

Effective Date: XX/XX/XXXX
Expiration Date: XX/XX/XXXX

Hanford Air Operating Permit
Permit No. 00-05-06
Renewal 3

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**STATEMENT OF BASIS
HANFORD SITE AIR OPERATING PERMIT
NO. 00-05-006
RENEWAL 3**

**ATTACHMENT 2
DEPARTMENT OF HEALTH LICENSE**

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HANFORD SITE AIR OPERATING PERMIT
NO. 00-05-006
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TABLE OF CONTENTS

10 1.0 EMISSION STANDARDS..... 5
11 2.0 MONITORING, TESTING, QUALITY ASSURANCE, REPORTING AND RECORD
12 KEEPING 5
13 2.1 Requirements for Diffuse or Fugitive Sources In Table 2.1 5
14 2.2 Compliance Assurance Monitoring for Legacy Sources Discovered on Site 6
15 3.0 EMISSION UNIT IDENTIFICATION DESCRIPTIONS USED IN ATTACHMENT 2 6
16 4.0 ALARACT DEMONSTRATIONS 7
17 5.0 OBSOLETE EMISSION UNITS 8
18 6.0 OBSOLETE APPLICABLE REQUIREMENTS 8
19 7.0 CERCLA APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS..... 8
20
21
22
23 Table 1 ALARACT Demonstrations..... 7
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1.0 EMISSION STANDARDS

Radioactive air emission standards for the State of Washington are contained in WAC 173-480-040, 173-480-050, 173-480-060, WAC 246-247 and in 40 CFR Part 61, Subparts H. In accordance with WAC 173-480-050 Health shall enforce the most stringent standard in effect.

Under WAC 246-247-040(5), the department may set limits on emission rates for specific radionuclides for specific emission units and/or set requirements and limitations on the operation of emission unit(s) as specified in this license. Health establishes emission limits in Notice of Construction (NOC) approvals or upon baseline emissions from an emission unit.

All new construction and significant modifications of emission units from August 10, 1988 until the termination of this license, shall utilize BARCT per WAC 246-247-040(3).

All existing emission units and insignificant modifications shall utilize ALARACT. [WAC 246-247-040(4)]

2.0 MONITORING, TESTING, QUALITY ASSURANCE, REPORTING AND RECORD KEEPING

Emission units with a potential-to-emit less than 0.1 mrem/yr total effective dose equivalent to the maximally exposed individual may estimate those radionuclide emissions, in lieu of monitoring, in accordance with 40 CFR 61 Appendix D, or other procedure approved by the department. The department may require periodic confirmatory monitoring methods approved by the department under WAC 246-247-075(3).

WAC 246-247-075(11) requires the licensee to address accidental releases when planning for any new construction or significant modification of the emission unit if the probability of occurrence during the expected life of the emission unit is greater than one percent.

2.1 Requirements for Diffuse or Fugitive Sources in Table 2.1

Section 5 of Attachment 2 describes the requirements for monitoring and reporting of diffuse or fugitive source emissions. The ambient air monitoring conducted at the Hanford Site has been accepted by the department as the method for demonstrating compliance to emissions limits for diffuse and fugitive sources. Those sources with Emission Unit specific conditions and limitations within the FF-01 License must be monitored and meet the applicable quality assurance and analysis requirements. All required ambient air monitors shall be identified along with their data measurements in the annual Radionuclide Air Emissions Report.

2.1.1 Quality Assurance and Analysis

All required ambient air samples collected and analyzed must be compatible with the quality assurance requirements of national standards such as NQA-1, EPA QA/R-5, and Method 114 as applicable. Near-facility ambient air samples from individual stations must be composited at a frequency no greater than 6 months.

2.1.2 Modifications to the Diffuse and Fugitive Environmental Monitoring

Prior to making modifications (i.e., moving, or removing air sample locations, or changing the sampling period) to the accepted periodic confirmatory measurement (for minor diffuse and fugitive sources) and continuous measurement (for major diffuse and fugitive sources) the Department of Health, Radioactive Air Emissions Section shall approve a written request for the modifications. The request for modification

1 may take the form of an email or formal letter. Analysis of other media samples will be conducted at labs
2 with the appropriate quality assurance programs in-place.

3
4 **2.2 Compliance Assurance Monitoring for Legacy Sources Discovered on Site**

5 In the course of Hanford's 50-year history radioactive waste products may have been disposed of by
6 means not allowed by today's standards. These disposal areas represent potential diffuse or passively
7 ventilated point sources of radioactive airborne emissions. The license describes actions that must be
8 taken upon the licensee discovering any category of diffuse or passively ventilated point sources. These
9 actions include a means to establish methods for determining compliance assurance.

10 Categories of emission units or other specific emission units not identified in existing Tables, will meet
11 the requirements for periodic confirmatory monitoring, recordkeeping, and reporting found in Attachment
12 2. The annual Radionuclide Air Emissions Report for the Hanford Site satisfies the reporting
13 requirements.

14 **3.0 EMISSION UNIT IDENTIFICATION DESCRIPTIONS USED IN ATTACHMENT 2**

15 The principle identifier used in Attachment 2 of the Air Operation Permit is the Air Emissions Inventory
16 (AEI) number. This number is assigned to an emission unit when registered with the department. In
17 addition to the Emission Unit ID number the AEI number is also used as an identifier. This unique
18 identifier was established for use in the Hanford Air Operating Permit. It is based upon an alphanumeric
19 code description indicating key information concerning the operational area code, a category code, a
20 building identifier, and type of emission point identifier code.

21 Secondary emission unit identifications were used in the permit for familiarity with the identification such
22 as the commonly used regulatory identification.

23 For facility operator's ease of use, a plant name or tank farm was listed with the emission unit identifiers.

24 In attachment 2, Health used a three digit Emission Unit ID in small font under the heading text. This
25 number is created from the database Health uses to track and generate the emission unit requirements for
26 each emission unit.

27 An example of the heading used in attachment 2 would be as follows:

28
29 **Emission Unit ID: 393**.....*Health's database tracking number*
30 **200W P-291Z001***The AEI number*
31 **291-Z-1***The regulatory ID*
32 **Plutonium Finishing Plant (Z Plant)**.....*The associated facility/farm*

33
34 **AEI number representation:**

35
36 **200W** Operational area code

37
38 **P** Process emission point

39
40 **291Z** Building number

41
42 **001** Emission point identifier
43

1 **4.0 ALARACT DEMONSTRATIONS**

2 The following ALARACT demonstrations (Table 1) describe the approved methods for ALARACT
 3 compliance set forth in section 2.2 of Attachment 2 for the following approved routine activities. The
 4 ALARACTs referenced below are the latest revisions. If an emission unit license references an older
 5 ALARACT revision (1, 2, etc.) then the most up to date revision must be used (01.1, 02.1, etc.). The
 6 revision number is designated by the number following the decimal place.

7 **Table 1 ALARACT Demonstrations**

ALARACT Number	ALARACT Demonstration Title
01.1	TANK FARM ALARACT DEMONSTRATION FOR RISER PREPARATION/OPENING
02.3	TANK FARM ALARACT DEMONSTRATION FOR LOW PURGE CORE SAMPLING
03.1	TANK FARM ALARACT DEMONSTRATION FOR INSTALLATION/OPERATION/REMOVAL OF AUGER SAMPLING EQUIPMENT
04.1	TANK FARM ALARACT DEMONSTRATION FOR PACKAGING AND TRANSPORTATION OF WASTE
05.2	TANK FARM ALARACT DEMONSTRATION SOIL EXCAVATION
06.3	TANK FARM ALARACT DEMONSTRATION FOR PIT ACCESS
07.1	TANK FARM ALARACT DEMONSTRATION FOR TANK WASTE GRAB SAMPLING
08.1	TANK FARM ALARACT DEMONSTRATION FOR VAPOR SAMPLING
10.2	TANK FARM ALARACT DEMONSTRATION FOR WATER LANCING
11.1	TANK FARM ALARACT DEMONSTRATION FOR WASTE TRANSFERS
12.1	TANK FARM ALARACT DEMONSTRATION FOR PACKAGING AND TRANSPORTATION OF EQUIPMENT & VEHICLES
13.1	TANK FARM ALARACT DEMONSTRATION FOR INSTALLATION, OPERATION, AND REMOVAL OF TANK EQUIPMENT
14.2	TANK FARM ALARACT DEMONSTRATION FOR PIT WORK.
15.1	TANK FARM ALARACT DEMONSTRATION FOR SIZE REDUCTION OF WASTE EQUIPMENT FOR DISPOSAL
16.1	TANK FARM ALARACT DEMONSTRATION FOR WORK ON POTENTIALLY CONTAMINATED VENTILATION SYSTEM COMPONENTS

18	ENVIRONMENTAL RESTORATION PROGRAM ALARACT DEMONSTRATION FOR DRILLING
26.1	DISPOSAL BY BURNING OF POTENTIALLY CONTAMINATED TUMBLEWEEDS
28.1	SHUTDOWN OF STACK SYSTEM(s) (Maintenance and incidental)
29.1	242-A EVAPORATOR MAINTENANCE FACILITY SHUTDOWNS
30.1	TANK FARM ALARACT DEMONSTRATION FOR STACK EXTENSION AND PASSIVE EMISSION POINT VENTURI

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5.0 OBSOLETE EMISSION UNITS

Reserved

6.0 OBSOLETE APPLICABLE REQUIREMENTS

Reserved

7.0 CERCLA APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

CERCLA Substantive Requirements -- Applicable or Relevant and Appropriate Regulations [WAC 246-247-040]

Regulations promulgated under statutory authority other than the FCAA (e.g., RCRA and CERCLA) are not Title V applicable requirements and are not included in the license. In addition, actions taken pursuant to CERCLA are exempt from permitting. However, the actions taken must meet the substantive requirements of applicable or relevant and appropriate regulations (ARARs) (e.g., WAC 246-247-040, ALARACT). Characterization and cleanup activities are being conducted at Hanford pursuant to CERCLA. The characterization and cleanup activities are applying best available radionuclide control technology to control emissions, and emissions are being monitored to ensure that the offsite dose to the maximally exposed individual is below the applicable standards. The CERCLA decision documents, such as an Action Memo, identify ARARs.