

APPENDIX D
Air Emissions License



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

AIR 16-902
RAEL-009
NOC 1010

September 1, 2016

Mr. Sean Murphy, CHP
US Ecology Washington
1777 Terminal Drive
Richland, WA 99354

Re: Approval of Air Attachment to Radioactive Materials License WN-I019-2, RAEL-009

Mr. Murphy:

Pursuant to Chapter 246-247 of the Washington Administrative Code (WAC), your Air Attachment to Radioactive Materials License WN-I019-2, RAEL 009 is hereby approved as of August 31, 2016.

**Operation of US Ecology Package Inspection at the Low Level Radioactive
Waste Disposal Facility (Replaces NOC 955)
(EU 1247, NOC 1010)**

The conditions, controls, monitoring requirements, and limitations of this license must be observed in order for you to be in compliance with WAC 246-247. Failure to meet any provision of this license may result in the revocation of approval, the issuance of Notices of Violation, or other enforcement actions under WAC 246-247-100.

If you have any questions regarding this approval, please contact Gail Laws at gail.laws@doh.wa.gov or by phone (509) 946-0712.

Sincerely,

John Martell, Manager
Radioactive Air Emissions Section

Enclosure: Operation of US Ecology Package Inspection at the Low Level Radioactive
Waste Disposal Facility, Richland, Washington

cc: (see next page)



Mr. Sean Murphy
September 1, 2016
Page 2 of 2

AIR 16-902

cc: Mike Ault, USE
Shawna Berven, WDOH
Gail Laws, WDOH
John Schmidt, WDOH
Kevin Siebert, WDOH
RAES Tracking: Line # 16-138; NOC 1010; EU 1247; IM 9,145; RAEL-009

Emission Unit ID: 1247

Richland

US Ecology Package Inspection

this is a MAJOR, ACTIVELY ventilated emission unit.

US Ecology, Hanford

Abatement Technology NONE WAC 246-247-040(3), 040(4)

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

Zone or Area	Abatement Technology	Required # of Units	Additional Description
--------------	----------------------	---------------------	------------------------

Monitoring Requirements

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

Federal and State Regulatory	Monitoring and Testing Requirements	Radionuclides Requiring Measurement	Sampling Frequency
WAC 246-247-075	US Ecology Richland Operating Procedure ROP 46 "Air Monitoring" .	Gross Alpha and Beta. Iodine when greater than one (1) mCi of iodine is present.	Continuous particulate sample during licensed activities. Iodine sampling when greater than one (1) mCi of iodine is present.

Sampling Requirements Continuous particulate sample during package inspection. Iodine sampling when greater than one (1) mCi of iodine is present.

Additional Requirements

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

Operational Status Containers of waste are opened and inspected at the package inspection facility. Containers of waste may be opened exterior of the package inspection facility as detailed in the following special conditions.

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

Project Title	Approval #	Date Approved	NOC_ID
Operation of US Ecology Package Inspection at the Low Level Radioactive Waste Disposal Facility (Replaces NOC 955)	AIR 16-902	8/31/2016	1010

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 1.00E+00 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice of Construction is limited to 1.00E+00 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).
- 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.

The US Ecology Washington (USEW) Low Level Radioactive Waste Disposal Facility (LLRWDF) receives and disposes of Low Level (LLRW) and Naturally Occurring and Accelerator Produced (NARM) radioactive waste in the form of solid, solidified materials, contaminated equipment, cleaning wastes, tools, protective clothing, gloves, and laboratory wastes.

This license covers all aspects of the waste receipt, disposal, inspection and material decontamination process, including mitigation of resulting material. When possible the following will occur in the inspection facility:

- Inspection is defined as: opening, testing, removing and/or repackaging of waste material in the packages.
- Mitigation is defined as: processing any waste resulting from the inspection, repackaging inspection waste, repairing inspection containers or decontamination.
- Waste processing is defined as: stabilization, solidification, evaporation, void space mitigation or other actions to ensure waste is compliant for disposal and shipping as needed.
- Decontamination is defined as: methods to remove radioactive material from USEW facilities and equipment, or

waste transport vehicles.”

All waste is contained in trenches and when completely filled is covered with eight feet of soil and capped with a layer of gravel.

3) The Annual Possession Quantity is limited to the following radionuclides (Curies/year):

Alpha - 0	B/G - 0
Quantity specific annual possession quantities are not appropriate for Low Level Radioactive Waste (LLRW) disposal site operations. Operations are limited by controlling exposure to the MEI. See Limiting Conditions 1, and 4 of this air license.	Quantity specific annual possession quantities are not appropriate for Low Level Radioactive Waste (LLRW) disposal site operations. Operations are limited by controlling exposure to the MEI. See Limiting Conditions 1, and 4 of this air license.

- 4) **ANNUAL POSSESSION QUANTITY- Limitation**
The annual possession quantity shall be limited such that US Ecology shall demonstrate the emissions are limited to less than 1 mrem/yr based on the calendar year. WAC 246-247-030(21)(e), -040(5), -060(5).
- 5) **ANNUAL REPORTING -Requirements**
The US Ecology shall submit an annual report covering the air emissions for a calendar year no later than June 1st of the following year (WAC 246-247-080(3), WAC 246-247-040(5), -060(5)), corresponding to the Washington State Radioactive Materials License WN-I019-2. A copy must be submitted electronically to AIRRichland@doh.wa.gov, or sent to Washington State Department of Health, Office of Radiation Protection, Radioactive Air Emissions Section, 309 Bradley Blvd Suite 201, Richland, WA 99352-4524.
- 6) **NOTIFICATION-Requirement**
A projected annual effective dose equivalent to the Maximally Exposed Individual (MEI) greater than 1 mrem per year shall be reported to the Department within 24 hours. WAC 246-247-080(5).
- 7) **AIR SAMPLING-Requirement**
If licensed activity is to occur in open air/outside an air sample will be collected in the downwind direction and the following approved assumption shall be used to determine emissions: Release height 10 feet, release duration 1 hour, and release flow rate 1000 cubic feet per minute. WAC 246-247-040(5), -060 (5).
- 8) **STANDARD-Requirement**
The MEI shall be determined by US Ecology by calculating the highest dose to those persons at the US Ecology fence line. This condition applies only to this license. WAC 246-247-040(5), -060 (5).
- 9) **MONITORING-Procedures**
The Facility Air Monitoring and Instrument Operating Procedures approved Washington State Radioactive Materials License WN-I019-2 are approved pursuant to WAC 246-247-WAC 246-247-075(2), -075(4) , -075(8).
- 10) **QUALITY ASSURANCE-Program and Documentation**
The quality assurance program (consistent with NUREG 1293 Rev 1 (April-1991)) approved by Washington State Radioactive Materials License WN-I019-2 shall ensure the facility conducts and documents an appropriate quality assurance program pursuant to WAC 246-247-075(6).
- 11) **PROCEDURE-Requirement**
The Radiological Contingency Plan approved by Washington State Radioactive Materials License WN-I019-2 meets the requirements of WAC 246-247-075 (12).
- 12) **SEALED CONTAINER-Determination**
The tritium waste form mixed in cement, in a welded aluminum container, surrounded by more cement, in a steel drum is not considered dispersible as long as the welded aluminum container remains unopened and the tritium is not available for release WAC 246-247-040(5), -060(5).