HANFORD SITE AIR OPERATING PERMIT NO. 00-05-006
ATTACHMENT 2: RADIOACTIVE AIR EMISSIONS LICENSE FF-01, AS INCORPORATED
STATEMENT OF BASIS

CHANGE CONTROL LOG

Change Control Logs ensure that changes to this permit are performed in a methodical, controlled, coordinated, and transparent manner. Each permit file will have its own change control log with a modification history table. The "**Modification Number**" represents Ecology's method for tracking the different versions of the permit. This log will serve as an up to date record of modifications and version history of the permit.

Modification History Table

Modification Date	Modification Number

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ATTENTION: The Hanford Site Air Operating Permit is broken into multiple documents and attachments/sections. The Statement of Basis for Attachment 2 is not enforceable.

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LIST OF ABBREVIATIONS FOR THE STATEMENT OF BASIS FOR ATTACHMENT 2

Ecology is establishing the following abbreviations for common terms used within the Statement of Basis for Attachment 2.

Whenever possible, the same abbreviations will be used in the other documents which make up this Air Operating Permit. Consistency will not always be possible, due to wide range of sources which establish applicable requirements for the Hanford Site. Please consult the appropriate List of Abbreviations for each document when reviewing.

AEI	Air Emissions Inventory
ALARACT	As Low As Reasonably Achievable Control Technology
AOP	Air Operating Permit
ARAR	Applicable or relevant and appropriate regulations
BARCT	Best Available Radionuclide Control Technology
CAA	Clean Air Act, either Federal or Washington State
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
DOE	United States Department of Energy
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
Health	Washington State Department of Health
NESHAP	40 CFR Part 61 or 63, National Emission Standard for Hazardous Air Pollutants
NOC	Notice of construction
RAEL	Radiological air emission license
RCRA	Resource Conservation and Recovery Act
RCW	Revised Code of Washington
Statement	Statement of Basis
WAC	Washington Administrative Code

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BACKGROUND

This Statement of Basis (Statement) is issued by Washington State Department of Ecology (Ecology) as a separate supporting reference document for Attachment 2, including Attachment 2, Addendum A. This Statement sets forth the legal and factual basis for the Attachment 2 conditions and is not intended for enforcement purposes. This Statement also includes references to the applicable statutory or regulatory provisions, technical supporting information on specific emission units, and clarifications of specific requirements. [Washington Administrative Code (WAC) 173-401-700(8)]

Attachment 2 incorporates Radiological Air Emission License (RAEL) FF-01, issued by Washington State Department of Health (Health), in its entirety. Health is the licensing authority for radionuclide air emissions in the State of Washington and is the delegated authority for the federal requirements for radionuclide air emissions from United States Department of Energy (DOE) Facilities.

Health is designated as the state radiation control agency in Revised Code of Washington (RCW) 70A.388.040 as "having sole responsibility for administration of the regulatory, licensing and radiation control provisions of this chapter." WAC 246-247, *Radiation Protection—Air Emissions* was created under the authority of RCW 70.388. WAC 246-247 is the regulation that allows Health to issue RAELs.

On July 5, 2006, Health was granted partial delegation of 40 Code of Federal Regulations (CFR), Part 61, *Subpart H, National Emission Standards for Emissions of Radionuclides Other Than Radon from Department of Energy Facilities*, by the Environmental Protection Agency (EPA). On July 1, 2021, Health was granted full delegation of 40 CFR, Part 61, subpart H by the EPA.

In accordance with WAC 246-247, the radioactive air emissions license for the Hanford Site, RAEL FF-01, will be incorporated into the Air Operating Permit:

> In accordance with RCW 70A.15.2260(10), air operating permits issued under chapter 173-401 WAC shall incorporate all applicable requirements of this chapter. Therefore, all facilities listed in sub-section (1) of this section that are also subject to the operating permit regulations in chapter 173-401 WAC shall be considered in compliance with the requirements of this chapter if they comply with all the applicable requirements of the air operating permit issued under chapter 173-401 WAC. These applicable requirements shall be contained in the radioactive air emissions license which shall be incorporated as part of the air operating permit. In accordance with RCW 70A.15.3130(1), the department shall enforce all the requirements contained in the radioactive air emissions license. [WAC 246-247-010(5)];

and,

> For those facilities subject to the operating permit regulations in chapter 173-401 WAC, the radioactive air emissions license will be incorporated as an applicable portion of the air operating permit issued by the department of ecology or a local air pollution control authority. The department will be responsible for determining the facility's compliance with and enforcing the requirements of the radioactive air emissions license. [WAC 246-247-060]

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ATTACHMENT 2: RADIOACTIVE AIR EMISSIONS LICENSE FF-01, AS INCORPORATED STATEMENT OF BASIS

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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, Subpart H. In accordance with WAC 173-480-050, Health must enforce the most stringent standard in effect.

Under WAC 246-247-040(5), Health 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, must utilize Best Available Radionuclide Control Technology (BARCT) per WAC 246-247-040(3).

All existing emission units and insignificant modifications must utilize As Low As Reasonably Achievable Control Technology (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 Health. Health may require periodic confirmatory monitoring methods approved by Health 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 1 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 Health 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 must 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 six 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) Health, Radioactive Air Emissions Section must approve a written request for the modifications. The request for modification may take the form of an email or formal letter. Analysis of other media samples will be conducted at labs with the appropriate quality assurance programs in-place.

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2.2 Compliance Assurance Monitoring for Legacy Sources Discovered on Site

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

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

3.0 EMISSION UNIT IDENTIFICATION DESCRIPTIONS USED IN ATTACHMENT 2

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

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

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

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

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

Emission Unit ID: 393……*Health's database tracking number*

200W P-291Z001……...*The AEI number*

291-Z-1……..*The regulatory ID*

Plutonium Finishing Plant (Z Plant)……*The associated facility/farm*

AEI number representation:

200W	Operational area code
P	Process emission point
291Z	Building number
001	Emission point identifier

4.0 AS LOW AS REASONABLY ACHIEVABLE CONTROL TECHNOLOGY DEMONSTRATIONS

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

5.0 OBSOLETE EMISSION UNITS

Reserved.

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6.0 OBSOLETE APPLICABLE REQUIREMENTS

Reserved.

7.0 COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Substantive Requirements -- Applicable or Relevant and Appropriate Regulations (WAC 246-247-040)

Regulations promulgated under statutory authority other than the federal Clean Air Act (CAA) (e.g., Resource Conservation and Recovery Act [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 off-site dose to the maximally exposed individual is below the applicable standards. The CERCLA decision documents, such as an Action Memo, identify ARARs.

8.0 ATTACHMENT 2, ADDENDUM A

The EPA issued an Order on May 29, 2015, granting in part and denying in part two petitions for objection to Renewal 2 and Renewal 2, Revision A, of the Hanford Site AOP. The Order is available in the EPA Title V Petition Database, accessible at https://www.epa.gov/title-v-operating-permits/title-v-petition-database.

The EPA granted Claim 3B: "…the Petitioner's request to object to the Hanford Title V Permit on the basis that Ecology's record is inadequate with respect to addressing Subpart H in the Hanford Title V Permit." The EPA proposed a number of options that could be used to address this inadequacy. Additionally, the EPA clarified the scope of judicial review in a discussion under Claim 4.

Ecology and Health discussed the findings of the Order and selected to implement one of the suggestions in the Order. Ecology will "attach an addendum to the Hanford Title V Permit to correct any omissions or errors – if any – contained in the license with respect to Subpart H, since Ecology also has authority to enforce the NESHAP."

This addendum to the Hanford Title V Permit is located in the Attachment 2 Section of the AOP as Attachment 2, Addendum A. When necessary, the addendum will contain enforceable requirements that modify or add to the requirements in Attachment 2.

9.0 FF-01 LICENSE PROCEDURES, INCORPORATION, AND CHANGE TABLES

The procedures Health follows for development and issuance of the FF-01 License are established by WAC 246-247-060. As stated in the preamble to this WAC section, "the radioactive air emissions license will be incorporated as an applicable portion of the air operating permit issued by the department of ecology or a local air pollution control authority." This incorporation requirement is satisfied by Ecology including the current complete version of the FF-01 License, provided by Health, as the enforceable Attachment 2 whenever a renewal or significant modification is issued for this AOP. Incorporation into the AOP makes the applicable requirements of the FF-01 License enforceable by both Health and Ecology.

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The licensing procedures of WAC 246-247-060 do not include public notice or public participation. Incorporation of these requirements into the AOP is subject to public notice and participation requirements under WAC 173-401, but only after they have become applicable through Health finalizing them in the FF-01 License.

To better support the WAC 173-401 public participation process, Ecology will include a table summarizing the changes to the FF-01 License in the administrative record for permitting actions which update Attachment 2. The change table will also be made available through the Ecology website (https://fortress.wa.gov/ecy/nwp/permitting/AIR/) which provides the issued version of the Hanford Site AOP, once public participation and EPA review have been completed.

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