

**Head Space Gas Sampling at the Waste Receiving and Processing Facility  
USDOE – Hanford Site  
Richland WA  
License: FF-01  
(EU 1183; NOC 1076)**

**Licensing File**

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- 2) Other Applicable Documentation (Emails, reports, calculations, etc.)
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  - a) Licensee Comments on Informal Draft
  - b) Resolution of Comments
- 4) 28 Day Draft
  - a) Licensee Acceptance
  - b) RAES response and explanation of city notification time requirement
- 5) Final License

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# LICENSING CHECKLIST

(Rev. 2)

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

RAES date received \_\_\_\_\_ and IM# assigned \_\_\_\_\_.

Entered into RAES Tracking/RDIT \_\_\_\_\_ . Completeness Review due \_\_\_\_\_.

To HP3 (responsible for facility) for assignment: WSS

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 NOT** 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/RDIT 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: NA (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/RDIT 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: NA

(see page 2)

Within 40 days N/A 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 JWS

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/RDIT, verify database concurrence, and return license file to HP2 with due date for licensee response or final issuance of license.

Final Due Date: 2/15/17

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/RDIT
- Verify database concurrence
- Update Licensee List
- Add final file to database 'inbox' to be entered/scanned

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**200W 200W S-MO444-001****HSGS Analysis Facility**

This is a MINOR, ACTIVELY ventilated emission unit.

Waste Receiving and Processing Facility ( WRAP)

**Emission Unit Information**

Stack Height: 10.00 ft. 3.05 m. Stack Diameter 0.50 ft. 0.15 m.

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

Average Stack Exhaust Velocity: 4.00 ft/second. 1.22 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
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**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
WAC 246-247-075(3)	Emissions will be calculated per conditions below.	Total Alpha (assumed Am-241) and Total Beta (assumed Sr-90)	

**Sampling Requirements** None**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 at the WRAP Head Space Gas Sampling (HSGS) Analysis Facility involve laboratory scale analysis operations supporting the Hanford transuranic (TRU) program mission.**This Emission Unit has 1 active Notice(s) of Construction.**

Project Title	Approval #	Date Approved	NOC_ID
Head Space Gas Sampling at the Waste Receiving and Processing Facility (Replaces NOC 810)		Not Approved	1076

**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 4.26E-09 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).
- 2) **Head Space Gas Sampling**  
The 2404-WC building has been transferred into the WRAP complex from the Central Waste Complex (CWC) and includes equipment within the 2404-WC building for HSGS of solid waste storage containers. HSGS is also performed in the 2336-W Process Area. This activity normally occurs within the 2404-WC after nondestructive examination (NDE) and nondestructive assay (NDA) in 2336-W

Containers subjected to HSGS at WRAP are already vented with Nucfil filters or other vent mechanisms. In some cases, a container might have had a vent clip. An approved particulate filter or filter with equivalent volatile organic compound (VOC) dispersion characteristics is installed in the container, to allow characterization sampling. Withdrawing a sample for HSGS from containers with existing vents does not create a new pathway for potential radioactive air emissions. The HSGS sampling protocol employs either the use of a syringe or a canister-sampling system to collect headspace-gas samples for analysis and quality control.

The sampling system for collecting headspace gas, consists of a side port needle (e.g., a hollow needle sealed at the tip with a small opening on its side close to the tip) a filter to prevent particles from contaminating the gas sample, and an adapter to connect the side port needle to the filter or sampling port. To sample the headspace gas, a side port needle is pressed through the sample port or filter and into the headspace beneath the lid. The gas is drawn under a vacuum directly into the sampling system.

- 3) The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 4.26E-09 mrem/year. Approved are the associated potential release rates (Curies/year) of:

DE - 0                      7.49E-10      Liquid/Particulate Solid                      WAC 246-247-030(21)(a)  
DE-Ci is a method of normalizing the exposure risk of the Various isotopes, where the DE-Ci are represented as PU-239.

---

- 4) **PROCESS DESCRIPTION - Analysis of Headspace Gas Samples**

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.

Analyses of head space gas samples are to be performed on samples obtained from TRU solid waste storage containers in various field locations. HSGS is performed per Radioactive Air Emissions Notice of Construction Application for the Transuranic Waste Retrieval Project (DOE/RL 2001 57). The HSGS protocol employs a syringe sampling system to collect up to a 100 ml sample from the container headspace through a filter into a gastight syringe for analysis. To sample the container head space gas, a side-port needle is pressed through the sample port septum and into the head space beneath the lid. This permits the gas to be drawn under a vacuum directly into the syringe.

Samples are withdrawn into a syringe through a 0.5 micron filter (99.95% efficient, Pall Corporation\* or equivalent). The syringe is transported to a field laboratory where the sample is inserted into the gas chromatograph mass spectrometer (GCMS) equipment.

The emissions will be vented from the GCMS and exhausted to the atmosphere through a ceiling fan. The process involves injecting the HSGS sample into the GCMS for analysis. The analysis involves heating the gas to greater than 200°C and then emitting the analyzed gas at a rate of approximately 30 ml/min. Up to 150 of these samples are planned to be analyzed per week. Emission calculations indicate that this process will result in a maximum (PTE) of approximately 8.0E-10 mrem/yr total effective dose equivalent (TEDE) to the onsite receptor. WAC 246-247-040(5), WAC 246-247-060(5))

- 5) **PROCESS DESCRIPTION - Headspace Gas Sampling**

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Containers subjected to HSGS at WRAP are already vented with NucFil® filters or other vent mechanisms. In some cases, a container might have had a vent clip. An approved particulate filter or filter with equivalent volatile organic compound (VOC) dispersion characteristics is installed in the container, to allow characterization sampling. Withdrawing a sample for HSGS, from containers with existing vents does not create a new pathway for potential radioactive air emissions. The HSGS sampling protocol employs either the use of a syringe or a canister-sampling system to collect headspace-gas samples for analysis and quality control.

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Emission Unit ID: 1183

**200W 200W S-MO444-001**

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**Emission Unit Information**

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Zone or Area	Abatement Technology	Required # of Units	Additional Description
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**Monitoring Requirements**

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Federal and State Regulatory	Monitoring and Testing Requirements	Radionuclides Requiring Measurement	Sampling Frequency
WAC 246-247-075(3)	Emissions will be calculated per conditions below.	Total Alpha (assumed Am-241) and Total Beta (assumed Sr-90)	

**Sampling Requirements** None

**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 at the WRAP HSGS Analysis Facility involve laboratory scale analysis operations supporting the Hanford TRU program mission.

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

Project Title	Approval #	Date Approved	NOC_ID
Head Space Gas Sampling at the Waste Receiving and Processing Facility		Not Approved	1076

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DE - 0                      7.49E-10      Liquid/Particulate Solid      WAC 246-247-030(21)(a)  
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Emission Unit ID: 1183

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

Zone or Area	Abatement Technology	Required # of Units	Additional Description
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**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
WAC 246-247-075(3)	Emissions will be calculated per conditions below.	Total Alpha (assumed Am-241) and Total Beta (assumed Sr-90)	

**Sampling Requirements** None

**Additional Requirements**

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**Operational Status** Activities at the WRAP Head Space Gas Sampling (HSGS) Analysis Facility involve laboratory scale analysis operations supporting the Hanford transuranic (TRU) program mission.

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Project Title	Approval #	Date Approved	NOC_ID
Head Space Gas Sampling at the Waste Receiving and Processing Facility (Replaces NOC 810)		Not Approved	1076

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- 3) The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 4.26E-09 mrem/year. Approved are the associated potential release rates (Curies/year) of:

DE - 0	7.49E-10	Liquid/Particulate Solid	WAC 246-247-030(21)(a)
DE-CI is a method of normalizing the exposure risk of the Various isotopes, where the DE-CI are represented as PU-239.			

- 4) **PROCESS DESCRIPTION - Analysis of Headspace Gas Samples**

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Application for the Transuranic Waste Retrieval Project (DOE/RL 2001 57). The HSGS protocol employs a syringe sampling system to collect up to a 100 ml sample from the container headspace through a filter into a gastight syringe for analysis. To sample the container head space gas, a side-port needle is pressed through the sample port septum and into the head space beneath the lid. This permits the gas to be drawn under a vacuum directly into the syringe.

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#### 5) PROCESS DESCRIPTION - Headspace Gas Sampling

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LB# 4927

STATE OF WASHINGTON  
DEPARTMENT OF HEALTH

AIR 17-120  
NOC 1076

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

January 10, 2017

**CERTIFIED MAIL**

**7015 0640 0007 5050 8088**

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) 1076

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:

**Head Space Gas Sampling at the Waste Receiving and Processing Facility  
(Replaces NOC 810)  
(EU 1183; NOC 1076)**

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.



Mr. Doug Shoop  
January 10, 2017  
Page 2 of 3

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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 draft approval, please contact Thomas Frazier at [Thomas.frazier@doh.wa.gov](mailto:Thomas.frazier@doh.wa.gov) or (509) 946-0774.

Sincerely,



John Martell, Manager  
Radioactive Air Emissions Section

Enclosures: 1. Conditions and Limitations for EU 1183 (NOC 1076)  
2. Request for Adjudicative Proceedings

cc: (see next page)

Mr. Doug Shoop  
January 10, 2017  
Page 3 of 3

AIR 17-120

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  
Phil Gent, Ecology  
Reed Kaldor, MSA  
Paul Karschnia, CHPRC  
Jim McAuley, EPA  
John Schmidt, WDOH  
Jeff Voogd, WRPS  
Environmental Portal  
RAES Tracking: Line 16-216; EU 1183; NOC 1076



Emission Unit ID: 1183

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2) **PROCESS DESCRIPTION**

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.

The 2404-WC building has been transferred into the WRAP complex from the Central Waste Complex (CWC) and includes equipment within the 2404-WC building for HSGS of solid waste storage containers. HSGS is also performed in the 2336-W Process Area. This activity normally occurs within the 2404-WC after nondestructive examination (NDE) and nondestructive assay (NDA) in 2336-W

**Analysis of Headspace Gas Samples**

Analyses of head space gas samples are to be performed on samples obtained from TRU solid waste storage containers in various field locations. HSGS is performed per Radioactive Air Emissions Notice of Construction Application for the Transuranic Waste Retrieval Project (DOE/RL 2001 57). The HSGS protocol employs a syringe sampling system to collect up to a 100 ml sample from the container headspace through a filter into a gastight syringe for analysis. To sample the container head space gas, a side-port needle is pressed through the

sample port septum and into the head space beneath the lid. This permits the gas to be drawn under a vacuum directly into the syringe.

Samples are withdrawn into a syringe through a 0.5 micron filter (99.95% efficient; Pall Corporation\* or equivalent). The syringe is transported to a field laboratory where the sample is inserted into the gas chromatograph mass spectrometer (GCMS) equipment.

The emissions will be vented from the GCMS and exhausted to the atmosphere through a ceiling fan. The process involves injecting the HSGS sample into the GCMS for analysis. The analysis involves heating the gas to greater than 200°C and then emitting the analyzed gas at a rate of approximately 30 ml/min. Up to 150 of these samples are planned to be analyzed per week. Emission calculations indicate that this process will result in a maximum (PTE) of approximately 8.0E-10 mrem/yr total effective dose equivalent (TEDE) to the onsite receptor.

#### Headspace Gas Sampling

Containers subjected to HSGS at WRAP are already vented with NucFil® filters or other vent mechanisms. In some cases, a container might have had a vent clip. An approved particulate filter or filter with equivalent volatile organic compound (VOC) dispersion characteristics is installed in the container, to allow characterization sampling. Withdrawing a sample for HSGS, from containers with existing vents does not create a new pathway for potential radioactive air emissions. The HSGS sampling protocol employs either the use of a syringe or a canister-sampling system to collect headspace-gas samples for analysis and quality control.

The sampling system for collecting headspace gas, consists of a side port needle (e.g., a hollow needle sealed at the tip with a small opening on its side close to the tip) a filter to prevent particles from contaminating the gas sample, and an adapter to connect the side port needle to the filter or sampling port. To sample the headspace gas, a side port needle is pressed through the sample port or filter and into the headspace beneath the lid. The gas is drawn under a vacuum directly into the sampling system.

- 3) The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 4.26E-09 mrem/year. Approved are the associated potential release rates (Curies/year) of:

DE - 0                    7.49E-10      Liquid/Particulate Solid                    WAC 246-247-030(21)(a)

DE-CI is a method of normalizing the exposure risk of the Various isotopes, where the DE-CI are represented as PU-239.

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

Docket No:  
**REQUEST FOR ADJUDICATIVE PROCEEDING**

Approval No:  
**AIR 17-120**

In Re The Approval of:  
**28-DAY DRAFT APPROVAL OF NOC 1076**

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 17-120

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 17-120, dated January 10, 2017, 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):

	<u>Admit</u>	<u>Deny</u>	<u>Do Not Contest</u>
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 PARTICIPATION AND WITHOUT FURTHER NOTICE TO YOU.

DATED this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_

\_\_\_\_\_  
Party

\_\_\_\_\_  
Party's Representative (if any)

WSBA #: \_\_\_\_\_

**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.

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature  
 X *John W Epps*  Agent  
 Addressee

B. Received by (Printed Name)  
 John W EPPS

C. Date of Delivery  
 1/18/17

delivery address different from item 1?  Yes  
 YES, enter delivery address below:  No

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 0590 84

- Service Type
- Adult Signature
  - Adult Signature Restricted Delivery
  - Certified Mail®
  - Certified Mail Restricted Delivery
  - Collect on Delivery
  - Collect on Delivery Restricted Delivery
  - Registered Mail™
  - Registered Mail Restricted Delivery
  - Return Receipt for Merchandise
  - Signature Confirmation™
  - Signature Confirmation Restricted Delivery
  - Priority Mail Express®

Article Number (Transfer from carrier label)  
 7015 0640 0007 5050 8088

PS Form 3811, July 2015 PSN 7530-02-000-8053

Domestic Return Receipt

**U.S. Postal Service™**  
**CERTIFIED MAIL® RECEIPT**  
 Domestic Mail Only

For delivery information, visit our website at [www.usps.com](http://www.usps.com)

**OFFICIAL USE**

Certified Mail Fee \$ 3.30

Extra Services & Fees (check box, add fee as appropriate)

- Return Receipt (hardcopy) \$ 2.70
- Return Receipt (electronic) \$ \_\_\_\_\_
- Certified Mail Restricted Delivery \$ \_\_\_\_\_
- Adult Signature Required \$ \_\_\_\_\_
- Adult Signature Restricted Delivery \$ \_\_\_\_\_

Postage \$ 1.57

Total Postage and Fees \$ \_\_\_\_\_

Postmark Here

17-120

Sent To \_\_\_\_\_

Street and Apt. No., or PO Box No. \_\_\_\_\_

City, State, ZIP+4® \_\_\_\_\_

PS Form 3800, April 2015 PSN 7530-02-000-8047 See Reverse for Instructions

7015 0640 0007 5050 8088

**5**





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

LB 4971

AIR 17-207  
NOC 1076

February 15, 2017

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) 1076

Mr. Shoop:

Pursuant to Chapter 246-247 of the Washington Administrative Code (WAC), your update is approved, as negotiated, according to the enclosed (EU) specific license for:

**Head Space Gas Sampling at the Waste Receiving and Processing Facility  
(Replaces NOC 810)  
(EU 1183; NOC 1076)**

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

Sincerely,

John Martell, Manager  
Radioactive Air Emissions Section

Enclosure: NOC 1076 for EU 1183

cc: (see next page)



Mr. Doug Shoop  
February 15, 2017  
Page 2 of 2

AIR 17-207

cc: Ruth Allen, WRPS  
Matthew Barnett, PNNL  
Lilyann Bauder, Ecology  
Shawna Berven, WDOH  
Lucinda Borneimani, WRPS  
Lee Bostic, BNI  
Frank Carleo, CHPRC  
Cliff Clark, USDOE-RL  
Jack Donnelly, WRPS  
Rick Engelmann, CHPRC  
Dennis Faulk, EPA  
Eric Faust, USDOE-RL  
Thomas Frazier, WDOH  
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 16-216; EU 1183; NOC 1076

Emission Unit ID: 1183

**200W 200W S-MO444-001**

**HSGS Analysis Facility**

This is a MINOR, ACTIVELY ventilated emission unit.

Waste Receiving and Processing Facility ( WRAP)

**Emission Unit Information**

Stack Height: 10.00 ft. 3.05 m. Stack Diameter 0.50 ft. 0.15 m.

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

Average Stack Exhaust Velocity: 4.00 ft/second. 1.22 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
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**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
WAC 246-247-075(3)	Emissions will be calculated per conditions below.	Total Alpha (assumed Am-241) and Total Beta (assumed Sr-90)	

**Sampling Requirements** None

**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 at the WRAP Head Space Gas Sampling (HSGS) Analysis Facility involve laboratory scale analysis operations supporting the Hanford transuranic (TRU) program mission.

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

Project Title	Approval #	Date Approved	NOC_ID
Head Space Gas Sampling at the Waste Receiving and Processing Facility (Replaces NOC 810)	AIR 17-207	2/15/2017	1076

**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 4.26E-09 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).
- 2) PROCESS DESCRIPTION

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.

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DE - 0	7.49E-10	Liquid/Particulate Solid	WAC 246-247-030(21)(a)
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