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing (WAC 246-247-075(10) and (11)).

8) The facility must be able to demonstrate that the workers associated with this emission unit are adequately trained in the use and maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures (WAC 246-247-075(12)).

9) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13) and WAC 246-247-075(6)). The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in the above-cited regulation.

10) The department reserves the right to inspect and audit this unit during construction and operation, including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations (WAC 246-247-080(1)).

11) The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).

12) All reports and records must be kept and reported according to 40 CFR 61, Subpart H. (WAC 246-247-080(2)).

13) All measured or calculated emissions must be reported annually (WAC 246-247-080(3)).

14) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that lasts more than four hours, it must be reported to the department within 24 hours. Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in this approval

15) When this project is completed, or operations cease, the facility shall notify the department via a report of closure, including whether or not any potential for airborne release occurred (WAC 246-247-080(6)).

16) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least five years (WAC 246-247-080(8)).

17) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known

to allow for unannounced inspections, as required by EPA (WAC 246-247-080(9)). At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet the requirements.

18) The facility shall make requested documents available in a timely manner for review (WAC 246-247-080(10)).

19) The facilities covered under this NOC will be entered through a door or other existing access location to perform these activities identified below.

* Accessing Facilities - Accessing Facilities will be performed in accordance with the appropriate control outlined in the approved HNF-IP-0842, Volume VII, Radiological Control Matrix
* Inspections/Surveillance - Visual inspections will be conducted to evaluate facilities' integrity for future decommissioning work, to assure that utilities have been shut off, and/or identification of any environmental, radiological, or safety concerns.
* Photographing/Videotaping - Photographing/videotaping are performed to assist personnel in recording a facility's contents and to obtain knowledge of a facility and its content.
* Sampling/Surveys - Swipes, smears, air sampling, and other surveys may be performed to characterize contamination levels present in the facility. These activities may be performed on containers, walls, floors, piping, pumps, valves, motors, and cover blocks associated with the facility.
* Removal of access port shield plugs may be performed to allow installation of video equipment and/or to perform radiological surveys.

20) The radiological control technology for all entries conducted under this NOC must follow the containment matrix HNF-IP-0842, Volume VII, Radiological Control.

21) 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.

22) The total abated emission limit for all non-actively ventilated activities is 3.13E-5 mrem/yr. The active ventilated activities must abide by the currently approved Portable/Temporary Radioactive Air Emissions Units (PTRAEU) NOC abated emission limit.

23) The Department of Health requires an identification number or numbers used to track emission units or activities must be submitted to the department within 60 days from that date of approval.

24) Whenever active ventilation is in operation, a PTRAEU emission unit must be used and those emissions will be tracked under the currently approved PTRAEU NOC. All of the applicable Conditions and Limitations stated for the PTRAEU NOC approval must be adhered to and clearly documented. This includes the emission limits and controls. The emissions from these activities are documented and recorded under the PTRAEU NOC only.

25) During facility entries using a passive ventilation system, surveys and smears must be conducted and recorded on log sheets or survey reports. These reports and/or survey records must be readily retrievable.

26) This NOC does not allow any decontaminating and decommissioning work to commence.

27) This NOC is only applicable to tank farm facilities.

28) The annual possession quantity must be tracked for each entry.

Project Title	Approval No.	Date Approved	NOC_ID
Vapor Sampling of Miscellaneous Underground Units with No Known path of ventilation.	AIR 00-510	5/18/2000	489

Conditions (state only enforceable)

1) U.S. DOE shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5)).

2) These Conditions and Limitations must be proceduralized prior to starting the activities described in the Notice of Construction.

3) This approval, with its Conditions and Limitations, must be included in the next revision of the Hanford Air Operating Permit (WAC 246-247-060(1)(e) and (2)(c)) and will at that time, constitute a revision of the Radioactive Air Emissions License.
modifications to bring it into compliance (WAC 246-247-060(2)(d)).

5) The facility shall notify the department at least seven days prior to any planned preoperational testing of the emission unit's emissions control, monitoring or containment systems. The department reserves the right to observe such tests (WAC 246-247-060(4)).

6) The department retains the right to conduct its own stack sampling, environmental monitoring or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing (WAC 246-247-075(10).

7) The facility must be able to demonstrate that the workers associated with this emission unit are adequately trained in the use and maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures (WAC 246-247-075(12)).

8) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from these units (WAC 246-247-075(13) and WAC 246-247-075(6)). The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in the above cited regulation.

9) The department reserves the right to inspect and audit this unit during operation. This includes all activities, equipment, operation procedures, documents, data, and other records related to compliance with the regulations (WAC 246-247-080(1)).

10) The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).

11) All reports and records must be kept and reported according to 40 CFR 61, Subpart H. (WAC 246-247-080(2)).

12) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least five years (WAC 246-247-080(8)).

13) All measured or calculated emissions must be reported annually (WAC 246-247-080(3)).

14) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that lasts more than four hours, it must be reported to the department within 24 hours. Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in this approval

15) This unit must be fully accessible to Department of Health (DOH)inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections, as required by EPA (WAC 246-247-080(9)). At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet the requirements.

16) The facility shall make requested documents available for timely review (WAC 246-247-080(10)).

17) When this project is completed, or operations cease, the facility shall notify the department via a report of closure, and indicate whether or not any potential for airborne release occurred (WAC 246-247-080(6)).

18) The work in this NOC is limited to those described activities associated with the construction and operation activities involving Vapor Sampling of Miscellaneous Underground Units With No Known Path of Ventilation.

19) 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.

20) The total unabated emissions are limited to 2.02E-02 mrem/yr per tank.

21) The total unabated dose TEDE to the hypothetical MEI cannot exceed 1.04 E-05 mrem/yr per tank.

22) The total abated emissions are limited to 5.07E-02 mrem/yr.

23) The following controls must be adhered to:
* ALARACT 8 with the exception of bulleted Items 5 of Section 2.

24) The annual possession quantity is limited to the radionuclides listed below:
3H: 1.29E-03 Ci/gal; 6.46E+01 Ci
14C: 2.08E-04 Ci/gal; 1.04E+01 Ci
59 Ni: 6.12E-04 Ci/gal; 3.06E+01 Ci
60Co: 1.73E-02 Ci/gal; 8.88E+02 Ci
63Ni: 6.02E-02 Ci/gal; 3.01E+03 Ci
79Se: 3.40E-04 Ci/gal; 1.70E+01 Ci
90Sr: 1.05E+02 Ci/gal; 5.23E+06 Ci
90Y: 1.05E+02 Ci/gal; 5.23E+06 Ci
93Zr: 1.47E-03 Ci/gal; 7.36E+01 Ci
93mNb: 1.26E-03 Ci/gal; 6.32E+01 Ci
99Tc: 1.04E-03 Ci/gal; 6.20E+01 Ci
106Ru: 2.34E-06 Ci/gal; 1.17E-01 Ci
113mCd: 3.10E-03 Ci/gal; 1.55E+02 Ci
125Sb: 1.73E-02 Ci/gal; 8.63E+02 Ci
126Sn: 5.46E-04 Ci/gal; 2.73E+01 Ci
129I: 1.03E-05 Ci/gal; 5.16E-01 Ci
134Cs: 6.15E-04 Ci/gal; 3.08E+01 Ci
137Cs: 3.39E+00 Ci/gal; 1.70E+05 Ci
137mBa: 3.22E+00 Ci/gal; 1.61E+06 Ci
151Sm: 1.27E+00 Ci/gal; 6.36E+04E+0 Ci
152Eu: 3.38E-04 Ci/gal; 1.69E+01 Ci
154Eu: 1.45E-01 Ci/gal; 7.23E+03 Ci
155Eu: 2.09E-02 Ci/gal; 1.04E+03 Ci
226Ra: 4.09E-08 Ci/gal; 2.04E-03 Ci
227Ac: 2.12E-07 Ci/gal; 1.06E-02 Ci
228Ra: 1.96E-06 Ci/gal; 9.82E-02 Ci
229Th: 4.54E-08 Ci/gal; 2.27E-03 Ci
231Pa: 3.22E-07 Ci/gal; 1.61E-02 Ci
232Th: 2.22E-07 Ci/gal; 1.11E-02 Ci
232U: 8.76E-05 Ci/gal; 4.38E+00 Ci
233U: 3.37E-04 Ci/gal; 1.68E+01 Ci
234U: 5.34E-05 Ci/gal; 2.67E+00 Ci
235U: 2.11E-06 Ci/gal; 1.06E-01 Ci
236U: 1.73E-06 Ci/gal; 8.66E-02 Ci
237Np: 3.24E-05 Ci/gal; 1.62E+00 Ci
238Pu: 4.86E-04 Ci/gal; 2.43E+01 Ci
238U: 4.76E-05 Ci/gal; 2.38E+00 Ci
239Pu: 2.58E-02 Ci/gal; 1.29E+03 Ci
240Pu: 4.07E-03 Ci/gal; 2.04E+02 Ci
241Am: 1.38E-02 Ci/gal; 6.92E+02 Ci
241Pu: 3.55E-02 Ci/gal; 1.78E+03 Ci
242Cm: 1.22E-05 Ci/gal; 6.08E-01 Ci
242Pu: 1.99E-07 Ci/gal; 9.94E-03 Ci
243Am: 6.92E-07 Ci/gal; 3.46E-02 Ci
243Cm: 1.06E-06 Ci/gal; 5.28E-02 Ci
244Cm: 3.97E-05 Ci/gal; 1.98E+00 Ci

25) Vapor space sampling must be in accordance with ALARACT 8.

26)All work on this project must be completed on or before April 1, 2010.

200 J-NONPOINT 025
Vadose Zone Characterization
Emission Unit ID: 487

This Emission Unit has 6 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Vadose Zone Characterization	AIR 00-1104	11/17/2000	454

Conditions (state only enforceable)

1) The letter # AIR 00-515 originally approved this NOC. This approval letter did not reference the Conditions and Limitations for the NOC, Tank Waste Remediation Vadose Zone Characterization (# AIR 99-701).

2) Approval Condition #22 of AIR 99-701, the last paragraph, shall be deleted and now will read:

> Excavation activities using hand tools will be performed in accordance with ALARACT 5, "ALARACT Demonstration for Soil Excavation Using Hand Tools". Excavation with a backhoe will be done using controls equivalent to ALARACT 5.

Project Title	Approval No.	Date Approved	NOC_ID
Vadose Zone Characterization	NOC Revision Form	6/21/2000	455

Project Title	Approval No.	Date Approved	NOC_ID
Tank Waste Remediation System Vadose Zone Characterization, Revision 1	AIR 00-515	5/26/2000	490

Conditions (state only enforceable)

1) U.S. DOE shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5)).

2) These Conditions and Limitations must be proceduralized prior to starting the activities described in the Notice of Construction.

3) This approval, with its Conditions and Limitations, must be included in the next revision of the Hanford Air Operating Permit (WAC 246-247-060(1)(e) and (2)(c)).

4) The following is a list of registered emission units to be used under this NOC:
* 200 P-Vadose 001 HEPA filtered exhaust on greenhouse
* 200 P-Vadose 002 HEPA filtered exhaust on air rotary exhaust train
* 200 P-Vadose 003 HEPA filtered exhaust on air hammer
* 200 P-Vadose 004 Perched water container
* 200 P-Vadose 005 Truck for hauling perched water
* 200 J-Non-point 025 All fugitive emissions

5) If the department finds that the emission unit described in this NOC is not in compliance with the standards in WAC 246-247-040 during construction or during operation the department reserves the right to require modifications to bring it into compliance (WAC 246-247-060(2)(d)).

6) The following additional drilling techniques are approved for use under this NOC: 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).

7) Approval is given as an alternative to transfer the perched water directly from borehole to the tanker.

8) Approval is given to use a downhole air hammer to drive a sampler while using a closed end probe.

9) Operation of the passive or active ventilation unit during the operation of the air hammer shall be documented on an approved log.

10) Emissions associated with the downhole air hammer will be routed to a passive or active ventilated HEPA filter. Pressure gauges will be installed on the emissions unit and will be monitored and recorded daily during operation of the downhole air hammer. Operation in the passive mode will not be allowed if the HEPA inlet pressure exceeds 20 inches water gauge and differential pressure exceeds 5.9 inches water gauge. Operation in the active ventilation mode will not be allowed if the HEPA inlet pressure exceeds 20 inches water gauge and differential pressure exceeds 5.9 inches water gauge. The flow shall not exceed the HEPA filter manufactures recommendation. Emissions from the drill rig shall be minimized using a double gasket seal and a chromed casing. This area shall be smear surveyed at the beginning and end of the work cycle and documented to determine adequacy of seal.

11) Periodic confirmatory sampling is required. For the air hammer method, instead of air sampling near the HEPA as described in the NOC, this shall consist of a destructive or non-destructive analysis of the HEPA filter combined with radiological field surveys during the work. The HEPA type filter located downstream shall have a minimum efficiency of 99.95 percent for particulates with a median diameter of 0.3 microns as specified by the manufacturer. The radiological analyses from the soil samples will be averaged to determine the isotopic distribution of Strontium-90 (Sr-90), Cs-137, Plutonium-239 (Pu-239), and Americium (Am-241). The record filter will be counted using a gamma spectrometer calibrated to Cs-137. Counting will be done annually using either a destructive or non-destructive technique.

12) The emission unit shall be inspected daily during operation and after any relocations. Line pressure tests will be performed on the line between the well head and the filter and/or fan prior to deploying the air hammer. Line pressure tests will be performed in accordance with ASME/ANSI N510.

13) 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.

14) APQ associated with the air hammer operation shall not exceed 195 curies. This shall be tracked and documented on an approved log.

15) The department reserves the right to inspect and audit this unit during construction and operation, including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations (WAC 246-247-080(1)).

16) The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).

17) All reports and records must be kept and reported according to 40 CFR 61, Subpart H. (WAC 246-247-080(2)).

18) All measured or calculated emissions must be reported annually in the Hanford Site Air Emissions Report (WAC 246-247-080(3)).

19) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that lasts more than four hours, it must be reported to the department within 24 hours. Applicable standards (WAC 246-247-040) include unit specific emission limits, the offsite dose standard, BARCT or ALARACT, whichever is applicable, or any limitations included in this approval .

20) When this project is completed, or operations cease, the facility shall notify the department via a report of closure, including whether or not any potential for airborne release occur. (WAC 246-247-080(6)).

21) The facility must maintain a log in an approved format for this activity or emission unit (WAC 246-247-080(7)).

22) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least five years (WAC 246-247-080(8)).

23) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections, as required by EPA (WAC 246-247-080(9)). At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet the requirements.

24) The facility shall make requested documents available in a timely manner for review (WAC 246-247-080(10)).

Project Title	Approval No.	Date Approved	NOC_ID
Vadose Zone Characterization NOC Revision 2	NOC revision approval	11/1/1999	409

Conditions (state only enforceable)

1) 21. Activities under this NOC are limited to the following processes as described in this NOC.

Up to ten equivalent boreholes may be drilled per year (consecutive 12-month period) by the methods described in this of the NOC. An equivalent borehole for the purposes of this NOC is assumed to have a nominal top diameter of 10 inches for the first 50 feet and a nominal bottom diameter of 8 inches for the remaining 200 feet of pipe (average depth is 250 feet). Additionally, an equivalent borehole is assumed to contain a contaminated layer 20 feet long in the 10-inch portion of the equivalent borehole. Each of the proposed subsurface sampling and drilling methods has the potential to emit radionuclides into the air. Individual methods are to be selected based on the likely level (concentration) of contaminants to be encountered. The highest levels of contamination occur closest to the tanks; however, as the depth below the tank increases, the levels of contamination decrease substantially. 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 various side-wall sampling techniques as the boreholes are decommissioned.

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 drums shall be labeled to allow correlating the material level in the drum to the depth in the borehole where the material resided. The material in the drums will be sampled by pulling a mini-core from the drum. Sampling and change-out of the drums shall performed inside the containment structure with continuous HPT coverage

Other possible 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

Other 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
- Sonic Core Barrel and Split Spoon
- Rotary Coring
- Sidewall Sampling

The last paragraph of #21, AIR 99-701 shall now read:
For casing removal, if decontamination or application of fixatives cannot reduce smearable contamination to less than 100,000 dpm per 100 cm2 for beta/gamma or 2,000 dpm per 100 cm2 for alpha, the casing shall be pulled into plastic sleeving. The casing shall be cut using a wheel cutter or by disconnecting from other segments into a nominal length of 10 feet. The wheel cutter shall not use a high speed blade. If decontamination or application of fixatives cannot reduce smearable contamination to less than 100,00 dpm per 100 cm2 for beta/gamma or 2,000 dpm per 100 cm2 for alpha and the casing is sleeved in plastic, no more than one foot of casing shall be exposed to the air during the cutting process. Cuttings shall be captured in a draped plastic. If decontamination or application of fixatives cannot reduce smearable contamination to less than 100,000 dpm per 100 cm2 for beta/gamma or 2,000 dpm per 100 cm2 for alpha, the cut pieces shall be capped with plastic or the sleeving will be horse tailed and the sections shall be placed in a burial box. Using a tremie, the hole shall be backfilled with clean (non-radioactive) materials (e.g., granular bentonite and/or grout. Casing removal activities may 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.

Project Title	Approval No.	Date Approved	NOC_ID
Vadose Zone Characterization NOC revision	NOC revision approval	8/23/1999	387

Conditions (state only enforceable)

1) 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.

2) 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 a tanker truck for treatment at the 200 Area ETF or other permitted storage/treatment

3) The APQ associated with perched water, purge water and groundwater sampling shall not exceed 1.36E-3 curies.

4) Fugitive emissions will be monitored using periodic confirmatory monitoring accomplished by operating three fixed head samplers around the location of the work activities. The fixed head samplers will also be located within 100 feet of where the casing removal activities are occurring and will be operated when the work activities have the potential to emit radionuclides.

Project Title	Approval No.	Date Approved	NOC_ID
Vadose Zone Characterization	AIR 99-701	7/14/1999	379

Conditions (state only enforceable)

1) This approval, with its Conditions and Limitations, must be included in the next revision of the Hanford Air Operating Permit (WAC 246-247-060(1)(e) and (2)(c)).

2) These Conditions and Limitations must be proceduralized prior to starting the activities described in the Notice of Construction.

3) 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 & Vehicles".

   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 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)).

4) This NOC becomes obsolete on July 15, 2019.

5) The facility shall notify the department at least seven days prior to any planned preoperational testing of the emission unit's emissions control, monitoring or containment systems. The department reserves the right to observe such tests (WAC 246-247-060(4)).

6) The department retains the right to conduct its own stack sampling, environmental monitoring or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing (WAC 246-247-075(10) and (11)).

7) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13) and WAC 246-247-075(6)). The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in the above cited regulation.

8) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that lasts more than four hours, it must be reported to the department within 24 hours. Applicable standards (WAC 246-247-040) include unit specific emission limits, the offsite dose standard, BARCT or ALARACT, whichever is applicable, or any limitations included in this approval.

9) The department reserves the right to inspect and audit this unit during construction and operation, including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations (WAC 246-247-080 (1)).

10) The facility shall make requested documents available in a timely manner for review (WAC 246-247-080(10).

11) U.S. DOE shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5)).

12) If the department finds that the emission unit described in this NOC is not in compliance with the standards in WAC 246-247-040 during construction or during operation, the department reserves the right to require modifications to bring it into compliance (WAC 246-247-060(2)(d)).

13) These activities are limited to the emission limits as shown in the following table and shall not exceed the total abated maximum limit of 7.03 E –02 mrem/Yr.

14) When this project is completed, or operations cease, the facility shall notify the department via a report of closure, including whether or not any potential for airborne release occur (WAC 246-247-080(6)).

15) The radionuclides allowed to be process are 3H, 14C, 59Ni, 63Ni, 60Co, 90Sr, 90Y, 93Zr, 99Tc, 106Ru, 125Sb, 126Sn, 129I, 134Cs, 137Cs, 151Sm, 152Eu, 154Eu, 155Eu, 226Ra, 228Ra, 227Ac, 229Th, 232Th, 231Pa, 232U, 233U, 234U, 235U, 236U, 238U, 237Np, 238Pu, 239Pu, 240Pu, 241Pu, 242Pu, 241Am, 243Am, 242Cm, 243Cm, 244Cm.

16) All measured or calculated emissions must be reported annually in the Hanford Site Air Emissions Report (WAC 246-247-080(3)).

17) Periodic confirmatory sampling is required. For the air rotary type drilling this shall consist of a destructive or non-destructive analysis of the record filter combined with radiological field surveys during the work. The record HEPA type filter located downstream shall have a minimum efficiency of 90 percent for particulates with a median diameter of 0.3 microns as specified by the manufacturer. The radiological analyses from the soil samples will be averaged to determine the isotopic distribution of Strontium-90 (Sr-90), Cesium-137 (Cs-137), Plutonium-239 (Pu-239) and Americium (Am-241). The record filter will be counted using a gamma spectrometer calibrated to Cs-137. Counting will be done annually using either a destructive or non-destructive technique.

The soil sample isotope ratios will be applied to Cs-137 on the record filter to confirm low emissions. In addition, the HEPA filter housing shall be field surveyed after the completion of each borehole to verify low emissions. This field survey method shall be submitted to the department for approval.
Periodic confirmatory monitoring of the passive HEPA type filter will be accomplished by performing a field survey of the filter housing to confirm low emissions. The field survey of the passive HEPA type filter will be performed after the completion of each borehole. The method of performing this "field survey" shall be submitted to the department for approval (WAC 246-247-075(3)).

18) All reports and records must be kept and reported according to 40 CFR 61, Subpart H. (WAC 246-247-080(2)).

19) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections, as required by EPA (WAC 246-247-080(9)). At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet the requirements.

20) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least 5 years (WAC 246-247-080 (8)).

21) The annual possession quantity shall not exceed that described in the following table:

22) The facility must maintain a log in an approved format for this activity or emission unit (WAC 246-247-080(7)).

23) The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).

24) 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 3 ft 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 activity and casing removal. All periodic confirmatory samples will be collected and analyzed following EPA method 114.

25) The facility must be able to demonstrate that the workers associated with this emission unit are adequately trained in the use and maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures (WAC 246-247-075(12)).

200 E diffuse/fugitive emissions

200E P-241AR151-001
AR151
Emission Unit ID: 319

200 West Burial Grounds

200W P-Trench31 001
Leachate Collection Tank for Trench 31
Emission Unit ID: 472

This Emission Unit has 2 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Leachate Collection and Storage Tank (LLBG Mixed Waste Disposal)	RTAM	8/3/1999	381

Conditions (state only enforceable)

1) The PCM shall consist of smearing the overflow pipe before and after emptying the tank. When the tank is not empty, a monthly smear shall be taken. The frequency of smear samples shall be reassessed after one year.

Project Title	Approval No.	Date Approved	NOC_ID
Trench 34: Leachate Collection and Storage Tank (LLBG Mixed Waste Disposal)	RTAM	7/13/1999	377

200W P-Trench34 001
Leachate Collection Tank for Trench 34
Emission Unit ID: 473

This Emission Unit has 2 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Leachate Collection and Storage Tank (LLBG Mixed Waste Disposal)	RTAM	8/3/1999	381

Conditions (state only enforceable)

1) The PCM shall consist of smearing the overflow pipe before and after emptying the tank. When the tank is not empty, a monthly smear shall be taken. The frequency of smear samples shall be reassessed after one year.

Project Title	Approval No.	Date Approved	NOC_ID
Trench 34: Leachate Collection and Storage Tank (LLBG Mixed Waste Disposal)	RTAM	7/13/1999	377

Conditions (state only enforceable)

1) No WDOH conditions apply to this NOC.

241-AX TANK FARM

200E P-241AX155-001
AX155 Diversion Box
Emission Unit ID: 330

241-ER

200E P-241ER311-001
ER311
Emission Unit ID: 185

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Installation and use of a new emissions unit for the 241-ER-311 Catch Tank.	Shortform Approval	11/8/1999	412

300 diffuse/fugitive emissions

300 Area Emissions
300 Area Emissions
Emission Unit ID: 443

This Emission Unit has 2 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
300 AREA Process Sewer Cleanout	AIR 00-708	7/27/2000	446

Conditions (state only enforceable)

1) U.S. DOE shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5)).

2) These Conditions and Limitations must be proceduralized prior to starting the activities described in the Notice of Construction.

3) This approval, with its Conditions and Limitations, must be included in the next revision of the Hanford Air Operating Permit (WAC 246-247-060(1)(e) and (2)(c)), and will at that time, constitute a revision of the Radioactive Air Emissions License.

4) If the department finds that the emission units described in this NOC is not in compliance with the standards in WAC 246-247-040 during construction (as described in the NOC or during operation) it reserves the right to require modifications to bring it into compliance (WAC 246-247-060(2)(d)).

5) The facility shall notify the department at least seven days prior to any planned preoperational testing of the emission units, emission control, monitoring or containment systems. The department reserves the right to observe such tests (WAC 246-247-060(4)).

6) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from these units (WAC 246-247-075(13) and WAC 246-247-075(6)). The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in the above cited regulation.

7) The department reserves the right to inspect and audit these units during construction and operation, including all activities, equipment, operation procedures, documents, data, and other records related to compliance with the regulations

8) The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).

9) All reports and records must be kept and reported according to 40 CFR 61, Subpart H (WAC 246-247-080(2)).

10) Records must be readily (promptly) available for these units. Those records must be maintained onsite, and must be retained for at least five years (WAC 246-247-080(8)).

11) All measured or calculated emissions must be reported annually (WAC 246-247-080(3)).

12) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any Conditions or Limitations in this NOC approval or that lasts more than four hours, it must be reported to the department within 24 hours. Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), BARCT (paragraph 3), or ALARACT (paragraph 4), whichever is applicable, or any limitations included in this approval (paragraph 5).

13) This unit must be fully accessible to Department of Health (DOH) inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections, as required by EPA (WAC 246-247-080(9)). At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, notification must occur far enough in advance for the inspectors to have reasonable time to meet the requirements.

14) The facility shall make requested documents available for timely review (WAC 246-247-080(10)).

15) When this project is completed, or operations cease, the facility shall notify the department via a report of closure, and indicate whether or not any potential for airborne release occurred (WAC 246-247-080(6)).

16) The work approved in this NOC is limited to those described activities associated with the construction and operation activities involving the cleanout of selected process sewer lines in the 300 Area.

17) Approved activities included in the process are the following: Pressure wash to clean the lines between Process Sewer 45, Process Sewer 80, Process Sewer 80, and the 300 Area Lift Station. The Guzzler may be used with the cyclone attachment that will direct the extracted liquid/soil mixture to a collection trough. The liquid/soil mixture will then be pumped from the collection trough to a tank trailer for transportation to the 307 Basins. If other types of pumping and collection equipment will be used, and the Guzzler is not available, the department must be notified of the type of equipment that will be used. The 300 Area TEDF Lift Station contains a sump, which will be cleaned in the same manner as stated above. Process Sewer 16 will also be cleaned using the Guzzler.

18) The total unabated emissions are limited to 4.7E-05 mrem/yr.

19) The total unabated dose TEDE to the hypothetical MEI cannot exceed 4.70 E-05 mrem/yr.

20) The total abated emissions is 4.70 E-05 mrem/yr. the same as the unabated dose.

21) The following Controls must be adhered to:

* The power washing activities will take place within the intact piping system, which has limited access ports allowing for air exchange to the environment.

* Piping system access ports will be closed to the maximum extent practicable during power washing activities.

* Use of liquids during power washing activities will be expected to reduce the potential for airborne particulate resuspension.

* The Guzzler controls which include, collection tank and plate separator device, cyclone separators, baghouse system with 72 bags each, equipped with a cyclic bag cleaning air blow-back system, micro-strainer device, and high-efficiency particulate air (HEPA) filter system consisting of three in-place tested HEPA filters in parallel (99.95% efficient system).

22) The annual possession quantity is limited to the radionuclide emissions listed below:

Sr-90 6.56 E-08 mrem/yr.
U-234 2.04 E-05 mrem/yr.
U-235 2.34 E-06 mrem/yr.
U-238 1.33 E-05 mrem/yr.
U-239 3.79 E-08 mrem/yr.
Am-241 8.11 E-08 mrem/yr.
Pu-238 1.46 E-08 mrem/yr.
Pu-239 1-09 E-05 mrem/yr.

TOTAL 4.70 E-05 mrem/yr.

23) The monitoring systems must be periodic confirmatory measurements to verify the low emissions.

24) All work on this project can take place once annually.

25) The department retains the right to conduct stack sampling, environmental monitoring or other testing around this unit to assure compliance. If directed by the department, the facility must make provision for such testing (WAC

246-247-075(10) and (11).

26) The facility must be able to demonstrate workers associated with this emission unit are trained in the use and maintenance of control and monitoring systems, and in the performance of associated tests and emergency procedures (WAC 246-247-075(12)).

Project Title	Approval No.	Date Approved	NOC_ID
Isolation of Radioactive Liquid Waste System Line In Valve Box 11 Outside The 324 Facility	Shortform Approval	7\7\99	375

Conditions (state only enforceable)

Isolation of Valve Box#11 Outside 324 Facility

1) Perform radiological field surveys during valve box work using hand held instruments to verify low emissions
2) Establish a buffer area around the pit to minimize the chance of spreading contamination.

400 diffuse/fugitive emissions

400 J-NONPOINT 027

4843 Waste Inspection Facility

Emission Unit ID: 489

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Shortform	4/17/1999 Approval	356	

Conditions (state only enforceable)

1) Verify low emissions using the four air samplers located at each border of the 400 Area.
2) Provide HPT coverage for field surveys during activities at the 4843 Building.
3) Cease all work if contaminated material exceeds 10 mrem/hour on contact and place in safe configuration.
4) Fumigate the garbage as necessary to prevent the spread of contamination by insects
5) Use fixatives when needed to prevent the spread of contamination.

600 Area Diffuse Emissions

600 J NONPOINT SOURCE

600 Area Diffuse Emissions

Emission Unit ID: 504

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Waste Sampling & Characterization Facility	AIR 00-802	8/10/2000	451

Conditions (state only enforceable)

1) U.S. DOE shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5)).
2) These Conditions and Limitations must be proceduralized prior to starting the activities described in the Notice of Construction before the specified activity is to begin. Copies of these procedures must be provided to the department before starting these activities.
3) This approval, with its Conditions and Limitations must be included in the next revision of the Hanford Air Operating Permit (WAC 246-247-060(1)(e) and (2)(c)) and will at that time, constitute a revision of the Radioactive Air Emissions License.
4) If the department finds that the emission unit described in this NOC is not in compliance with the standards in WAC 246-247-040 during construction (as described in the NOC or during operation it reserves the right to require

modifications to bring it into compliance (WAC 246-247-060(2)(d)).

5) The facility shall notify the department at least seven days prior to any planned preoperational testing of the emission unit's emissions control, monitoring or containment systems. The department reserves the right to observe such tests (WAC 246-247-060(4)).

6) The U.S. DOE shall monitor these emission units as follows: 696-W-1 and 696-W-2 emission units shall be monitored periodically. The periodic sampling shall consist of a sample being drawn a minimum of two weeks per quarter. Periodic radiological surveys of swipes or surfaces associated with 600 J NONPOINT 033, J NONPOINT 023, 600 J NONPOINT 031, and 600 J NONPOINT 030 must be conducted to verify compliance.

7) The department reserves the right to conduct its own environmental monitoring or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing (WAC 246-247-075(10)).

8) The facility must be able to demonstrate that the workers associated with these emission units are adequately trained in the use and maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures (WAC 246-247-075(12)).
these units (WAC 246-247-075(13) and WAC 246-247-075(6)). The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in the above-cited regulation.

9) The department reserves the right to inspect and audit this unit during construction and operation including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations (WAC 246-247-080(1)). Periodic inspections will occur.

10) The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).

11) All reports and records must be kept and reported according to 40 CFR 61, Subpart H. (WAC 246-247-080(2)).

12) All measured or calculated emissions must be reported annually (WAC 246-247-080(3)).

13) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that lasts more than four hours, it must be reported to the department within 24 hours. Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in this approval

14) When this project is completed, or operations cease, the facility shall notify the department via a report of closure, and indicate whether or not any potential for airborne release occurred (WAC 246-247-080(6)).

15) The facility must maintain a log in an approved format by the department for the surveys and smears required in approval condition number six.

16) Records must be readily (promptly) available for these units. These records must be maintained onsite, and must be retained for at least five years (WAC 246-247-080(8)).

17) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections, as required by EPA (WAC 246-247-080(9)). At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet the requirements.

18) The facility shall make requested documents available in a timely manner for review (WAC 246-247-080(10)).

19) The Waste Sampling Characterization Facility is limited to the following process descriptions for emission unit.

* WSCF provides analytical services to support chemical and radiological analyses conducted on a variety of solid, liquid, and vapor media, as required by the Resource Conservation and Recovery Act (RCRA) of 1976, Comprehensive Environmental Response, Compensation, and Liability Act of 1980, Safe Drinking Water Act of 1974, Toxic Substance Control Act of 1976, Clean Water Act of 1977, and the Clean Air Act of 1990 requirements.

WESF consists of the following:

* 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. Wastewater 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 wastewater drums are moved to various locations with WSCF.

* 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.

* Environmental data including a computer center - This is a non-radiological building and will not be addressed further.

* Environmental Sample Archive Building (600 J non-point 032) - This building provides for controlled storage, indexing, categorizing 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.
* Mobile Laboratory Storage Facility (600 J non-point 031) - 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 a calibration laboratory instrumentation used in the mobile laboratories, and a sample preparation area for adding chemical buffers and preservatives to sample containers. This building also provides for temporary storage of drums, or other waste packages contained with low levels of radioactive material. Less than 100 drums are stored at any one time.

* Solid Waste Storage Building (600 J non-point 030) - This open-sided building provides for temporary storage of drums or other low-level waste packages. Less than 100 drums are stored at any one time.

* Contaminated Liquid Waste Retention Vault (600 J non-point 033) - This 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 for temporary storage of drums, or other waste packages contaminated with low levels of radioactive material. Less than 100 drums are stored at any one time.

* 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 bunghole or other opening, and flexible hose transfers the liquid to the tanker.

* Sample Equipment Cleaning Facility - This facility includes a calibration and laboratory equipment room equipped with a fume hood for solvent cleaning of tools used for collecting samples from the field. This is a non-radiological facility and will not be addressed further.

20) The radiological control technology requirements are as follows:

* 696-W-1 shall have a pre-filter and a HEPA filter before entering the exhaust stack. The flow rate shall be kept in a range of 54,000 CFM plus or minus 10%. When the ventilation system exits the analytical laboratory building and divides into legs, each leg must consist of a damper, a pre-filter, a HEPA filter bank (4x3), a damper, and a fan. The pre-filter must be a high-density micro media with an average efficiency of 25 to 30 percent. The HEPA filter assembly housings must have bagout provisions. The pre-filter housing must be designed for ease of filter change without increased dust loading on the HEPA filters. Two 50% capacity exhaust fans are installed and operate with parallel under normal power.

* 696-W-2 stack operates a ventilation system that splits into two legs. Each leg of the parallel system must consist of a damper, a pre-filter, a HEPA filter bank (4x3), and a damper. The installed filtration system provides a minimum of 99.95% collection efficiency. After the air passes through the parallel system, the legs join together and pass through the fan. The airflow is divided into two paths, with 10% of the airflow exhausting directly to the

stack, and the other 90% of flow recycling back into the building. The damper and fan regulate the flow.

* 600 J non-point 032 will control emissions by the structure itself.

* 600 J non-point 031 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.

* 600 J non-point 030 will control emissions by controlling the waste packages. Minimize the external contamination in accordance with established radiation control procedures.

* 600 J non-point 033 will control emissions by having a passive vent HEPA type high efficiency filter on each tank.

* 600 J non-point portable tanker source will control emissions by passively venting the portable tanker.

21.) The annual possession quantity for each building is as follows:

* 696-W-1 stack can handle 0.33 curies per year of plutonium 239 and 6.80 curies per year of strontium 90.

* 696-W-2 stack can handle 0.33 curies per year of plutonium 239 and 6.80 curies per year of strontium 90.

* 600 J non-point 032 can handle 0.33 curies per year of plutonium 239 and 6.80 curies per year of strontium 90.

* 600 J non-point 031 can handle 0.33 curies per year of plutonium 239 and 6.80 curies per year of strontium 90.

* 600 J non-point 030 the annual possession quantity for this emission unit must abide by the vented container Notice of Construction.

* 600 J non-point 033 can handle 0.33 curies per year of plutonium 239 and 6.80 curies per year of strontium 90.

22) The annual possession quantity for each building is as follows:

* 696-W-1 stack can handle 0.33 curies per year of plutonium 239 and 6.80 curies per year of strontium 90.

* 696-W-2 stack can handle 0.33 curies per year of plutonium 239 and 6.80 curies per year of strontium 90.

* 600 J non-point 032 can handle 0.33 curies per year of plutonium 239 and 6.80 curies per year of strontium 90.

* 600 J non-point 031 can handle 0.33 curies per year of plutonium 239 and 6.80 curies per year of strontium 90.

* 600 J non-point 030 the annual possession quantity for this emission unit must abide by the vented container Notice of Construction.

23) The abated and unabated emission limits are as follows:

* 696-W-1 Stack:
Unabated: 3.3 E-4 Ci/yr Pu-239, 6.8 E-3 Ci/yr Sr-90
Abated: 1.7 E-7 Ci/yr Pu-239, 3.4 E-6 Ci/yr Sr-90

* 696-W-2 Stack:
Unabated: 3.3 E-4 Ci/yr Pu-239, 6.8 E-3 Ci/yr Sr-90

Abated: 1.7 E-7 Ci/yr Pu-239, 3.4 E-6 Ci/yr Sr-90

* 600 J Non-Point 032:
Unabated: 3.3 E-4 Ci/yr Pu-239, 6.8 E-3 Ci/yr Sr-90
Abated: 3.3 E-6 Ci/yr Pu-239, 6.8 E-5 Ci/yr Sr-90

* 600 J Non-Point 031:
Unabated: 3.3 E-4 Ci/yr Pu-239, 6.8 E-3 Ci/yr Sr-90
Abated: 3.3 E-7 Ci/yr Pu-239, 6.8 E-6 Ci/yr Sr-90

* 600 J Non-Point 033:
Unabated: 3.3 E-4 Ci/yr Pu-239, 6.8 E-3 Ci/yr Sr-90
Abated: 3.3 E-6 Ci/yr Pu-239, 6.8 E-5 Ci/yr Sr-90

* 600 J Non-Point Source, Portable Tanker:
Unabated: 3.3 E-4 Ci/yr Pu-239, 6.8 E-3 Ci/yr Sr-90
Abated: 3.3 E-4 Ci/yr Pu-239, 6.8 E-3 Ci/yr Sr-90

24) The annual possession quantity of plutonium and strontium are considered conservative and noted that these radionuclides representative types of alpha and beta radiation that this facility expects to handle. The facility needs to verify annually that plutonium and strontium are the most conservative radionuclides this facility handles.

All Plants

200 J-NONPOINT 023
By-Pass of 244-U DCRT
Emission Unit ID: 483

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
By-Passing the 244-U Double Contained Receiver Tank (DCRT) During Saltwell Pumping	Shortform Approval	5/4/1999	360

Conditions (state only enforceable)

1) Pneumatic Pressure Testing: Air used to pressurize line(s) will be vented to the atmosphere through a HEPA filter.

2) Welding: Prior to making a weld, the external cut and weld area will be radiologically surveyed/smeared to verify contamination levels are equal to or less than 10,000 dpm/100 square centimeters beta/gamma and 2,000 dpm/100 square centimeters alpha.

3) Excavation: Provide HPT field survey coverage during excavation activities.

4) Transfer Line Cuts: Transfer lines will be cut in a glovebag that is passively vented through a HEPA type filter. Provide continuous HPT coverage during cutting operations.

5) Pit Work: Perform radiological surveys of work area. Swipes for removable contamination are required. Swipes will be taken to determine that splash guards are maintained below 50,000dpm/100cm2 beta/gamma and 20 dpm/100 cm2 alpha. Survey the pit area when work is completed.

200 P-241ER151-001
ER151
Emission Unit ID: 171

200 P-241ER152-001
ER152
Emission Unit ID: 170

200 P-241ER153-001
ER153
Emission Unit ID: 169

200 J-NONPOINT 018
Grout Railcar
Emission Unit ID: 460

200 J-NONPOINT 012
Purgewater Modutanks
Emission Unit ID: 465

This Emission Unit has 4 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Purgewater Modutanks	Teleconference	4/29/1999	359

Conditions (state only enforceable)

1) This teleconference clarified two conditions regarding control technology and monitoring requirements of AIR

Project Title	Approval No.	Date Approved	NOC_ID
Purgewater Modutanks	AIR 99-101	1/8/1999	330

Conditions (state only enforceable)

1) These Conditions and Limitations must be proceduralized prior to starting the activities described in the Notice of Construction

2) This approval, with its Conditions and Limitations, constitutes and amendment to the Department's Radioactive Air Emission License. This amendment must be included in the next revision of the Hanford Air Operating Permit (WAC 246-247-060(1)(e) and (2)(c).

3) The department retains the right to conduct its own stack sampling, environmental monitoring or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing (WAC 246-247-075(10) and (11).

4) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13) and WAC 246-247-075(6)). The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in the above cited regulation.

5) The department reserves the right to inspect and audit this unit during construction and operation, including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations (WAC 246-247-080(1).

6) The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).

7) U.S. DOE shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5).

8) When this project is completed, or operations cease, the facility shall notify the department via a report of closure, including whether or not any potential for airborne releases occurred (WAC 246-247-080(5)).

9) If the department finds that the emission unit described in this NOC, is not in compliance with the standards in WAC 246-247-040 during construction ,as described in this NOC, or during operation, it reserves the right to require modifications to bring it into compliance (WAC 246-247-060-(2)(d)).

10) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least 5 years (WAC 246-247-080(8)).

11) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections, as required by EPA (WAC 246-247-080(9)).

12) The facility shall make requested documents available in a timely manner for review. (WAC 246-247-080(10)).

13) 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.

14) The maximum impact for the six evaporation units shall be 1.5E-04 millirem per year.

15) All reports and records must be kept and reported according to 40 CFR 61, Subpart H (WAC 246-247-080(2)).

16) All measured or calculated emissions must be reported annually (WAC 246-247-080(3)). Project specific monitoring is not required for this unit. Emissions from the unit are monitored by the ambient air monitoring program established for the Hanford Site and documented in reports prepared for this program.

17) The facility must be able to demonstrate that the workers associated with this emission unit are adequately trained in the use and maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures (WAC 246-247-075(12).

18) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that last more than four hours, it must be reported to the department within 24 hours. Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in the approval (paragraph 5) (WAC 246-247-080(5)).

Project Title	Approval No.	Date Approved	NOC_ID
Purgewater Modutanks	Meeting minutes	7/9/1998	285

Conditions (state only enforceable)

1) No WDOH conditions apply to this NOC.

Project Title	Approval No.	Date Approved	NOC_ID
Purgewater Modutanks	AIR 91-803	8/27/1991	7

Conditions (state only enforceable)

1) Controls will be implemented to minimize wind suspension of any potentially radioactively contaminated solids that may settle to the bottom of the storage units.

200 J-NONPOINT 020

Soil Characterization Using Cone Penetrometer

Emission Unit ID: 480

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Soil Characterization Using the Cone Penetrometer	AIR 98-1009	10/29/1998	324

Conditions (state only enforceable)

1) The process is limited to the exact description described in the NOC.

2) The facility shall make requested documents available in a timely manner for review.

3) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections. At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet the requirements.

4) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least 5 years.

5) The facility must maintain a log in an approved format for this activity or emission unit.

6) When this project is completed, or operations cease, the facility shall notify the department via a report of closure, including whether or not any potential for airborne releases occurred.

7) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed

to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that last more than four hours, it must be reported to the department within 24 hours. (Note: Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in the approval (paragraph 5)).

8) The required controls are: As described in Item 6 of the NOC.

9) All reports and records must be kept and reported according to 40 CFR 61, Subpart H.

10) U.S. DOE shall monitor this project or emission unit as follows: Field surveys HP coverage

11) The department reserves the right to inspect and audit this unit during construction and operation, including all activities, equipment, operations, documents, data, and other records related to compliance with the regulations.

12) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13) and WAC 246-247-075(6)). The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in the above cited regulation.

13) The facility must be able to demonstrate that the workers associated with this emission unit are adequately trained in the use an maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures.

14) The department retains the right to conduct its own stack sampling, environmental monitoring or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing.

15) Periodic confirmatory sampling is required. It must consist of: Field surveys resulting from HP coverage

16) U.S. DOE shall comply with all Conditions and Limitations of this license.

17) The facility shall notify the department at least seven days prior to any planned preoperational testing of the emission unit's emissions control, monitoring or containment systems (if conducted). The department reserves the right to observe such tests.

18) The abated emission limit is: 2.04e-10 mrem/yr to the MEI.

19) All measured or calculated emissions must be reported annually.

20) The department may require an ALARACT demonstration at any time.

21) If the department finds that the emission unit described in this NOC, is not in compliance with the standards in WAC 245-247-040 during construction ,as described in this NOC, or during operation, it reserves the right to require modifications to bring it into compliance.

22) The radionuclides are limited to: Cs-137, Sr-90 - Table 1 of NOC.

23) The facility must be able to demonstrate that it has a quality assurance program compatible with the applicable national standards listed in, or equivalent to, those listed in the above cited regulation

200 J-NONPOINT 003
Tank Farm Restoration and Safe Storage
Emission Unit ID: 456

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Tank Farm Restoration and Safe Operations Project W-314, Revision 4	AIR 00-310	3/22/2000	441

Conditions (state only enforceable)

1) The controls and monitoring requirements listed in the NOC and this approval shall assure adequate measures are in place for the safe operation of the emission unit.

2) The department reserves the right to conduct an environmental surveillance program around the emission unit and to require the facility to conduct or modify its own environmental monitoring program (WAC 246-247-075(9)).

3) When this project is completed, and ceases to be an emission unit, a report of closure must be filled with the department (WAC 246-247-080(6)).

4) The Annual Possession Quantity (APQ) for pipe cuts must be tracked using a WDOH approved log. The log must contain the date the cut was performed, contamination levels associated with the pipe being cut, using the same

methodology as outlined in Attachment 1 "Potential to Emit Cutting Transfer Lines", and the mrem/yr. to the MEI associated with that pipe cut (WAC 246-247-080(7)).

5) This project must be included in the next revision of the Air Operating Permit if active at the time (WAC 246-247-060(1)(e)).

6) The NOC constitutes a contract between the department and the facility. Any changes must be approved by the department.

7) A wind speed restriction of 20 miles per hour will be applied to all excavation of radioactive material. This criterion applies to sustained wind speed as determined by the Hanford Meteorological Station.
makes a commitment on what standards (required or recommended) will be followed. At that point, the commitment is binding.

9) The emissions from the continued operation of the new AN and AZ pits will be limited to 5.38E-04 mrem/yr. these emissions will be monitoring by the near field monitoring stations.

10) This approval to commence construction is valid for only two years from the date of approval. If construction is not commenced within two years of approval, the approval is void.

11) An ALARACT demonstration may be required at any time by the department (WAC 246-247-130).

12) Any spread of contamination via the air pathway must be reported to the department within 24 hours (WAC 246-247-075(9)).

13) The APQ for soil excavation must be tracked using a WDOH approved log. The log must contain the date of the excavation, the contamination levels of the soil, amount of soil excavated, and the mrem/yr. to the MEI associated with that excavation (WAC 246-247-080(7)).

14) Pit work will be comprised of decontamination, applying protective coatings, and replacing wall nozzles, leak detectors, cover blocks, pipe stub-outs and jumpers. Additional pit activities will include coring to allow installation of new equipment and piping and to allow access to pit equipment. Pit work will also include repair and removal of cracked material to allow application of grouting material.

15) The use of the Guzzler is approved for excavation work associated with the W-314 Project provided the total PTE for the project of 1.15E-02 mrem/yr. TEDE to the MEI is not exceeded. The emission from the Guzzler must be tracked using a WDOH approved operations log. The log shall include soil contamination levels, total amount of soil excavated, and the calculated potential dose to the MEI form those emissions using a release fraction of one. The Guzzler will be operated in accordance with the Tank Farm A Complex NOC and the associated conditions provided by WDOH in the December 23, 1998 approval letter. Guzzler use in other Farms will be performed in accordance with the December 18, 1998 WDOH approved Categorical Guzzler NOC (WAC 246-247-080(7)).

16) Excavated areas will be backfilled with the original soil or soil that is less contaminated than excavated soil.

17) The project shall be fully accessible to department inspectors (WAC 246-247-080(9)).

18) U.S. DOE shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5)).

19) Any deviation from the description of the modification or new construction without approval of the department, may result in enforcement action under WAC 246-247-100.

20) The emission limit for this project may not exceed 1.15E-02 mrem/yr. TEDE to the MEI (WAC 246-247-040(5)). All logs, and documentation associated with this NOC and other referenced NOC (PTREAU NOC, A-Tank Farm Guzzler NOC, and Categorical Guzzler NOC) must be maintained for review and assure that the APQ and emission limit of 1.15E-02 mrem/yr. TEDE to the MEI are not exceeded for Project W-314.

21) Vibratory roller compactors may not be used on contaminated soil, due to the high possibility of soil resuspension (WAC 246-247-040(4)).

22) Expandable foam may be used in cutting of transfer lines, but is not required.

23) Containment for the cutting of transfer lines will be HEPA filtered and in sealed glove bags or other containment. HEPA filters used on passively ventilated glovebags or containments will be surveyed once per day. HEPA filters used on powered ventilation will comply with the requirements of the Portable/Temporary Radioactive Air Emission Units NOC (DOE/RL-96-75).

24) Nothing may be inferred that is not specifically described in this NOC (WAC 246-247-060 and 110).

25) Soil will be wetted prior to and during excavation using the backhoe, jackhammer or rototool. During manual excavation soil will be wetted upon excavation if it is not naturally damp.

26) Excavation work north of the 241-AX-103 and 101 Tanks is close to the 216-A-39 Crib, which may be a source of

extra contamination in the vicinity. Extra care should be taken in that area.

27) No radionuclides other than those listed in the NOC may be emitted in any detectable concentrations (WAC 246-247-110(10)(11)(12)).

28) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13)). The emission data must be reported in the Hanford Site Annual Air Emission

29) Pit work will include removal of cracked material will be performed using manual and power tools. This work will be conducted inside a fully enclosed containment tent with a HEPA filtered exhauster operated in accordance with the PTRAEU NOC.

30) All records required by WAC 246-247 must be retrievable within 24 hours of the request, and must be stored onsite at the facility. All records shall be maintained for a minimum of five years (WAC 246-247-080(8)).

31) During excavation, using a backhoe, jackhammer, rototool, or manual devices soil will be placed in a container or on the ground for a screening survey. The screening levels will be as follows:

* Excavation activities will be stopped if evenly distributed (i.e. non-speck) contamination detection readings are greater than 100,000 dpm/100 cm2 beta-gamma, or 35 dpm/100 cm2 alpha above background. Background for alpha will be determined in a known clean area nearby. Excavation will not continue until a review of the work and encountered conditions have been performed and it has been confirmed with the Department of Health that no threat to the environment exists, and proper controls (i.e. removal and disposal, water, fixative, covers, etc.) have been put into place.

* Screening survey for alpha contamination will not be performed unless the beta-gamma survey is greater than 100,000 dpm/100 cm2 above naturally occurring background.

* If hot specks are detected during the screening surveys, the specks will be removed and containerized in drums for disposal before the excavation is allowed to continue, unless located in the bottom of the trench. In the bottom of the trench, the specks maybe covered with clean fill.

* Screening surveys for beta-gamma contamination will be conducted using a GM/P-11 probe. Screening surveys for alpha contamination will be conducted using a PAM.

32) Pit coring activities will be performed in accordance with the containment requirements established in the HNF-IP-0842 "Containment Guidelines Matrix".

33) The facility shall notify the department at least seven days prior to any planned preoperational testing (cold or hot) monitoring or containment system involved in this project. The department reserves the right to observe any such testing (WAC 246-247-060(4)). Notification may be by phone, electronic mail or written correspondence.

34) A HEPA vacuum may be used to assist in the removal of debris during repair of cracked concrete and concrete coatings. The HEPA vacuum must only be operated in a fully enclosed containment tent, which is being ventilated by a HEPA filtered powered exhaust, in accordance with the PTRAEU NOC. Any other use of a HEPA vacuum must receive prior approval from WDOH.

35) For cover block removal a "bull pen" will be utilized. A vertical splashguard will be established around the pit and will be maintained less than 50,000 dpm/100 cm2 beta-gamma and 20 dpm/100 cm2 alpha. The removable contamination within the pit is decontaminated/fixed to an average of less than 100,000 dpm/100 cm2 beta-gamma and 2000 dpm/100 cm2 alpha or an approved fixative has been reapplied to pit surfaces. Fixative will matrix the contamination to ensure minimization of potential airborne contamination.

For the removal of jumpers an open top greenhouse ventilated with an HEPA filtered exhauster will be utilized for containment. The exhauster will be operated in accordance with the PTRAEU NOC. A suction elephant trunk may be extended into the valve pit. When an elephant trunk in extended into a pit it should be maintained at least two feet above the pit floor. As jumpers are removed from the valve pit they will be drained of any liquid while still within the valve pit. Draining will be accomplished by titling the jumper and allowing any liquid present to flow to the pit floor and floor drain. The ends of the jumpers will then be wrapped in plastic and placed in disposal boxes while inside the containment.

A continuous air sample will be taken during pit work evolution. Work will be placed in a safe condition and stopped

if the results of the net field count indicate that the work place air sample has exceeded 0.1 of the Derived Air Concentration (DAC) at which time WDOH will be notified. Work will remain suspended until this air sample and potential cause has been evaluated by the Radiological Controls and Environmental. An air sample outside of a radiological area will be taken at approximately the same time and volume and can be used as a background sample to subtract activity resulting from radon and its progeny from the workplace sample.

During pit work when contamination levels exceed 100,000 dpm/100 cm2 and the fixative is disturbed or not in place, containment shall consist of a fully enclosed certified containment tent with an operating HEPA filtered exhaust. The exhauster will be operated in accordance with the PTRAEU NOC.

36) The department reserves the right at any time to require the licensee to provide for split or collocated sampling of this project (WAC 246-247-075(10)).

Effluent Treatment Facility (ETF)

200E J-NONPOINT 021
ETF Load-In Station Filter Skid
Emission Unit ID: 481

This Emission Unit has 1 active Notice of Construction.

Project Title	Approval No.	Date Approved	NOC_ID
Addition of 200 Area Effluent Treatment Facility (ETF) Load-In Station Filter Skid	Short form approval	3/31/1999	350

Conditions (state only enforceable)

1) Periodic confirmatory measurements to verify low emission shall use the Hanford Site Near-Facility Environmental Monitoring program.

2) Implement administrative controls based on a liquid sample analysis from the feed stream to allow no more than 824 curies pass through the filtration system in one year.

Table 2.1 Requirements for minor passively ventilated vents in high level waste tank farms

Perform Periodic Confirmatory Measurements (PCM) annually by verifying the levels of smearable contamination 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, should one exist. Use a confirmation level below 10,000 dpm/100 cm^2 beta gamma and 200 dpm/100 cm2 alpha to verify low emissions. Detected levels above these thresholds would result in further investigation and reporting if it is determined that the cause was due to an airborne emission. The radiological survey reports will become the record for the PCM. [WAC 173-401-61(2)]

200EP-241A101-001
200EP-241A102-001
200EP-241A103-001
200EP-241A104-001
200EP-241A105 001
200EP-241A106-001
200EP-241AX101-00
200EP-241AX102-00
200EP-241AX103-00
200EP-241AX104-00
200EP-241B101-001
200EP-241B102-001
200EP-241B103-001
200EP-241B104-001
200EP-241B105-001
200EP-241B106-001
200EP-241B107-001
200EP-241B108-001
200EP-241B109-001
200EP-241B110-001
200EP-241B111-001
200EP-241B112-001
200EP-241B201-001
200EP-241B202-001
200EP-241B203-001
200EP-241B204-001
200EP-241BX101-00
200EP-241BX102-00
200EP-241BX103-00
200EP-241BX104-00
200EP-241BX105-00
200EP-241BX106-00
200EP-241BX107-00
200EP-241BX108-00
200EP-241BX109-00
200EP-241BX110-00
200EP-241BX111-00
200EP-241BX112-00
200EP-241BY101-00
200EP-241BY102-00
200EP-241BY103-00
200EP-241BY104-00
200EP-241BY105-00
200EP-241BY106-00
200EP-241BY107-00
200EP-241BY108-00
200EP-241BY109-00
200EP-241BY110-00
200EP-241BY111-00
200EP-241BY112-00
200EP-241C101-001
200EP-241C101-001
200EP-241C102-001
200EP-241C107-001
200EP-241C108-001
200EP-241C109-001
200EP-241C110-001
200EP-241C111-001
200EP-241C112-001
200EP-241C201-001
200EP-241C202-001
200EP-241C203-001
200EP-241C204-001
200WP-241S101-001
200WP-241S102-001
200WP-241S103-001
200WP-241S104-001
200WP-241S105-001
200WP-241S106-001
200WP-241S107-001
200WP-241S108-001
200WP-241S109-001
200WP-241S110-001
200WP-241S111-001
200WP-241S112-001
200WP-241SX113-00
200WP-241SX115-00
200WP-241T101-001
200WP-241T102-001
200WP-241T103-001
200WP-241T104-001
200WP-241T105-001
200WP-241T106-001
200WP-241T107-001
200WP-241T108-001
200WP-241T109-001
200WP-241T110-001
200WP-241T111-001
200WP-241T112-001
200WP-241T201-001
200WP-241T202-001
200WP-241T203-001
200WP-241T204-001
200WP-241TX101-0
200WP-241TX102-0
200WP-241TX103-0
200WP-241TX104-0
200WP-241TX105-0
200WP-241TX106-0
200WP-241TX107-0
200WP-241TX108-0
200WP-241TX109-0
200WP-241TX110-0
200WP-241TX111-0
200WP-241TX112-0
200WP-241TX113-0
200WP-241TX114-0
200WP-241TX115-0
200WP-241TX116-0
200WP-241TX117-0
200WP-241TX118-0
200WP-241TY101-0
200WP-241TY102-0
200WP-241TY103-0
200WP-241TY104-0
200WP-241TY105-0
200WP-241TY106-0
200WP-241U101-001
200WP-241U102-001
200WP-241U103-001
200WP-241U104-001
200WP-241U105-001
200WP-241U106-001
200WP-241U107-001
200WP-241U108-001
200WP-241U109-001
200WP-241U110-001
200WP-241U111-001
200WP-241U112-001
200WP-241U201-001
200WP-241U202-001
200WP-241U203-001
200WP-241U204-001
200EP-241C103-001

Approval Number: AIR 00-207 **NOC ID: 429**

DEPARTMENT OF HEALTH
RADIOACTIVE AIR EMISSIONS
NOTICE OF CONSTRUCTION
APPROVAL FOR

PROJECT TITLE: USE OF AN ULTRA HIGH PRESSURE WATER LANCE TO INSTALL SALTWELL PUMPING EQUIPMENT IN TANK 241-BY-105
Date Approved: 22-Feb-00
Emission Unit Name: BY105

This is a MINOR, PASSIVELY ventilated emission unit.

This emission unit requires the following Abatement Technology:

Applicable Requirements: ALARACT [WAC 246-247-040(4)]
ALARACT

BARCT [WAC 246-247-040(3)]

Additional monitoring or sampling requirements established by this NOC will be listed in the Conditions and Limitations section.

CONDITIONS AND LIMITATIONS

1) The U.S. Department of Energy shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5)).

2) The total abated emission limit for this Notice of Construction is limited to 1.02E-05 mrem/year to the Maximally Exposed Individual. The total unabated emission limit for this Notice of Construction is limited to 5.85E-03 mrem/year to the Maximally Exposed Individual.

3) **This process is limited to:**
This NOC allows the use of an ultra high pressure water lance to install saltwell pumping equipment. This approval authorizes the use of an ultra high-pressure water lance for this work instead of the high-pressure water lance described in DOE/RL-97-09, "Radioactive Air Emissions Notice of Construction Use of a Portable Exhauster in Single Shell Tanks During Saltwell Pumping."

4) All work on the project must be concluded by 2005.

5) This unit must be fully accessible to Department of Health inspectors. If there are any specific training requirements or have restrictions or special requirements for entry, they must be given to the department when they are known to allow for unannounced inspections, as required by EPA (WAC 246-247-080(9)). At a minimum, for unannounced inspections, such requirements or restrictions must be told to inspectors that morning, with the opportunity for the inspectors to meet those requirements. For prior announced inspections, such notification must occur far enough in advance for the inspectors to have reasonable time to meet the requirements.

6) If there is an unexpected release of radioactivity or if there is a shutdown or other condition that, if it were allowed to persist, would result in emissions of radionuclides in excess of any standards or limitations in the license or that lasts more than four hours, it must be reported to the department within 24 hours. Applicable standards(WAC 246-247-040)include unit specific emission limits (paragraph 5), the offsite dose standard(paragraph 1), BARCT(paragraph 3)or ALARACT(paragraph 4), whichever is applicable, or any limitations included in this approval(paragraph 5).

7) All measured or calculated emissions must be reported annually (WAC 246-247-080(3)).

8) Approved saltwell pumping activities of liquid waste from Tank 241-BY-105 is outlined in DOE/RL-97-09, "Radioactive Air Emissions Notice of Construction Use of a Portable Exhauster in Single Shell Tanks During Saltwell Pumping". This approval authorizes the use an ultra high-pressure water lance for this work instead of the originally approved high-pressure water lance.

9) The total abated emissions are limited to 1.02E-05 mrem/yr.

10) The annual possession quantity of the waste material in Tank 241-BY-105 cannot exceed 2.3E+06 curies.

11) Records must be readily (promptly) available for this unit. Those records must be maintained onsite, and must be retained for at least five years (WAC 246-247-080 (8)).

12) All reports and records must be kept and reported according to 40 CFR 61, Subpart H. (WAC 246-247-080(2)).

13) The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).

14) Monitoring must consist of:

* Dose rate measurements and contamination surveys during the proposed activities. Particular attention must be paid to areas with potential leakage, air borne pathway releases associated with work around risers, cover block penetrations and removal of equipment. Pre-job and post-job surveys must be performed. These records must be made available to DOH upon request. All surveys must be performed according to established procedures during work activities.

* Periodic confirmatory measurements (PCMs) must be performed quarterly. These activities will be done by verifying the levels of smearable contamination on the outside of the screen covering the outlet of the vent. Confirmation levels below 10,000 disintegrations per minute/100 square centimeters beta/gamma and 200 disintegrations per minute/100 square centimeters alpha must be used to verify low emissions. Levels above the thresholds will require further investigations and reporting if it is determined that the cause was due to airborne emissions. Radiological survey reports become part of the PCM record.

15) The proposed controls for this operation must include the following:
* The existing high-efficiency particulate air (HEPA) type breather filter must be used.

* All operational activities must be performed under the tank's passive breathing rates.

* Tank interface equipment must include riser adapter spool pieces that mates to, and is supported by, the pump pit cover plate and extends down into the riser.

* The pump pit cover plate must be installed during the installation, operation, and removal of the UHP water lance. Installation and removal of equipment must be performed according to ALARACT 10.

* If a retrievable lance is utilized, a spray washer decontamination system must be integrated into the riser adapter to reduce radioactive contamination levels of the deployment device to allowable levels, when the device is withdrawn from the tank.

16) The total unabated TEDE to the MEI is limited to 5.85E-03 mrem/yr.

17) This approval, with its Conditions and Limitations, must be included in the next revision of the Hanford Air Operating Permit (WAC 246-247-060(1)(e) and (2)(c)) and will at that time, constitute a revision of the Radioactive Air Emissions License.

18) The abated emissions levels are limited to 3.06 E-08 Ci/yr. for alpha, 5.00E-04 Ci/yr. for beta, and 1.15E-04 Ci/yr. for Cs-137.

19) The facility must be able to demonstrate that the workers associated with this emission unit are adequately trained in the use and maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures (WAC 246-247-075(12)).

20) If the department finds that the emission unit described in this NOC is not in compliance with the standards in WAC 246-247-040 during construction (as described in the NOC or during operation)it reserves the right to require modifications to bring it into compliance (WAC 246-247-060(2)(d)).

21) The department retains the right to conduct its own stack sampling, environmental monitoring or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing (WAC 246-247-075(10).

22) When this project is completed, or operations cease, the facility shall notify the department via a report of closure, and indicate whether or not any potential for airborne release occurred (WAC 246-247-080(6)).

23) The UHP water lance may not be operated until the lance is situated under the liquid waste cover.

24) Unabated alpha emissions are limited to 3.06 E-06 Ci/yr., beta emissions are limited to 5.0 E-02 Ci/yr., and Cs-137 emissions are limited to 1.15 E-02 Ci/yr.

25) The facility shall notify the department at least seven days prior to any planned preoperational testing of the emission unit's emission control, monitoring or containment systems. The department reserves the right to observe such tests (WAC 246-247-060(4)).6.) The department retains the right to conduct its own stack sampling, environmental monitoring or other testing, as required around this unit to assure compliance. If the department so decides, the facility must make provision for such testing (WAC 246-247-075(10).

26) The facility must be able to demonstrate the reliability and accuracy of emission data and other test results from this unit (WAC 246-247-075(13) and WAC 246-247-075(6)). The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards listed in, or equivalent to, those listed in the above cited regulation.

27) The facility shall make requested documents available for timely review (WAC 246-247-080(10)).

28) The work approved in this NOC is limited to use of the UPH water lance to install saltwell pumping hardware in Tank 241-BY-105.

29) These Conditions and Limitations must be proceduralized prior to starting the activities described in the Notice of Construction.

30) The department reserves the right to inspect and audit this unit during operation. This includes all activities, equipment, operation procedures, documents, data, and other records related to compliance with the regulations (WAC 246-247-080 (1)).

31) Administrative controls must be based on ALARA "As Low as Reasonably Achievable", they must include the following for this project:

* If the lance is removed from the tank, the tank equipment must be designed for ease of decontamination. The system must be contoured to allow "snag free" removal from the riser and also be self-draining. All intenal recesses must be easily accessible for decontamination.

* Installation/operation/removal methods of the water lance system must be designed to minimize the possibility of an unfiltered radioactive material release to the environment.