



LB# 3552

AIR 12-1204
NOC 649

STATE OF WASHINGTON
DEPARTMENT OF HEALTH
OFFICE OF RADIATION PROTECTION

309 Bradley Blvd., Suite 201 • Richland, Washington 99352
TDD Relay Service: 1-800-833-6388

December 10, 2012

Mr. Ray J. Corey, Assistant Manager
for Safety and Environment
United States Department of Energy
Richland Operations Office
P.O. Box 550, MSIN: A5-14
Richland, Washington 99352

Dear Mr. Corey:

Re: Waste Encapsulation and Storage Facility (WESF) (EU 340; NOC 649) Correction

During the annual inspection of WESF EU 340, the inspector noted that all of the conditions of the EU license were no longer listed in the current FF-01 license. After further investigation, it was determined that the Notice of Construction (NOC 649) had been removed during the FF-01 license renewal process. The removal of NOC 649 caused the conditions for EU 340 to be omitted from the latest FF-01 license issued on February 23, 2012. Enclosed is the correct EU 340 license that was approved on October 5, 2006. The complete EU 340 license will replace the incomplete EU 340 license at the next revision of the FF-01 license.

If you have any questions about the EU license, or action to replace the license, please contact Randy Utley at (509) 946-0534.

Sincerely,

for
P. John Martell, Manager
Radioactive Air Emissions Section

Enclosure: EU 340 License

cc: (see next page)

cc: Robert Anderson, MSA
Matthew Barnett, PNNL
John Bates, USDOE-RL
Tom Beam, MSA
Lee Bostic, BNI
Jack Culmer, WDOH
Jack Donnelly, WRPS
Dennis Faulk, EPA
Phil Gent, Ecology
Robert Haggard, BNI
Dale Jackson, USDOE-RL
Steven Killoy, WRPS
Felix Miera, WRPS
Valarie Peery, Ecology
Michael Peloquin, WRPS
Lucinda Penn, WRPS
James Rasmussen, USDOE-RL
John Schmidt, WDOH
Maria Skorska, Ecology
Randy Utley, WDOH
Jeff Voogd, WRPS
Stephen Weil, USDOE-RL
Rebecca Wiegman, WRPS
Joan Woolard, WCH
Davis Zhen, EPA
Environmental Portal
RAES Tracking: EU 340, NOC 649

Emission Unit ID: 340

200E P-296B010-001

296-B-10, WESF

This is a MAJOR, ACTIVELY ventilated emission unit.

Waste Encapsulation and Storage Facility (WESF)

Emission Unit Information

Stack Height: 75.00 ft. 22.86 m. Stack Diameter 3.50 ft. 1.07 m.

Average Stack Effluent Temperature: 68 degrees Fahrenheit. 20 degrees Celsius.

Average Stack Exhaust Velocity: 42.20 ft/second. 12.86 m/second.

Abatement Technology ALARACT WAC 246-247-040(4)

state only enforceable: WAC 246-247-010(4), 040(5), 060(5)

Zone or Area	Abatement Technology	Required # of Units	Additional Description
K-1 Filter Bldg.	Prefilter	2	In series
K-1 Filter Bldg.	HEPA	2	In series
K-1 Filter Bldg.	Fan	1	2 in parallel
K-3 Filter Pit	Demister	1	Not operable
K-3 Filter Pit	Heater	1	Not operable
K-3 Filter Pit	Impingement Vanes	1	
K-3 Filter Pit	HEPA	2	2 parallel flow paths, in-series
K-3 Filter Pit	Fan	1	2 parallel paths (1 in-use, 1 backup)

Monitoring Requirements

state enforceable: WAC 246-247-040(5), 060(5), and federally enforceable: 40 CFR 61 subpart H

Federal and State Regulatory	Monitoring and Testing Requirements	Radionuclides Requiring Measurement	Sampling Frequency
40 CFR 61.93(b)(4)(i) & WAC 246-247-075(2)	40 CFR 60, Appendix A, Method 2; 40 CFR 61, Appendix B, Method 114; 61.93(b)(2)(ii) ANSI N13.1	Each radionuclide that could contribute greater than 10% of the potential TEDE	Continuous

Sampling Requirements Record Sample

Additional Requirements

Additional monitoring or sampling requirements established by this License will be listed in the Conditions and Limitations section, if applicable.

Operational Status Activities for WESF involve surveillance, maintenance and storage of radioactive capsules on the Hanford Site.

This Emission Unit has 1 active Notice(s) of Construction.

Project Title

Waste Encapsulation and Storage Facility (WESF) Liquid Low Level Radioactive Liquid Removal from Tank 100. (Replaced NOC ID 259)(Replaced by NOC 832)

Approval #

AIR 06-1014

Date Approved

10/5/2006

NOC_ID

649

Conditions (state only enforceable: WAC 246-247-040(5), 060(5) if not specified)

- 1) The total abated emission limit for this Notice of Construction is limited to 1.75E-05 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).
- 2) This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.

Modification and continuous operations of the Waste Encapsulation and Storage Facility (WESF) liquid low level radioactive (LLLW) stream piping. The tank TK-100 serves as a catch tank for liquid low level radioactive waste streams originating from WESF, condensate from the K-1 and K-3 filter pits, and the 296-B-10 stack. TK-100 is ventilated through the WESF K-3 ventilation system and out of the 296-B-10 Stack.

The contents of TK-100 are emptied by pumping the LLLW to a tanker truck at the Truck Load-Out Port. In the event that additional storage capacity is needed, a new portable aboveground storage tank (nominal capacity of 4,000 gallons) will be installed at the Truck Load-Out Port and vented to TK-100 during filling operations. After filling the portable aboveground storage tank, the tank will be disconnected from the Truck Load-Out Port, a HEPA or NucFil filter shall be installed, and then the tank will be moved outside for storage until arrangements are made to dispose of the excess LLLW.

During normal operations the LLLW streams to TK-100 are less than 0.001 curie/liter of Sr-90 and Cs-137. In the event that the TK-100 contents are greater than or equal to 0.001 curie/liter of Sr-90 and Cs-137 during routine operations, a WESF Ion Exchange Module will be installed at the Truck Load-Out Port and the contents of TK-100 will be recirculated through the WESF Ion Exchange Module until the concentration is less than 0.001 curie/liter of Sr-90 and Cs-137. The WESF Ion Exchange Module will be vented to TK-100 during recirculation. Storage of the WESF Ion Exchange Module will normally be outdoors and will vent to atmosphere through a HEPA or NucFil filter. Use of the WESF Ion Exchange Module will continue up to a maximum loading of 20,000 curies of Sr-90 or 25,000 curies of Cs-137.

In addition, certain piping modifications will be made to the current WESF LLLW system. They are as follows:

A. TK-50 Vault

- Remove existing Tank 50 Vault Piping.
- Remove remaining equipment (e.g., Tank 50, Heat Exchanger, Pumps) if possible, and all other equipment and debris in the vault.
- Install new pipe.

B. Valve Pit 225B-VP-05

- Remove 3-way valve.
- Blank off line to B-Plant.
- Install new pipe elbow.

- 3) The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 3.51E-02 mrem/year. Approved are the associated potential release rates (Curies/year) of:

Release rates are not listed; emission release rates are controlled by special conditions.

The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)) DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.