Tru Waste Retrieval Project
Richland WA
FF-01
Portable Enclosure System #1
(EU 1322; NOC 1037)

Licensing File

Table of Contents

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LICENSING CHECKLIST

(Rev. 2)

1 to 1
PREVIOUS: NOC 804
EU 1322
NEW: NOC 1037
EU 1322

Please initial boxes, as appropriate, rather than placing a check mark in the box

RAES date received NA and IM# assigned LB4751.

Entered into RAES Tracking/RDTT 10-151. Completeness Review due NA.

To HP3 (responsible for facility) for assignment: Jues

To assigned HP2: Tom F

Add draft Table of Contents and separator pages to file.

Conduct completeness review using "Completeness Review Checklist" and draft "Completeness Notification" letter **within 20 days** of RAES date received. Discuss any concerns/issues with HP3 during this 20 day period.

Place "Completeness Review Checklist" in license file and prepare draft "Completeness Determination" letter. Letter *must go out within 30 days* of RAES date received.

- If application is incomplete, you may need to repeat this (and prior) step(s).
- If application complete, assign NOC ID and EU ID, as appropriate. **Do <u>NOT</u>** obsolete 'old' NOC, EU, etc. before the new final, approved, license is issued (you may have to exclude old from AOP for printing purposes).

Forward license file and draft "Completeness Determination" letter to HP3 for review. *(If 28-day draft has already been reviewed by licensee and HP3 and is ready to go out at the 30 day mark, you may combine completeness and 28-day draft.)*

HP3 - work with HP2 to resolve any comments then forward license file and draft "Completeness Determination" letter to HSC for review.

HSC – work with HP3 to resolve any comments then forward draft "Completeness Determination" letter to AA3 for finalization (HSC will update RAES Tracking/RDTT upon transmittal and will note the 28-Day Draft Due Date, below, upon returning file to you). You now have **60 days** to issue the official 28-Day Draft Approval letter.

28-Day Draft Due Date:_____ (See next step, immediately.)

Is it necessary to send the 20-Day City Notification? If yes, prepare **ASAP** and forward to HP3 for review (follow same process as above for letter issuance [HP3 -> HSC -> AA3]). HSC will update RAES Tracking/RDTT upon transmittal and will notify you of 20-Day Comment Due Date, below, upon returning the file to you).

- USDOE-RL Hanford Site is exempt from this requirement.
- If RAEL is part of a Materials or Waste license, the responsibility falls on them to notify the city.
- We issue these notifications for *new licenses or renewals only*; we do not issue them for modifications.

20-Day Comment Due Date:_____

(see page 2)

Within 40 days _____ of completeness determined, complete thorough review of application and draft license. **Any EU specific conditions must have justification/basis documented in the 'explanation' section of the database**. Discuss any concerns/issues with HP3 during this 40 day period. Also, have HSC do an informal review of the license for consistency before sending to the licensee.

HSC Informal License Review

Send informal draft license to licensee for review, allowing them **a week to 10 days** to get comments back to you. *Be sure to include a 'due date'.*

Upon receipt of response from licensee, resolve any comments/issues/concerns right away and finalize the draft license and transmittal letter (28-day Draft). **At least 3-5 days** before 28-Day Draft Due Date, send license file, draft transmittal letter, and draft license to HP3 for final review.

HP3 approves and forwards license file and draft letter to HSC for review. HSC reviews and forwards to AA3 for finalization (HSC will hold file until licensee receives 28-day draft).

Upon licensee receipt of 28-day draft, HSC will update RAES Tracking/RDTT, verify database concurrence, and return license file to HP2 with due date for licensee response or final issuance of license.

Final Due Date: 12/19/16

Once licensee has accepted, or the 28 days has expired (**no more than 2-3 days before**), obtain an approval number (AIR#) from AA3 and prepare final license and "Final Approval" letter. Send license file (*be sure table of contents provides for final letter/license*), final transmittal letter, and final license to HP3 for final review.

HP3 approves and forwards to HSC for review. HSC forwards to AA3 for finalization.

HSC finalizes:

Add final letter(s)

Update RAES Tracking/RDTT

Verify database concurrence

Update Licensee List

Add final file to database 'inbox' to be entered/scanned

2

Frazier, Thomas (DOH)

From: Faust, Eric T <Eric.Faust@rl.doe.gov>
Sent: Tuesday, September 13, 2016 8:59 AM
To: Frazier, Thomas (DOH)
Cc: Schmidt, John W (DOH); Karschnia, Paul T; Carleo, Frank J; Engelmann, Richard H
Subject: RE: Informal Drafts of Transuranic Waste Retrieval Project Licenses NOCs 1035 to 1040
Attachments: NOC 1037 EU 1322 Transuranic Waste Portable Enclosure System #1 rl edits.pdf; NOC 1040 EU 1327 Transuranic Waste Next Generation Retrieval (active) rl edits.pdf

Tom,

Sorry for the wait. Please see attached NOCs for 1037 and 1040. We highlighted in yellow the instances where either NGR or PES should be removed from the licenses (instances of NGR should be redacted in NOC 1037 and instances of PES should be redacted in NOC 1040). Also in NOC 1040, we had questions regarding references to NOC 486. We indicated the comments in the yellow text bubble comment function in the pdf. These were the only comments that we have.

Thanks for the opportunity,

Eric
376-9607

From: Frazier, Thomas (DOH) [mailto:Thomas.Frazier@DOH.WA.GOV]
Sent: Tuesday, August 30, 2016 3:01 PM
To: Faust, Eric T <Eric.Faust@rl.doe.gov>; Karschnia, Paul T <Paul_T_Karschnia@rl.gov>
Cc: Schmidt, John <john.schmidt@doh.wa.gov>
Subject: Informal Drafts of Transuranic Waste Retrieval Project Licenses NOCs 1035 to 1040

Eric and Tad,

Here are informal drafts of the Licenses for the Transuranic Waste Project emission units for your review and comment.

Sincerely,

Tom
946-0774

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Emission Unit ID: 1322

200 W-PES-001

Portable Enclosure System #1

This is a MAJOR, ACTIVELY ventilated emission unit.

Portable Enclosure System

Emission Unit Information

Stack Height: 26.00 ft. 7.92 m. Stack Diameter 1.67 ft. 0.51 m.

Average Stack Effluent Temperature: 70 degrees Fahrenheit. 21 degrees Celsius.

Average Stack ExhaustVelocity: 47.90 ft/second. 14.60 m/second.

Abatement Technology BARCT 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
	Prefilter	6	Three by two for total of six.
	1st Stage HEPA Filter	6	Aerosol tested annually to 99.95% removal of a particulate with a median diameter of 0.7 micron. Three by two housing for total of six HEPA filters.
	2nd Stage HEPA Filter	6	Aerosol tested annually to 99.95% removal of a particulate with a median diameter of 0.7 micron. Three by two housing for total of six HEPA filters.

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 61, Appendix B Method 114	Each radionuclide that could contribute greater than 10% of the potential TEDE	Once per year minimum.

Sampling Requirements Destructive Examination (DE) of the filters. Daily sampling of the access doors when exhaust system is shut down with inventory inside

Additional Requirements

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

Operational Status Portable enclosure used to support waste retrieval.

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

Project Title	Approval #	Date Approved	NOC_ID
Operation of the Transuranic Waste Retrieval Project (Replaces NOC 804)		Not Approved	1037

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-01 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).

2) This approval applies to those additional 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.

Transuranic waste retrieval involves the processes for removing and dispositioning buried suspect transuranic mixed low-level radioactive waste (hereafter called TRU waste) from Hanford Site burial trenches for storage

or disposal at other approved locations. Dispositioning is the orderly administration and handling of waste (including contaminated soil) from the low level burial grounds to place it in approved storage or disposal status. The handling includes such actions as: packaging, labeling and tracking waste; venting, assaying, and staging waste; inspecting waste and waste staging areas; sampling/characterizing/designating waste; making arrangements for the transfer of waste; completing necessary paperwork; and performing radiological and/or industrial hygiene surveys. The containment system associated with this approval will be used for the retrieval of large containers and is referred to as, Portable Enclosure System (PES) EU 1322.

See the following emission units for a detailed description of additional controls/conditions and limits under this approval:

EU 455 HEPA Vacuums
EU 486 200 Area Diffuse/ Fugitive; Operation of the Transuranic Waste Retrieval Project
EU 755 Mobile Drum Venting System (Active Ventilation) (MDVS)
EU 756 Mobile Drum Venting System (Passive Ventilation) (MDVS)
EU 1181 Categorical Drum Venting System 2 (DVS2)
EU 1322 Portable Enclosure System #1 (PES)
EU 1326 Vapor Extraction System (VES)
EU 1327 Next Generation Retrieval (NGR)

1322 only?

~~EU 1322 Portable Enclosure System #1 (PES)~~

3) The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 1.00E-01 mrem/year. Approved are the associated potential release rates (Curies/year) of:

Am - 241	8.30E+00

Alpha release rate based on Am-241 + Progeny. It is recognized that other radionuclides may be present in very limited quantities.

Cs - 137	1.60E+00

Beta/Gamma release rate based on Cs-137 + Progeny. It is recognized that other radionuclides may be present in very limited quantities.

The radioactive isotopes identified for this emission unit are (no quantities specified):

Am - 241	Am - 243	Cf - 252	Cm - 244	Cs - 134
Cs - 137	Eu - 152	Eu - 154	Pu - 238	Pu - 239/240
Pu - 241	Sr - 90	U - 234	U - 235	U - 236
U - 238				

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.

4) WDOH NOTIFICATION - Implementing PES or NGR containment
During high hazard work activities, removable surface contamination is maintained less than 2,000,000 dpm/100 cm^2 alpha and/or less than 4 rad/hr/100 cm^2 beta-gamma, limited to a 1 ft^2 area. For an allowed increase in contaminated area footprint of 4 ft^2 the limiting condition for removable contamination will be 500,000 dpm/100 cm^2 alpha and or 1rad/hr/100 cm^2 beta-gamma. Exceeding any of these contamination limits will require work to stop, and notification to Operation and RadCon management in accordance with the RWP. Notification to WDOH via email or the established procedures in the Environmental Notification program will be required. For work to continue above any of these limiting radiological conditions, the NGR containment system or the PES and commensurate controls will be implemented. The NGR containment or PES exhaust system will be utilized to

minimize the potential for contamination spreads outside of posted radiological areas. (WAC 246-247-040(5) and WAC 246-247-060(5))

5) CONTROL TECHNOLOGY- Filter protection 85% humidity
The PES will not be operated if overall relative humidity, including humidity caused by misting, exceeds 85%. (WAC 246-247-040(5) and WAC 246-247-060(5))

6) CONTAMINATION CONTROL- NGR/PES activities
Activities done under confinement structure of PES and NGR will be considered to be diffuse and fugitive activities unless under active ventilation conditions. (WAC 246-247-040(5) and WAC 246-247-060(5))

7) CONTAMINATION CONTROL- ARA
Adherence to contamination limits in the immediate work location for medium and high-hazard work will help ensure that the work area airborne radioactivity limits (i.e., 1.0E-09 µCi/ml for alpha emitters and 2E-06 µCi/ml for beta-gamma emitters) are not exceeded. (WAC 246-247-040(5) and WAC 246-247-060(5))

8) CONTAMINATION CONTROL- soil removal, container handling
Both Alpha and beta-gamma contamination field surveys shall be performed for all removable contamination surveys, prior to and during soil removal (excluding overburden removal) and overpacking activities and when placing degraded outer container contents into replacement containers. Alpha surveys alone shall be performed for direct readings of container surfaces. Beta/gamma direct readings are influenced by container contents, so are not as useful and are not required. (WAC 246-247-040(5) and WAC 246-247-060(5))

9) ALARACT APROVAL- container handling
The process for handling of abnormal or severely degraded containers as described in PROCESS DESCRIPTION: EXCAVATION AND RETRIEVAL OF CONTAINERS, for bagging, overpacking, placing degraded outer container contents into replacement containers or in-situ grouting is approved as meeting ALARACT, and these processes and associated records and procedures will be subject to inspection upon request by the department. (WAC 246-247-040(5) and WAC 246-247-060(5))

10) CONTAMINATION CONTROL- daily surveys
When exhaust system is shut down with inventory inside the NGR or PES, radiological control technicians will perform daily radiological swipe surveys on the access doors to the PES or NGR during normal work days. (WAC 246-247-040(5) and WAC 246-247-060(5))

11) ALTERNATIVE APPROVAL- Destructive Examination
Approval is given for alternative flow monitoring and sample extraction method for the NGR and PES. Destructive Examination (DE) of the final stage HEPA filter of the PES or NGR containment, which will be performed once per calendar year any time the system is used within the calendar year. This authorization will remain in force for three years from the date of issue of the license, additional extensions on the life of the system will require installation of continuous flow measurement and sample extraction in accordance with ANSI/HPS N13.1-1999. (WAC 246-247-040(5), WAC 246-247-060(5), WAC 246-247-075(4))

12) PROCESS DESCRIPTION: PORTABLE ENCLOSURE SYSTEM (PES)
This approval applies to these additional 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 PES may be used for larger containers or multiple containers, based on the controls established in this emission unit. Due to the size and or weight of the waste packages, crane and rigging may be required in conjunction with use of the PES. (WAC 246-247-040(5) and WAC 246-247-060(5))

13) ABATEMENT TECHNOLOGY: EXCAVATION AND RETRIEVAL OF CONTAINERS
The administrative control points set in this emission unit for contamination, as monitored by standard radiological field instrumentation, will be used to bound emissions based on current efficiencies of typical RadCon field contamination instruments. The controls listed within this approval apply to TRU Waste Retrieval Project open air excavation and retrieval activities. (WAC 246-247-040(5) and WAC 246-247-060(5))

14) ABATEMENT TECHNOLOGY: PES
The PES is a portable hard-sided containment unit. Its function is to provide containment and filtered ventilation for work performed on degraded containers. The proposed abatement technology for the PES will consist of 2 banks of HEPA filters with an in-place testable efficiency of 99.95% for removal of test aerosol particulate with a median diameter of 0.7 micron. The annual average volumetric flow rate through this intermittently operated exhaust system is 2.8 cubic meters/s. The PES will be approximately 30 ft by 36 ft by 20 ft high, will weigh

approximately 30 tons, and project engineering calculations have been performed to show that it will remain stable and in place in an 85 mph wind. In addition, negative pressure ensures no outleakage during routine operations. The enclosure is built of flanged panels but the doors have normal air gaps. Gravity dampers are installed on the air inlets to the enclosure to eliminate mass flow back into the environment. Stack height is approximately 26 feet from ground level (18 feet from top of fan outlet) and stack diameter is approximately 20 inches.

A heater is not installed in the PES exhauster because condensed moisture is not anticipated in the filter housing. During normal operation of the system, the air that is exhausted through the system is outside air. This is based on the fact that outside air is being drawn into the PES exhauster at the rate of approximately 2.8 cubic meters/s. and is not conditioned before entering the facility. There is no planned heat source within the structure during operation. As a result, the air will have basically the same properties as the outside air (dry-bulb temperature, humidity, dew point temperature, etc.). A misting system is planned to be used in the PES to help reduce the amount of airborne particulate that could be suspended during box retrieval. However, due to the considerable volume of air changes and the minimal rate of water required for misting used, it is not anticipated that the properties of the exhaust air will change substantially due to the misting (i.e., increase moisture content, change dew point, etc.). As a result, since the air entering the exhaust system will be basically at the same temperature as the outside air, condensation will not occur because the dew point temperature will not be achieved.

A seal pot will be located at the inlet end of the skid to provide sufficient space as a precaution for any condensate to drain from the filter train or the fan housing. The seal pot will have low added water limits to ensure there will be enough water in the pot to prevent a contaminant escape air path, and a high limit to prevent overflow of the seal pot, leakage of water, or wetting of the filter housing or fan housing. (WAC 246-247-040(5) and WAC 246-247-060(5))

15) CONTROL TECHNOLOGY-Filter protection
The PES will be operated as an unheated structure whenever the HEPA exhaust system is in operation. (WAC 246-247-040(5) and WAC 246-247-060(5))

16) CONTAMINATION DOCUMENTATION - Exposed packages
During repackaging activities (i.e., when transferring the contents of a degraded container into a new container or containers) an operations log will be kept noting conditions of the transferred contents/packages. RadCon will generate and retain radiological records documenting air sample results and removable contamination conditions during retrieval of each container. (WAC 246-247-040(5) and WAC 246-247-060(5))

Emission Unit ID: 1322

200 W-PES-001

Portable Enclosure System #1

This is a MAJOR, ACTIVELY ventilated emission unit.

Portable Enclosure System

Emission Unit Information

Stack Height: 26.00 ft. 7.92 m. Stack Diameter 1.67 ft. 0.51 m.

Average Stack Effluent Temperature: 70 degrees Fahrenheit. 21 degrees Celsius.

Average Stack Exhaust Velocity: 47.90 ft/second. 14.60 m/second.

Abatement Technology BARCT 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
	Prefilter	6	Three by two for total of six.
	1st Stage HEPA Filter	6	Aerosol tested annually to 99.95% removal of a particulate with a median diameter of 0.7 micron. Three by two housing for total of six HEPA filters.
	2nd Stage HEPA Filter	6	Aerosol tested annually to 99.95% removal of a particulate with a median diameter of 0.7 micron. Three by two housing for total of six HEPA filters.

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 61, Appendix B Method 114	Each radionuclide that could contribute greater than 10% of the potential TEDE.	Once per year minimum.

Sampling Requirements Destructive Examination (DE) of the filters. Daily sampling of the access doors when exhaust system is shut down with inventory inside.

Additional Requirements

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

Operational Status Portable enclosure used to support waste retrieval.

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

Project Title	Approval #	Date Approved	NOC_ID
Portable Enclosure System #1 Operation (Replaces NOC 804)		Not Approved	1037

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-01 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).

2) This approval applies to those additional 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.

Transuranic waste retrieval involves the processes for removing and dispositioning buried suspect transuranic mixed low-level radioactive waste (hereafter called TRU waste) from Hanford Site burial trenches for storage

or disposal at other approved locations. Dispositioning is the orderly administration and handling of waste (including contaminated soil) from the low level burial grounds to place it in approved storage or disposal status. The handling includes such actions as: packaging, labeling and tracking waste; venting, assaying, and staging waste; inspecting waste and waste staging areas; sampling/characterizing/designating waste; making arrangements for the transfer of waste; completing necessary paperwork; and performing radiological and/or industrial hygiene surveys.

See the following for a detailed description of specific controls/conditions for each EU associated with the Transuranic Waste Retrieval Project:

~~EU 455 HEPA Vacuums~~
~~EU 486 200 Area Diffuse/ Fugitive, Operation of the Transuranic Waste Retrieval Project~~
EU 755 Mobile Drum Venting System (Active Ventilation) (MDVS)
EU 756 Mobile Drum Venting System (Passive Ventilation) (MDVS)
EU 1181 Categorical Drum Venting System 2 (DVS2)
EU 1322 Portable Enclosure System #1 (PES)
EU 1326 Vapor Extraction System (VES)
EU 1327 Next Generation Retrieval (NGR)

3) The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 1.00E-01 mrem/year. Approved are the associated potential release rates (Curies/year) of:

Am - 241	8.30E+00

Alpha release rate based on Am-241 + Progeny. It is recognized that other radionuclides may be present in very limited quantities.

Cs - 137	1.60E+00

Beta/Gamma release rate based on Cs-137 + Progeny. It is recognized that other radionuclides may be present in very limited quantities.

The radioactive isotopes identified for this emission unit are (no quantities specified):

Am - 241	Am - 243	Cf - 252	Cm - 244	Cs - 134
Cs - 137	Eu - 152	Eu - 154	Pu - 238	Pu - 239/240
Pu - 241	Sr - 90	U - 234	U - 235	U - 236
U - 238				

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.

4) WDOH NOTIFICATION - Implementing PES or NGR Containment
During high hazard work activities, removable surface contamination is maintained less than 2,000,000 dpm/100 cm^2 alpha and/or less than 4 rad/hr/100 cm^2 beta-gamma, limited to a 1 ft^2 area. For an allowed increase in contaminated area footprint of 4 ft^2 the limiting condition for removable contamination will be 500,000 dpm/100 cm^2 alpha and or 1rad/hr/100 cm^2 beta-gamma. Exceeding any of these contamination limits will require work to stop, and notification to Operation and RadCon management in accordance with the RWP. Notification to WDOH via email or the established procedures in the Environmental Notification program will be required. For work to continue above any of these limiting radiological conditions, the NGR containment system or the PES and commensurate controls will be implemented. The NGR containment or PES exhaust system will be utilized to minimize the potential for contamination spreads outside of posted radiological areas. (WAC 246-247-040(5) and WAC 246-247-060(5))

5) CONTROL TECHNOLOGY- Filter Protection 85% Humidity

The PES will not be operated if overall relative humidity, including humidity caused by misting, exceeds 85%. (WAC 246-247-040(5) and WAC 246-247-060(5))

6) CONTAMINATION CONTROL - NGR/PES Activities
Activities done under confinement structure of PES and NGR will be considered to be diffuse and fugitive activities unless under active ventilation conditions. (WAC 246-247-040(5) and WAC 246-247-060(5))

7) CONTAMINATION CONTROL - ARA
Adherence to contamination limits in the immediate work location for medium and high-hazard work will help ensure that the work area airborne radioactivity limits (i.e., 1.0E-09 µCi/ml for alpha emitters and 2E-06 µCi/ml for beta-gamma emitters) are not exceeded. (WAC 246-247-040(5) and WAC 246-247-060(5))

8) CONTAMINATION CONTROL - Soil Removal, Container Handling
Both Alpha and beta-gamma contamination field surveys shall be performed for all removable contamination surveys, prior to and during soil removal (excluding overburden removal) and overpacking activities and when placing degraded outer container contents into replacement containers. Alpha surveys alone shall be performed for direct readings of container surfaces. Beta/gamma direct readings are influenced by container contents, so are not as useful and are not required. (WAC 246-247-040(5) and WAC 246-247-060(5))

9) ALARACT APROVAL - Container Handling
The process for handling of abnormal or severely degraded containers as described in PROCESS DESCRIPTION- EXCAVATION AND RETRIEVAL OF CONTAINERS, for bagging, overpacking, placing degraded outer container contents into replacement containers or in-situ grouting is approved as meeting ALARACT, and these processes and associated records and procedures will be subject to inspection upon request by the department. (WAC 246-247-040(5) and WAC 246-247-060(5))

10) CONTAMINATION CONTROL - Daily Surveys
When exhaust system is shut down with inventory inside the NGR or PES, radiological control technicians will perform daily radiological swipe surveys on the access doors to the PES or NGR during normal work days. (WAC 246-247-040(5) and WAC 246-247-060(5))

11) ALTERNATIVE APPROVAL - Destructive Examination
Approval is given for alternative flow monitoring and sample extraction method for the NGR and PES. Destructive Examination (DE) of the final stage HEPA filter of the PES or NGR containment, which will be performed once per calendar year any time the system is used within the calendar year. This authorization will remain in force for three years from the date of issue of the license, additional extensions on the life of the system will require installation of continuous flow measurement and sample extraction in accordance with ANSI/HPS N13.1-1999. (WAC 246-247-040(5), WAC 246-247-060(5), WAC 246-247-075(4))

12) PROCESS DESCRIPTION - Portable Enclosure System (PES)
This approval applies to these additional 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 PES may be used for larger containers or multiple containers, based on the controls established in this emission unit. Due to the size and or weight of the waste packages, crane and rigging may be required in conjunction with use of the PES. (WAC 246-247-040(5) and WAC 246-247-060(5))

13) ABATEMENT TECHNOLOGY - Excavation and Retrieval of Containers
The administrative control points set in this emission unit for contamination, as monitored by standard radiological field instrumentation, will be used to bound emissions based on current efficiencies of typical RadCon field contamination instruments. The controls listed within this approval apply to TRU Waste Retrieval Project open air excavation and retrieval activities. (WAC 246-247-040(5) and WAC 246-247-060(5))

14) ABATEMENT TECHNOLOGY - PES
The PES is a portable hard-sided containment unit. Its function is to provide containment and filtered ventilation for work performed on degraded containers. The proposed abatement technology for the PES will consist of 2 banks of HEPA filters with an in-place testable efficiency of 99.95% for removal of test aerosol particulate with a median diameter of 0.7 micron. The annual average volumetric flow rate through this intermittently operated exhaust system is 2.8 cubic meters/s. The PES will be approximately 30 ft by 36 ft by 20 ft high, will weigh approximately 30 tons, and project engineering calculations have been performed to show that it will remain stable and in place in an 85 mph wind. In addition, negative pressure ensures no outleakage during routine operations. The enclosure is built of flanged panels but the doors have normal air gaps. Gravity dampers are installed on the air inlets to the enclosure to eliminate mass flow back into the environment. Stack height is approximately 26 feet from

ground level (18 feet from top of fan outlet) and stack diameter is approximately 20 inches.
A heater is not installed in the PES exhauster because condensed moisture is not anticipated in the filter housing. During normal operation of the system, the air that is exhausted through the system is outside air. This is based on the fact that outside air is being drawn into the PES exhauster at the rate of approximately 2.8 cubic meters/s. and is not conditioned before entering the facility. There is no planned heat source within the structure during operation. As a result, the air will have basically the same properties as the outside air (dry-bulb temperature, humidity, dew point temperature, etc.). A misting system is planned to be used in the PES to help reduce the amount of airborne particulate that could be suspended during box retrieval. However, due to the considerable volume of air changes and the minimal rate of water required for misting used, it is not anticipated that the properties of the exhaust air will change substantially due to the misting (i.e., increase moisture content, change dew point, etc.). As a result, since the air entering the exhaust system will be basically at the same temperature as the outside air, condensation will not occur because the dew point temperature will not be achieved.
A seal pot will be located at the inlet end of the skid to provide sufficient space as a precaution for any condensate to drain from the filter train or the fan housing. The seal pot will have low added water limits to ensure there will be enough water in the pot to prevent a contaminant escape air path, and a high limit to prevent overflow of the seal pot, leakage of water, or wetting of the filter housing or fan housing. (WAC 246-247-040(5) and WAC 246-247-060(5))

15) CONTROL TECHNOLOGY - Filter Protection
The PES will be operated as an unheated structure whenever the HEPA exhaust system is in operation. (WAC 246-247-040(5) and WAC 246-247-060(5))

16) CONTAMINATION DOCUMENTATION - Exposed Packages
During repackaging activities (i.e., when transferring the contents of a degraded container into a new container or containers) an operations log will be kept noting conditions of the transferred contents/packages. RadCon will generate and retain radiological records documenting air sample results and removable contamination conditions during retrieval of each container. (WAC 246-247-040(5) and WAC 246-247-060(5))

4

DUPLICATE

LB# 4874

AIR 16-1106
NOC 1037

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

November 17, 2016

CERTIFIED MAIL
7015 0640 0007 5050 7791

Mr. Doug Shoop, Manager
United States Department of Energy
Richland Operations Office
P.O. Box 550, MSIN: A5-14
Richland, Washington 99352

Re: 28-Day Draft Approval of Notice of Construction (NOC) 1037

Reference: Email (LB# 4751), from John Schmidt (WDOH) to Multiple USDOE Staff, "NOC Consolidation", dated June 30, 2016.

Mr. Shoop:

As per the reference email, we have worked with your staff to make changes to move the NOCs and/or Emission Units (EUs) associated with this license from a one-to-many, to a one-to-one relationship. We appreciate your cooperation and willingness to support our future database needs and to make license actions more efficient and cost effective moving forward.

Pursuant to Chapter 246-247 of the Washington Administrative Code (WAC), the update will be approved according to the enclosed License for:

Portable Enclosure System #1 Operation (Replaces NOC 804)
(EU 1322; NOC 1037)

The Washington State Department of Health (DOH) considers the conditions, controls, monitoring requirements, and limitations of the License integral to approval of your application.

This approval shall take effect, and a final approval letter issued, twenty-eight (28) days after you receive this letter, unless you apply for an adjudicative proceeding, as described below.

If you accept the conditions and limitations of this approval and do not wish to apply for an adjudicative proceeding, but wish to proceed under this approval before the 28 days have

elapsed, please notify us in writing and the DOH will issue a final approval letter. Your notice should be mailed or faxed to:

DOH – Office of Radiation Protection
Radioactive Air Emissions Section
309 Bradley Blvd., Suite 201
Richland, Washington 98352
FAX: (509) 946-0876

If there are concerns with the conditions and limitations of the approval, please notify the DOH. If attempts to resolve the concerns fail, the DOH will deny your application and you may contest the conditions and limitations of this approval, within 28 days of receipt, by filing the enclosed Request for Adjudicative Proceeding or a document providing substantially the same information with the DOH, Adjudicative Service Unit (ASU), in a manner that shows proof of service on the ASU. The ASU's address is:

DOH - Adjudicative Service Unit
310 Israel Road SE
P.O. Box 47879
Olympia, Washington 98504-7879

You must include a copy of this approval with your application. FILING SHALL NOT BE DEEMED COMPLETE UNTIL THE ADJUDICATIVE SERVICE UNIT ACTUALLY RECEIVES YOUR APPLICATION.

If you have any questions regarding this approval, please contact Mr. Thomas Frazier at thomas.frazier@doh.wa.gov or, by phone, at (509) 946-0774.

Sincerely,

P. John Martell, Manager
Radioactive Air Emissions Section

Enclosures: 1. Conditions and Limitations for EU 1322 (NOC 1037)
2. Request for Adjudicative Proceedings

cc: (see next page)

cc: Ruth Allen, WRPS
Matthew Barnett, PNNL
Lilyann Bauder, Ecology
Shawna Berven, WDOH
Lucinda Borneman, WRPS
Lee Bostic, BNI
Frank Carleo, CHPRC
Cliff Clark, USDOE-RL
Jack Donnelly, WRPS
Dennis Faulk, EPA
Eric Faust, USDOE-RL
Tom Frazier, WDOH
Gary Fritz, MSA
Philip Gent, Ecology
Daniel Heuston, Ecology
Reed Kaldor, MSA
Paul Karschnia, CHPRC
Ed MacAlister, USDOE-RL
Jim McAuley, EPA
Valarie Peery, Ecology
John Schmidt, WDOH
Jeff Voogd, WRPS
Davis Zhen, EPA
Environmental Portal
RAES Tracking: Line 16-151; EU 1322; NOC 1037

Emission Unit ID: 1322

200 W-PES-001

Portable Enclosure System #1

This is a MAJOR, ACTIVELY ventilated emission unit.

Portable Enclosure System

Emission Unit Information

Stack Height: 26.00 ft. 7.92 m. Stack Diameter 1.67 ft. 0.51 m.

Average Stack Effluent Temperature: 70 degrees Fahrenheit. 21 degrees Celsius.

Average Stack ExhaustVelocity: 47.90 ft/second. 14.60 m/second.

Abatement Technology BARCT 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
	Prefilter	6	Three by two for total of six.
	1st Stage HEPA Filter	6	Aerosol tested annually to 99.95% removal of a particulate with a median diameter of 0.7 micron. Three by two housing for total of six HEPA filters.
	2nd Stage HEPA Filter	6	Aerosol tested annually to 99.95% removal of a particulate with a median diameter of 0.7 micron. Three by two housing for total of six HEPA filters

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 61, Appendix B Method 114	Each radionuclide that could contribute greater than 10% of the potential TEDE.	Once per year minimum.

Sampling Requirements Destructive Examination (DE) of the filters. Daily sampling of the access doors when exhaust system is shut down with inventory inside.

Additional Requirements

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

Operational Status Portable enclosure used to support waste retrieval.

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

Project Title	Approval #	Date Approved	NOC_ID
Portable Enclosure System #1 Operation (Replaces NOC 804)		Not Approved	1037

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 2.00E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).

2) This approval applies to those additional 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.

Transuranic waste retrieval involves the processes for removing and dispositioning buried suspect transuranic mixed low-level radioactive waste (hereafter called TRU waste) from Hanford Site burial trenches for storage

or disposal at other approved locations. Dispositioning is the orderly administration and handling of waste (including contaminated soil) from the low level burial grounds to place it in approved storage or disposal status. The handling includes such actions as: packaging, labeling and tracking waste; venting, assaying, and staging waste; inspecting waste and waste staging areas; sampling/characterizing/designating waste; making arrangements for the transfer of waste; completing necessary paperwork; and performing radiological and/or industrial hygiene surveys.

See the following for a detailed description of specific controls/conditions for each EU associated with the Transuranic Waste Retrieval Project:

EU 455 Handford Sitewide W-PORTEX 007
EU 1440 200 Area Diffuse/ Fugitive; Operation of the Transuranic Waste Retrieval Project
EU 755 Mobile Drum Venting System (Active Ventilation) (MDVS)
EU 756 Mobile Drum Venting System (Passive Ventilation) (MDVS)
EU 1181 Categorical Drum Venting System 2 (DVS2)
EU 1322 Portable Enclosure System #1 (PES)
EU 1326 Vapor Extraction System (VES)
EU 1327 Next Generation Retrieval (NGR)

3) The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 3.90E+01 mrem/year. Approved are the associated potential release rates (Curies/year) of:

Am - 241	1.60E+00	Liquid/Particulate Solid

Alpha release rate based on Am-241 + Progeny. It is recognized that other radionuclides may be present in very limited quantities.

Cs - 137	8.50E+00	Liquid/Particulate Solid

Beta/Gamma release rate based on Cs-137 + Progeny. It is recognized that other radionuclides may be present in very limited quantities.

The radioactive isotopes identified for this emission unit are (no quantities specified):

Am - 241	Am - 243	Cf - 252	Cm - 244	Cs - 134
Cs - 137	Eu - 152	Eu - 154	Pu - 238	Pu - 239/240
Pu - 241	Sr - 90	U - 234	U - 235	U - 236
U - 238				

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.

4) WDOH NOTIFICATION - Implementing PES Containment
During high hazard work activities, removable surface contamination is maintained less than 2,000,000 dpm/100 cm^2 alpha and/or less than 4 rad/hr/100 cm^2 beta-gamma, limited to a 1 ft^2 area. For an allowed increase in contaminated area footprint of 4 ft^2 the limiting condition for removable contamination will be 500,000 dpm/100 cm^2 alpha and or 1rad/hr/100 cm^2 beta-gamma. Exceeding any of these contamination limits will require work to stop, and notification to Operation and RadCon management in accordance with the RWP. Notification to WDOH via email or the established procedures in the Environmental Notification program will be required. For work to continue above any of these limiting radiological conditions, the PES and commensurate controls will be implemented. The PES exhaust system will be utilized to minimize the potential for contamination spreads outside of posted radiological areas. (WAC 246-247-040(5) and WAC 246-247-060(5))

5) CONTROL TECHNOLOGY- Filter Protection 85% Humidity
The PES will not be operated if overall relative humidity, including humidity caused by misting, exceeds 85%.

(WAC 246-247-040(5) and WAC 246-247-060(5))

6) CONTAMINATION CONTROL - PES Activities
Activities done under confinement structure of PES will be considered to be diffuse and fugitive activities unless under active ventilation conditions. (WAC 246-247-040(5) and WAC 246-247-060(5))

7) CONTAMINATION CONTROL - ARA
Adherence to contamination limits in the immediate work location for medium and high-hazard work will help ensure that the work area airborne radioactivity limits (i.e., 1.0E-09 µCi/ml for alpha emitters and 2E-06 µCi/ml for beta-gamma emitters) are not exceeded. (WAC 246-247-040(5) and WAC 246-247-060(5))

8) CONTAMINATION CONTROL - Soil Removal, Container Handling
Both Alpha and beta-gamma contamination field surveys shall be performed for all removable contamination surveys, prior to and during soil removal (excluding overburden removal) and overpacking activities and when placing degraded outer container contents into replacement containers. Alpha surveys alone shall be performed for direct readings of container surfaces. Beta/gamma direct readings are influenced by container contents, so are not as useful and are not required. (WAC 246-247-040(5) and WAC 246-247-060(5))

9) ALARACT APROVAL - Container Handling
The process for handling of abnormal or severely degraded containers as described in PROCESS DESCRIPTION: Excavation and Retrieval of Containers, for bagging, overpacking, placing degraded outer container contents into replacement containers or in-situ grouting is approved as meeting ALARACT, and these processes and associated records and procedures will be subject to inspection upon request by the department. (WAC 246-247-040(5) and WAC 246-247-060(5))

10) CONTAMINATION CONTROL - Daily Surveys
When exhaust system is shut down with inventory inside the NGR or PES, radiological control technicians will perform daily radiological swipe surveys on the access doors to the PES or NGR during normal work days. (WAC 246-247-040(5) and WAC 246-247-060(5))

11) ALTERNATIVE APPROVAL - Destructive Examination
Approval is given for alternative flow monitoring and sample extraction method for the PES. Destructive Examination (DE) of the final stage HEPA filter of the PES containment, which will be performed once per calendar year any time the system is used within the calendar year. This authorization will remain in force for three years from the date of issue of the license, additional extensions on the life of the system will require installation of continuous flow measurement and sample extraction in accordance with ANSI/HPS N13.1-1999. (WAC 246-247-040(5), WAC 246-247-060(5), WAC 246-247-075(4))

12) PROCESS DESCRIPTION - Portable Enclosure System (PES)
This approval applies to these additional 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 PES may be used for larger containers or multiple containers, based on the controls established in this emission unit. Due to the size and or weight of the waste packages, crane and rigging may be required in conjunction with use of the PES. (WAC 246-247-040(5) and WAC 246-247-060(5))

13) ABATEMENT TECHNOLOGY - Excavation and Retrieval of Containers
The administrative control points set in this emission unit for contamination, as monitored by standard radiological field instrumentation, will be used to bound emissions based on current efficiencies of typical RadCon field contamination instruments. The controls listed within this approval apply to TRU Waste Retrieval Project open air excavation and retrieval activities. (WAC 246-247-040(5) and WAC 246-247-060(5))

14) ABATEMENT TECHNOLOGY - PES
The PES is a portable hard-sided containment unit. Its function is to provide containment and filtered ventilation for work performed on degraded containers. The proposed abatement technology for the PES will consist of 2 banks of HEPA filters with an in-place testable efficiency of 99.95% for removal of test aerosol particulate with a median diameter of 0.7 micron. The annual average volumetric flow rate through this intermittently operated exhaust system is 2.8 cubic meters/s. The PES will be approximately 30 ft by 36 ft by 20 ft high, will weigh approximately 30 tons, and project engineering calculations have been performed to show that it will remain stable and in place in an 85 mph wind. In addition, negative pressure ensures no outleakage during routine operations. The enclosure is built of flanged panels but the doors have normal air gaps. Gravity dampers are installed on the air inlets to the enclosure to eliminate mass flow back into the environment. Stack height is approximately 26 feet from ground level (18 feet from top of fan outlet) and stack diameter is approximately 20 inches.

A heater is not installed in the PES exhauster because condensed moisture is not anticipated in the filter housing. During normal operation of the system, the air that is exhausted through the system is outside air. This is based on the fact that outside air is being drawn into the PES exhauster at the rate of approximately 2.8 cubic meters/s. and is not conditioned before entering the facility. There is no planned heat source within the structure during operation. As a result, the air will have basically the same properties as the outside air (dry-bulb temperature, humidity, dew point temperature, etc.). A misting system is planned to be used in the PES to help reduce the amount of airborne particulate that could be suspended during box retrieval. However, due to the considerable volume of air changes and the minimal rate of water required for misting used, it is not anticipated that the properties of the exhaust air will change substantially due to the misting (i.e., increase moisture content, change dew point, etc.). As a result, since the air entering the exhaust system will be basically at the same temperature as the outside air, condensation will not occur because the dew point temperature will not be achieved.

A seal pot will be located at the inlet end of the skid to provide sufficient space as a precaution for any condensate to drain from the filter train or the fan housing. The seal pot will have low added water limits to ensure there will be enough water in the pot to prevent a contaminant escape air path, and a high limit to prevent overflow of the seal pot, leakage of water, or wetting of the filter housing or fan housing. (WAC 246-247-040(5) and WAC 246-247-060(5))

15) CONTROL TECHNOLOGY - Filter Protection
The PES will be operated as an unheated structure whenever the HEPA exhaust system is in operation. (WAC 246-247-040(5) and WAC 246-247-060(5))

16) CONTAMINATION DOCUMENTATION - Exposed Packages
During repackaging activities (i.e., when transferring the contents of a degraded container into a new container or containers) an operations log will be kept noting conditions of the transferred contents/packages.. RadCon will generate and retain radiological records documenting air sample results and removable contamination conditions during retrieval of each container. (WAC 246-247-040(5) and WAC 246-247-060(5))

STATE OF WASHINGTON
DEPARTMENT OF HEALTH
ENVIRONMENTAL HEALTH PROGRAMS
OFFICE OF RADIATION PROTECTION

In Re The Approval of:
28-DAY DRAFT APPROVAL OF NOTICE OF CONSTRUCTION (NOC) 1037

Docket No:
REQUEST FOR ADJUDICATIVE PROCEEDING

Approval No: **AIR 16-1106**

THE STATE OF WASHINGTON TO:

Mr. Doug Shoop, Manager
United States Department of Energy
Richland Operations Office
P.O. Box 550, MSIN: A5-14
Richland, Washington 99352

If you wish to request an adjudicative proceeding, you or your attorney must COMPLETE AND FILE THIS FORM OR A DOCUMENT PROVIDING SUBSTANTIALLY THE SAME INFORMATION WITH THE DEPARTMENT OF HEALTH ADJUDICATIVE SERVICE UNIT WITHIN TWENTY-EIGHT (28) DAYS OF YOUR RECEIPT of this Request for Adjudicative Proceeding form and a copy of the Office of Radiation Protection's approval, **AIR 16-1106.**

You must file your application in a manner that shows proof of service on the Adjudicative Service Unit, at the following address:

Department of Health
Adjudicative Service Unit
310 Israel Road S.E.
P.O. Box 47879
Olympia, WA 98504-7879

With your application, you must include a copy of the Office of Radiation Protection's approval.

FILING SHALL NOT BE DEEMED COMPLETE UNTIL THE ADJUDICATIVE SERVICE UNIT ACTUALLY RECEIVES YOUR APPLICATION.

YOU HAVE THE RIGHT TO a formal hearing in this matter conducted pursuant to Revised Code of Washington (RCW) 43.70.115, Chapter 34.05 RCW, and Chapter 246-10 of the Washington Administrative Code (WAC). Alternatively, you may waive the formal hearing and submit a written statement and supporting documents setting out your position, your defenses, and any mitigating circumstances that you wish to bring to the Department's attention.
You have the right to be represented by an attorney at your own expense.

I.

[ ] I **WILL BE** represented by an attorney. His/her name, address, and phone number are:

Name:

Address:

Phone:

[ ] I **WILL NOT BE** represented by an attorney.

If after submitting this request, you obtain attorney representation or change attorneys, you must notify the Adjudicative Service Unit.

II.

[ ] I **DO NOT** waive my right to a formal hearing.

[ ] I **DO** waive my right to a formal hearing. I understand that if I waive my right to a formal hearing, the Department may decide this matter solely with reference to information in the Department's possession and to such written statements and supporting documents as I may have submitted.

If you choose to waive your right to a formal hearing, please complete the following:

[ ] I **AM NOT** submitting documents to the Department in support of my position.

[ ] I **AM** submitting a sworn statement and/or other documents to the Department in support of my position.. Instructions - Please indicate your responses below:

If you are submitting documents to the Department, please list and briefly identify all such documents in the space provided below and on any additional sheet that may be necessary.

III.

ADMISSION/DENIAL OF CONDITIONS OR LIMITATIONS

The Office of Radiation Protection's approval **AIR.16-1106, dated November 17, 2016,** contains conditions and limitations set out as numbered paragraphs. In the space below you must indicate, in good faith, whether you admit, or do not contest, or deny the conditions or limitations. Conditions or limitations denied or not contested may later be admitted. Conditions or limitations admitted or not contested shall be conclusively deemed true for further proceedings.

Instructions: I admit, deny, or do not contest the conditions or limitations as follows (fill in the appropriate paragraph number):

	Admit	Deny	Do Not Contest
Paragraph _____	[ ]	[ ]	[ ]
Paragraph _____	[ ]	[ ]	[ ]
Paragraph _____	[ ]	[ ]	[ ]
Paragraph _____	[ ]	[ ]	[ ]
Paragraph _____	[ ]	[ ]	[ ]
Paragraph _____	[ ]	[ ]	[ ]
Paragraph _____	[ ]	[ ]	[ ]
Paragraph _____	[ ]	[ ]	[ ]
Paragraph _____	[ ]	[ ]	[ ]

Please attach any additional sheets that may be necessary to respond to all allegations.

If you have chosen not to waive your rights to a formal hearing, please state all grounds for contesting this matter in the space provided below and on any additional sheets that may be necessary.

IV.

You have the right to an interpreter, appointed at no cost, if you are a hearing impaired person or limited English speaking person. If any witness for you is a hearing impaired person or a limited English speaking person, an interpreter will be appointed at your expense.

I **[DO] / [DO NOT]** (circle one) request an interpreter be appointed. If an interpreter is requested, please indicate the person or persons for whom an interpreter is required and their primary language, and/or whether they are hearing impaired.

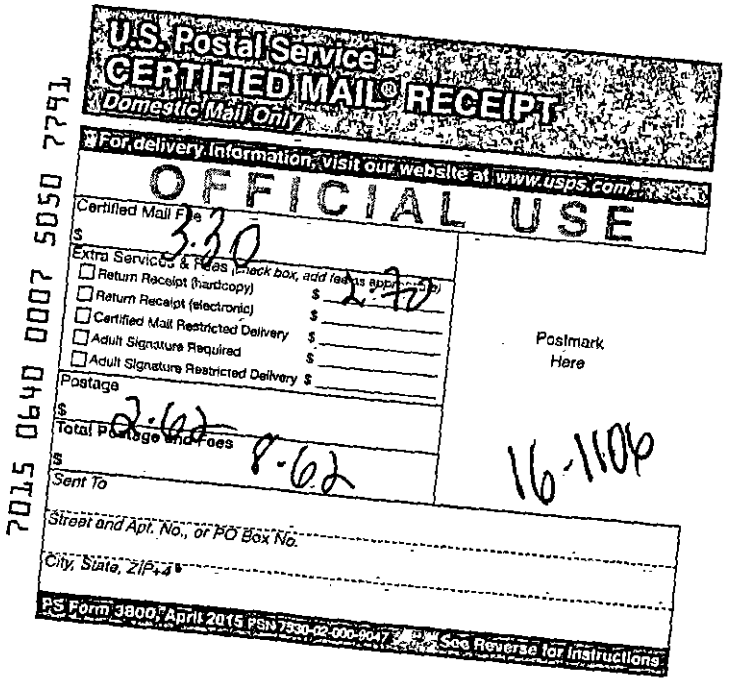
IF YOU FAIL TO FILE YOUR APPLICATION IN A TIMELY MANNER, OR IF YOU FILE YOUR APPLICATION TIMELY BUT FAIL TO APPEAR AT ANY SCHEDULED SETTLEMENT CONFERENCE, PREHEARING CONFERENCE, OR HEARING WITHOUT LEAVE TO DO SO, THE DEPARTMENT MAY DECIDE THIS MATTER WITHOUT YOUR YOUR PARTICIPATION AND WITHOUT FURTHER NOTICE TO YOU.

DATED this_____ day of _____, _____

_____
Party

_____
Party's Representative (if any)

WSBA #: _____



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- ☐ Adult Signature Restricted Delivery $

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16-1106

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City, State, ZIP+4®

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7015 0640 0007 5050 7791

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Doug Shoop, Manager
United States Department of Energy
Richland Operations Office
P.O. Box 550, MSIN: A5-14
Richland, WA 99352

9590 9402 1337 5285 0588 89

2. Article Number (Transfer from service label)
7015 0640 0007 5050 7791

COMPLETE THIS SECTION ON DELIVERY

A. Signature
x [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) R A Adams

C. Date of Delivery 11/21/16

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

RICHLAND WA NOV 21 2016 USPS

3. Service Type
- ☐ Adult Signature
- ☐ Adult Signature Restricted Delivery
- ☐ Certified Mail®
- ☐ Certified Mail Restricted Delivery
- ☐ Collect on Delivery
- ☐ Collect on Delivery Restricted Delivery
- ☐ Insured Mail
- ☐ Insured Mail Restricted Delivery (over $500)
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- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt

5

UB 4908

AIR 16-1222
NOC 1037

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 23, 2016

Mr. Doug Shoop, Manager
United States Department of Energy
Richland Operations Office
P.O. Box 550, MSIN: A5-14
Richland, Washington 99352

Re: Final Approval of Notice of Construction (NOC) 1037

Mr. Shoop:

Pursuant to Chapter 246-247 of the Washington Administrative Code (WAC), your modification was approved on December 19, 2016, according to the enclosed emission unit (EU) specific license for:

Portable Enclosure System #1 Operation (Replaces NOC 804)
(NOC 1037, EU 1322)

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 Tom Frazier at Thomas.Frazier@doh.wa.gov or, by phone, at (509) 946-0774.

Sincerely,

John Martell, Manager
Radioactive Air Emissions Section

Enclosure: NOC 1037 for EU 1322

cc: (see next page)

AIR 16-1222

cc: Ruth Allen, WRPS
Matthew Barnett, PNNL
Lilyann Bauder, Ecology
Shawna Berven, WDOH
Lucinda Borneman, WRPS
Lee Bostic, BNI
Frank Carleo, CHPRC
Cliff Clark, USDOE-RL
Jack Donnelly, WRPS
Rick Engelmann, CHPRC
Dennis Faulk, EPA
Thomas Frazier, WDOH
Eric Faust, USDOE-RL
Gary Fritz, MSA
Philip Gent, Ecology
Reed Kaldor, MSA
Paul Karschnia, CHPRC
Jim McAuley, EPA
John Schmidt, WDOH
Jeff Voogd, WRPS
Environmental Portal
RAES Tracking: Line 16-151; EU 1322; NOC 1037

Emission Unit ID: 1322

200 W-PES-001

Portable Enclosure System #1

This is a MAJOR, ACTIVELY ventilated emission unit.

Portable Enclosure System

Emission Unit Information

Stack Height: 26.00 ft. 7.92 m. Stack Diameter 1.67 ft. 0.51 m.

Average Stack Effluent Temperature: 70 degrees Fahrenheit. 21 degrees Celsius.

Average Stack ExhaustVelocity: 47.90 ft/second. 14.60 m/second.

Abatement Technology BARCT 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
	Prefilter	6	Three by two for total of six.
	1st Stage HEPA Filter	6	Aerosol tested annually to 99.95% removal of a particulate with a median diameter of 0.7 micron. Three by two housing for total of six HEPA filters.
	2nd Stage HEPA Filter	6	Aerosol tested annually to 99.95% removal of a particulate with a median diameter of 0.7 micron. Three by two housing for total of six HEPA filters

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 61, Appendix B Method 114	Each radionuclide that could contribute greater than 10% of the potential TEDE.	Once per year minimum.

Sampling Requirements Destructive Examination (DE) of the filters. Daily sampling of the access doors when exhaust system is shut down with inventory inside.

Additional Requirements

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

Operational Status Portable enclosure used to support waste retrieval.

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

Project Title	Approval #	Date Approved	NOC_ID
Portable Enclosure System #1 Operation (Replaces NOC 804)	AIR 16-1222	12/19/2016	1037

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 2.00E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).

2) This approval applies to those additional 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.

Transuranic waste retrieval involves the processes for removing and dispositioning buried suspect transuranic mixed low-level radioactive waste (hereafter called TRU waste) from Hanford Site burial trenches for storage

or disposal at other approved locations. Dispositioning is the orderly administration and handling of waste (including contaminated soil) from the low level burial grounds to place it in approved storage or disposal status. The handling includes such actions as: packaging, labeling and tracking waste; venting, assaying, and staging waste; inspecting waste and waste staging areas; sampling/characterizing/designating waste; making arrangements for the transfer of waste; completing necessary paperwork; and performing radiological and/or industrial hygiene surveys.

See the following for a detailed description of specific controls/conditions for each EU associated with the Transuranic Waste Retrieval Project:

EU 455 Handford Sitewide W-PORTEX 007
EU 1440 200 Area Diffuse/ Fugitive; Operation of the Transuranic Waste Retrieval Project
EU 755 Mobile Drum Venting System (Active Ventilation) (MDVS)
EU 756 Mobile Drum Venting System (Passive Ventilation) (MDVS)
EU 1181 Categorical Drum Venting System 2 (DVS2)
EU 1322 Portable Enclosure System #1 (PES)
EU 1326 Vapor Extraction System (VES)
EU 1327 Next Generation Retrieval (NGR)

3) The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 3.90E+01 mrem/year. Approved are the associated potential release rates (Curies/year) of:

Am - 241	8.30E+00	Liquid/Particulate Solid

Alpha release rate based on Am-241 + Progeny. It is recognized that other radionuclides may be present in very limited quantities.

Cs - 137	1.60E+00	Liquid/Particulate Solid

Beta/Gamma release rate based on Cs-137 + Progeny. It is recognized that other radionuclides may be present in very limited quantities.

The radioactive isotopes identified for this emission unit are (no quantities specified):

Am - 241	Am - 243	Cf - 252	Cm - 244	Cs - 134
Cs - 137	Eu - 152	Eu - 154	Pu - 238	Pu - 239/240
Pu - 241	Sr - 90	U - 234	U - 235	U - 236
U - 238				

The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notifiy 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.

4) WDOH NOTIFICATION - *Implementing PES Containment*
During high hazard work activities, removable surface contamination is maintained less than 2,000,000 dpm/100 cm^2 alpha and/or less than 4 rad/hr/100 cm^2 beta-gamma, limited to a 1 ft^2 area. For an allowed increase in contaminated area footprint of 4 ft^2 the limiting condition for removable contamination will be 500,000 dpm/100 cm^2 alpha and or 1rad/hr/100 cm^2 beta-gamma. Exceeding any of these contamination limits will require work to stop, and notification to Operation and RadCon management in accordance with the RWP. Notification to WDOH via email or the established procedures in the Environmental Notification program will be required. For work to continue above any of these limiting radiological conditions, the PES and commensurate controls will be implemented. The PES exhaust system will be utilized to minimize the potential for contamination spreads outside of posted radiological areas. (WAC 246-247-040(5) and WAC 246-247-060(5))

5) CONTROL TECHNOLOGY- Filter Protection 85% Humidity
The PES will not be operated if overall relative humidity, including humidity caused by misting, exceeds 85%.

(WAC 246-247-040(5) and WAC 246-247-060(5))

6) CONTAMINATION CONTROL - PES Activities
Activities done under confinement structure of PES will be considered to be diffuse and fugitive activities unless under active ventilation conditions. (WAC 246-247-040(5) and WAC 246-247-060(5))

7) CONTAMINATION CONTROL - ARA
Adherence to contamination limits in the immediate work location for medium and high-hazard work will help ensure that the work area airborne radioactivity limits (i.e., 1.0E-09 µCi/ml for alpha emitters and 2E-06 µCi/ml for beta-gamma emitters) are not exceeded. (WAC 246-247-040(5) and WAC 246-247-060(5))

8) CONTAMINATION CONTROL - Soil Removal, Container Handling
Both Alpha and beta-gamma contamination field surveys shall be performed for all removable contamination surveys, prior to and during soil removal (excluding overburden removal) and overpacking activities and when placing degraded outer container contents into replacement containers. Alpha surveys alone shall be performed for direct readings of container surfaces. Beta/gamma direct readings are influenced by container contents, so are not as useful and are not required. (WAC 246-247-040(5) and WAC 246-247-060(5))

9) ALARACT APROVAL - Container Handling
The process for handling of abnormal or severely degraded containers as described in PROCESS DESCRIPTION: Excavation and Retrieval of Containers, for bagging, overpacking, placing degraded outer container contents into replacement containers or in-situ grouting is approved as meeting ALARACT, and these processes and associated records and procedures will be subject to inspection upon request by the department. (WAC 246-247-040(5) and WAC 246-247-060(5))

10) CONTAMINATION CONTROL - Daily Surveys
When exhaust system is shut down with inventory inside the PES, radiological control technicians will perform daily radiological swipe surveys on the access doors to the PES during normal work days. (WAC 246-247-040(5) and WAC 246-247-060(5))

11) ALTERNATIVE APPROVAL - Destructive Examination
Approval is given for alternative flow monitoring and sample extraction method for the PES. Destructive Examination (DE) of the final stage HEPA filter of the PES containment, which will be performed once per calendar year any time the system is used within the calendar year. This authorization will remain in force for three years from the date of issue of the license, additional extensions on the life of the system will require installation of continuous flow measurement and sample extraction in accordance with ANSI/HPS N13.1-1999. (WAC 246-247-040(5), WAC 246-247-060(5), WAC 246-247-075(4))

12) PROCESS DESCRIPTION - Portable Enclosure System (PES)
This approval applies to these additional 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 PES may be used for larger containers or multiple containers, based on the controls established in this emission unit. Due to the size and or weight of the waste packages, crane and rigging may be required in conjunction with use of the PES. (WAC 246-247-040(5) and WAC 246-247-060(5))

13) ABATEMENT TECHNOLOGY - Excavation and Retrieval of Containers
The administrative control points set in this emission unit for contamination, as monitored by standard radiological field instrumentation, will be used to bound emissions based on current efficiencies of typical RadCon field contamination instruments. The controls listed within this approval apply to TRU Waste Retrieval Project open air excavation and retrieval activities. (WAC 246-247-040(5) and WAC 246-247-060(5))

14) ABATEMENT TECHNOLOGY - PES
The PES is a portable hard-sided containment unit. Its function is to provide containment and filtered ventilation for work performed on degraded containers. The proposed abatement technology for the PES will consist of 2 banks of HEPA filters with an in-place testable efficiency of 99.95% for removal of test aerosol particulate with a median diameter of 0.7 micron. The annual average volumetric flow rate through this intermittently operated exhaust system is 2.8 cubic meters/s. The PES will be approximately 30 ft by 36 ft by 20 ft high, will weigh approximately 30 tons, and project engineering calculations have been performed to show that it will remain stable and in place in an 85 mph wind. In addition, negative pressure ensures no outleakage during routine operations. The enclosure is built of flanged panels but the doors have normal air gaps. Gravity dampers are installed on the air inlets to the enclosure to eliminate mass flow back into the environment. Stack height is approximately 26 feet from ground level (18 feet from top of fan outlet) and stack diameter is approximately 20

inches.

A heater is not installed in the PES exhauster because condensed moisture is not anticipated in the filter housing. During normal operation of the system, the air that is exhausted through the system is outside air. This is based on the fact that outside air is being drawn into the PES exhauster at the rate of approximately 2.8 cubic meters/s. and is not conditioned before entering the facility. There is no planned heat source within the structure during operation. As a result, the air will have basically the same properties as the outside air (dry-bulb temperature, humidity, dew point temperature, etc.). A misting system is planned to be used in the PES to help reduce the amount of airborne particulate that could be suspended during box retrieval. However, due to the considerable volume of air changes and the minimal rate of water required for misting used, it is not anticipated that the properties of the exhaust air will change substantially due to the misting (i.e., increase moisture content, change dew point, etc.). As a result, since the air entering the exhaust system will be basically at the same temperature as the outside air, condensation will not occur because the dew point temperature will not be achieved.

A seal pot will be located at the inlet end of the skid to provide sufficient space as a precaution for any condensate to drain from the filter train or the fan housing. The seal pot will have low added water limits to ensure there will be enough water in the pot to prevent a contaminant escape air path, and a high limit to prevent overflow of the seal pot, leakage of water, or wetting of the filter housing or fan housing. (WAC 246-247-040(5) and WAC 246-247-060(5))

15) CONTROL TECHNOLOGY - Filter Protection
The PES will be operated as an unheated structure whenever the HEPA exhaust system is in operation. (WAC 246-247-040(5) and WAC 246-247-060(5))

16) CONTAMINATION DOCUMENTATION - Exposed Packages
During repackaging activities (i.e., when transferring the contents of a degraded container into a new container or containers) an operations log will be kept noting conditions of the transferred contents/packages.. RadCon will generate and retain radiological records documenting air sample results and removable contamination conditions during retrieval of each container. (WAC 246-247-040(5) and WAC 246-247-060(5))