

Effective Date: 08/01/2019
Expiration Date: 08/01/2024

Hanford Air Operating Permit
Permit No. 00-05-006
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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1 **1.0 EMISSION STANDARDS**

2 Radioactive air emission standards for the State of Washington are contained in Washington
3 Administrative Code (WAC) 173-480-040, 173-480-050, 173-480-060, WAC 246-247 and in 40 CFR Part
4 61, Subparts H. In accordance with WAC 173-480-050 Health shall enforce the most stringent standard
5 in effect.

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

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

13 All existing emission units and insignificant modifications shall utilize As Low As Reasonably
14 Achievable Control Technology (ALARACT). [WAC 246-247-040(4)]

15 **2.0 MONITORING, TESTING, QUALITY ASSURANCE, REPORTING AND RECORD**
16 **KEEPING**

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

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

25 **2.1 Requirements for Diffuse or Fugitive Sources in Table 2.1**

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

33 **2.1.1 Quality Assurance and Analysis**

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

38 **2.1.2 Modifications to the Diffuse and Fugitive Environmental Monitoring**

39 Prior to making modifications (i.e., moving, or removing air sample locations, or changing the sampling
40 period) to the accepted periodic confirmatory measurement (for minor diffuse and fugitive sources) and
41 continuous measurement (for major diffuse and fugitive sources) the Department of Health, Radioactive
42 Air Emissions Section shall approve a written request for the modifications. The request for modification
43 may take the form of an email or formal letter. Analysis of other media samples will be conducted at labs
44 with the appropriate quality assurance programs in-place.

1 **2.2 Compliance Assurance Monitoring for Legacy Sources Discovered on Site**

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

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

11 **3.0 EMISSION UNIT IDENTIFICATION DESCRIPTIONS USED IN ATTACHMENT 2**

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

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

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

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

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

25 **Emission Unit ID: 393**.....*Health’s database tracking number*
26 **200W P-291Z001***The AEI number*
27 **291-Z-1***The regulatory ID*
28 **Plutonium Finishing Plant (Z Plant)**.....*The associated facility/farm*

29 **AEI number representation:**

30 **200W** Operational area code
31 **P** Process emission point
32 **291Z** Building number
33 **001** Emission point identifier

34 **4.0 ALARACT DEMONSTRATIONS**

35 ALARACT demonstrations describe the approved methods for ALARACT compliance set forth in
36 section 2.2 of Attachment 2 for approved routine activities. If an emission unit license references an older
37 ALARACT revision (1, 2, etc.) then the most up to date revision must be used (01.1, 02.1, etc.). The
38 revision number is designated by the number following the decimal place.

39 **5.0 OBSOLETE EMISSION UNITS**

40 Reserved

1 **6.0 OBSOLETE APPLICABLE REQUIREMENTS**

2 Reserved

3 **7.0 CERCLA APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS**

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

6 Regulations promulgated under statutory authority other than the Federal Clean Air Act (FCAA) (e.g.,
7 Resource Conservation and Recovery Act [RCRA] and Comprehensive Environmental Response,
8 Compensation, and Liability Act [CERCLA]) are not Title V applicable requirements and are not included
9 in the license. In addition, actions taken pursuant to CERCLA are exempt from permitting. However, the
10 actions taken must meet the substantive requirements of applicable or relevant and appropriate
11 regulations (ARARs) (e.g., WAC 246-247-040, ALARACT). Characterization and cleanup activities are
12 being conducted at Hanford pursuant to CERCLA. The characterization and cleanup activities are
13 applying best available radionuclide control technology to control emissions, and emissions are being
14 monitored to ensure that the offsite dose to the maximally exposed individual is below the applicable
15 standards. The CERCLA decision documents, such as an Action Memo, identify ARARs.

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