



## U.S. Department of Energy Hanford Site

March 15, 2021

21-ESQ-000712

Addressees - See Attached

Addressees:

HANFORD SITE AIR OPERATING PERMIT SEMIANNUAL REPORT FOR THE PERIOD JULY 1, 2020, THROUGH DECEMBER 31, 2020 (DOE/RL-2021-03)

Attached is DOE/RL-2021-03, "Hanford Site Air Operating Permit Semiannual Report for July 1, 2020, through December 31, 2020." The report is being submitted as required by the Hanford Site Air Operating Permit Standard Terms and General Conditions, Section 5.6, and is certified in accordance with Washington Administrative Code (WAC) 173-401-520 by the U.S. Department of Energy (DOE), Richland Operations Office (RL) as the responsible official as defined in WAC 173-401-200 (29)(c).

This report provides the following:

- Status on monitoring and reporting requirements;
- confirmation that required monitoring for specific air emissions units was completed for the reporting period; and
- a list of permit deviations; summaries of complaint investigations formally forwarded to DOE by the Washington State Department of Ecology; and monitoring reports or permit deviation documentation submitted during the reporting period.

During the July 1, 2020, through December 31, 2020, reporting period, there were 10 permit deviations, no air emissions complaints, and monitoring was conducted.

If you have any questions, please contact me, or your staff may contact Glyn D. Trenchard, Acting Assistant Manager for Safety and Environment, RL on (509) 373-4016.

Sincerely,

**Brian T. Vance** Digitally signed by Brian T. Vance  
Date: 2021.03.15 14:31:10 -07'00'

Brian T. Vance  
Manager

ESQ:AET

Attachment and cc: See page 2

Addressees  
21-ESQ-000712

-2-

March 15, 2021

Attachment:  
Hanford Site Air Operating Permit  
Semiannual Report

cc w/attach:  
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Administrative Record  
Ecology NWP Library (CD ROM)  
Environmental Portal, G3-35

cc w/o attach:  
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Addressees - Letter dated March 15, 2021  
21-ESQ-000712

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Attachment  
21-ESQ-000712

Hanford Site Air Operating Permit  
Semiannual Report

40 pages including cover sheet

# Hanford Site Air Operating Permit Semiannual Report for July 1, 2020 through December 31, 2020

Prepared for the U.S. Department of Energy  
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy  
under Contract 89303320DEM000031



**P.O. Box 650  
Richland, Washington 99352**

# Hanford Site Air Operating Permit Semiannual Report for July 1, 2020 through December 31, 2020

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M. J. Demiter

Hanford Mission Integration Solutions (HMIS)

Date Published  
February 2021

Prepared for the U.S. Department of Energy  
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy  
under Contract 89303320DEM000031



**P.O. Box 650**  
**Richland, Washington 99352**

**APPROVED**  
*By Julia Raymer at 1:14 pm, Feb 04, 2021*

Release Approval

Date

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## EXECUTIVE SUMMARY

The Hanford Site Air Operating Permit requires submittal of a semiannual report to the regulatory agencies by March 15 and September 15 each year. The report provides the following:

- Status on monitoring and reporting requirements.
- Confirmation that required monitoring for specific air emissions units was completed for the reporting period.
- A list of any permit deviations; summaries of complaint investigations formally forwarded to the U.S. Department of Energy by the Washington State Department of Ecology; and monitoring reports or permit deviation documentation submitted during the reporting period.

The permit requires the report to be certified for truth, accuracy, and completeness by a Responsible Official. During the July 1, 2020, through December 31, 2020, reporting period, there were 10 permit deviations, no air emission complaints, and required monitoring was conducted.

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## 1.0 INTRODUCTION

The Hanford Site Air Operating Permit (AOP) Number 00-05-006 was effective on August 1, 2019. One condition contained in the AOP Standard Terms and General Conditions (STGC) Section 5.6, “Semiannual Reporting,” is the requirement to submit semiannual reports by March 15 and September 15 each year. The reports are required to be certified by a Responsible Official for truth, accuracy, and completeness.

Copies of semiannual reports are transmitted to the Washington State Department of Ecology (Ecology), the Washington State Department of Health (WDOH), the Benton Clean Air Agency, and the U.S. Environmental Protection Agency (EPA) Region 10.

This semiannual report contains information from July 1, 2020, through December 31, 2020. AOP STGC Section 5.6, “Semiannual Reporting,” identifies the following content for inclusion in the semiannual report:

- a) “Reference to reports submitted to the regulatory agencies as required by section 5.16.”

This information is provided in Section 2.0 of the semiannual report.

- b) “Reports of any required monitoring not previously submitted or reference to reports of required monitoring that were submitted previously during the reporting period.”

This information is provided in Section 4.0 of the semiannual report.

- c) “A summary of any substantiated air emission complaint investigations(s) required in Section 1.4 of Attachment 1 and issued during the reporting period.”

This information is provided in Section 3.0 of the semiannual report.

- d) “For all minor radioactive emission units (potential to emit <0.1 mrem to the maximally exposed individual listed in Attachment 2), a general statement confirming that any required monitoring was conducted to verify low emissions during the reporting period for those emission units with specific periodic monitoring required during that period. For all emission units with continuous monitoring, a general statement will be provided stating that required monitoring operated continuously.”

This information is provided in Section 5.0 of the semiannual report.

- e) “Emission unit(s) that operated for any part of the calendar year, and were not closed per WAC 246-247-080(6) (reference to FF-01 Attachment 2), will have monitoring data reported in the annual NESHAP report (Section 5.11). Diffuse and Fugitive minor emission units listed in Attachment 2 are not required to be reported on except annually as a composite portion of the annual NESHAP report.”

Diffuse and fugitive emission units are not included in the semiannual report.

- f) “List any new regulatory orders, (e.g., Notice of Construction) imposed during the reporting period by Ecology or Health.”

This information is provided in Section 6.0 of the semiannual report.

## 2.0 DEVIATION REPORTS

Table 1 contains reports or notifications submitted directly to the regulatory agencies during this reporting period as required by AOP STGC Section 5.16, "Permit Deviation Reporting." The date column represents the date the agency was notified. Additional detail is available in the reference if one exists.

**Table 1. Reports/Notifications for the Period July 1, 2020, through December 31, 2020. (3 sheets)**

Date	Agency	Area	Location	Reference Number	Description
7/23/20	Ecology	200-E	WTP	Ecology Compliance Assistance Table Row 39	Steam Plant Boiler performance testing was delayed beyond 180 days from initial start-up due to the COVID-19 stay at home order. Testing was completed November 10-12, 2020, and final test report demonstrating compliant emission results was delivered to Ecology on January 7, 2021, via BNI Correspondence Number 321176.
7/23/20	WDOH	200E and 200W	B-Plant, WESF, and 2706T		<p>B Plant: This stack was originally put in a lay-up condition on 3-23-20 due to a reduction of force. Closed the loop with WDOH to let them know that the facility had completed all NESHAPs and sampling had begun on 7-22-20.</p> <p>WESF: Notification to let WDOH know that the facility lost continuous sampling ability late in the evening of 7-22-20 due to vacuum pump issues. Sampling was returned to normal on 7-23-20.</p> <p>2706T: Original notification was sent to WDOH on 5-27-20 to postpone the annual NESHAP calibrations. Due to social distancing protocols, the facility was unable to complete two of their NESHAPs by the originally anticipated date in July. Ongoing safety and operational controls prevented completion of the required calibration.</p>

**Table 1. Reports/Notifications for the Period July 1, 2020, through December 31, 2020. (3 sheets)**

Date	Agency	Area	Location	Reference Number	Description
8/11/20	WDOH	200E	PUREX and B-Plant		<p>PUREX: This stack was originally put in a lay-up condition on 3-23-20 due to a reduction of force. Due to the same reduction of force, the DOE-RL and WDOH had agreed to do monthly compensatory control smears on a representative number of facility doors as a means to ensure contamination control. As a means of closing the loop on notifications for this stack, the facility was able to complete the NESHAPs and start sampling again. WDOH was notified on 8-11-20.</p> <p>B-Plant: Due to a maintenance activity that was going to take longer than 48 hours the facility had made notification that they were going into ALARACT 28.1. A follow-up notification indicated that the facility had exited ALARACT 28.1 on 8-17-20.</p>
8/17/20	WDOH	200W	WRAP		<p>This notification was due to electrical relay issues that caused both vacuum pumps to fail. Due to the loss of sampling ability that the facility experienced they shut down the stack until sampling could be reinstated.</p> <p>On 8-17-20 a follow-up notification was made to WDOH to let them know that the WRAP stack was operating and the facility was sampling again.</p>
9/10/20	WDOH	200W	T-Plant		<p>Planned maintenance created the need to shut down the stack. Compensatory controls were implemented. WDOH was notified on 9-21-20 that the system was operating as designed.</p>
9/15/20	WDOH	200W	WRAP		<p>Partial exhaust system shutdown at WRAP put it outside of its qualification window. This was due to heavy wildfire smoke loading up the filters. WDOH was notified on 9-21-20 that the sampling system was running within the qualified flow ranges and sampling was as designed.</p>

**Table 1. Reports/Notifications for the Period July 1, 2020, through December 31, 2020. (3 sheets)**

Date	Agency	Area	Location	Reference Number	Description
10/9/20	WDOH	200W	B-Plant		Notified WDOH of an exhaust and sampling system outage. Facility would start performing ALARACT 28.1 surveys. A follow-up notification to WDOH on 11-18-20 closed the loop on this item as ALARACT 28.1 surveys were discontinued and systems were again operational.
11/12/20	Ecology/ WDOH	200E	AW	TOC-ENV- NOT-2020- 4588	On 11/11/20, stack 296-A-46 operated between 0820 and 1249 hours with a CAM that was one day overdue on its calibration and functional test.
11/19/20	WDOH	200W	T-Plant		Part 1: Notified WDOH of planned maintenance as a part of prefilter replacements on 11-20-20. Provided a follow-up notification to WDOH on 11-24-20 to let them know the system was back up and running but outside of the qualification window. This put the sampling system in an over-reporting configuration.  Part 2: Notified WDOH of planned maintenance as a part of prefilter replacements on 12-3-20. Updated WDOH on 12-16-20 to let them know that the system was operating as designed.
11/24/20	WDOH	200W	Alpha Caisson #3 (EU 800)		Notified WDOH of permit deviation (License Condition 4, AIR 15-913) from annual aerosol test. Due to multiple reasons discussed in the notification the work will not be performed until Spring 2021.

ARARACT = As Low As Reasonably Achievable Control Technology  
 BNI = Bechtel National, Inc.  
 CAM = Continuous Air Monitor  
 DOE-RL = U.S. Department of Energy, Richland Operations Office  
 Ecology = Washington State Department of Ecology  
 NESHAP = National Emission Standards for Hazardous Air Pollutants  
 PUREX = Plutonium Uranium Extraction Plant  
 WDOH = Washington State Department of Health  
 WESF = Waste Encapsulation and Storage Facility  
 WRAP = Waste Receiving and Processing Facility  
 WTP = Waste Treatment Plant

### 3.0 AIR EMISSION COMPLAINT INVESTIGATIONS

No substantiated air emission complaints were received by the U.S. Department of Energy, Richland Operations Office or by the U.S. Department of Energy, Office of River Protection from Ecology as specified in the AOP Attachment 1, Section 1.4, during this reporting period.

### 4.0 PERMIT REQUIRED MONITORING REPORTS

Table 2 lists the required monitoring reports submitted during the reporting period.

**Table 2. Permit Required Monitoring Reports.**

Date	Title
07/23/20	MSA-1101757.37, 2020; "Second Quarter Calendar Year 2020 High-Efficiency Particulate Air-Filtered Vacuum Usage Report," external letter to J. Martell, Washington State Department of Health, from M. B. Wilson, Mission Support Alliance, LLC, Richland, Washington, July 23.
07/24/20	20-ESQ-0078, 2020; "Hanford Site Air Operating Permit Annual Compliance Certification Report (January 1 - December 31, 2019)," external letter to C. W. Hladick, U.S. Environmental Protection Agency, J. Martell, Washington State Department of Health, R. B. Priddy, Benton Clean Air Agency, and A. K. Smith, Washington State Department of Ecology, from B. T. Vance, U.S. Department of Energy, Richland Operations Office, Richland, Washington, July 24.
09/01/20	20-ESQ-0091, 2020; "Hanford Site Air Operating Permit Semiannual Report for the Period January 1, 2020 through June 30, 2020 (DOE/RL-2020-03)," external letter to C. W. Hladick, U.S. Environmental Protection Agency, J. Martell, Washington State Department of Health, R. B. Priddy, Benton Clean Air Agency, and A. K. Smith, Washington State Department of Ecology, from B. T. Vance, U.S. Department of Energy, Richland Operations Office, Richland, Washington, September 1.
09/16/20	State of Washington, Department of Ecology Electronic Greenhouse Gas Reporting for Calendar Year 2019 (Also documented in DOE/RL-2020-43, Rev. 0, <i>Calendar Year 2019 Greenhouse Gas Emissions Report to the State of Washington Department of Ecology</i> )
10/26/20	MSA-1101757.38, 2020, "Third Quarter Calendar Year 2020 High-Efficiency Particulate Air-Filtered Vacuum Usage Report," external letter to J. Martell, Washington State Department of Health, from M. B. Wilson, Mission Support Alliance, LLC, Richland, Washington, October 26.

### 5.0 STATUS OF REQUIRED MONITORING

Table 3 contains the status of required monitoring during this reporting period for minor radioactive emission units and all emission units with continuous monitoring requirements. The performance of monitoring is not required if the unit did not operate during the reporting period.

**Table 3. Status of Required Monitoring. (15 Sheets)**

<b>Emission Point (Common Name)</b>	<b>EU ID<sup>a</sup></b>	<b>Required Monitoring</b>	<b>Monitoring Completed? (Yes, No, NA)</b>	<b>Comment</b>
P-241C111-001 (241-C-111)	1	Smear survey, every 365 days	Yes	
W-296P045-001 (296-P-45)	50	Record Sample, Continuous	NA	Unit did not operate during the reporting period.
P-296P022-001 (296-P-22)	53	Record Sample, 1-week sample/4 times per year	Yes	
P-296SY-001 (296-P-23)	56	Record Sample, 1-week sample/4 times per year	Yes	
W-296P043-001 (296-P-43)	57	Record Sample, Continuous	NA	Unit did not operate during the reporting period.
W-296P044-001 (296-P-44)	58	Record Sample, Continuous	NA	Unit did not operate during the reporting period.
S-296S025-001 (296-S-25)	59	Record Sample, 1-week sample/4 times per year	Yes	
P-241T105-001 P-241T106-001 P-241T109-001 P-241T102-001 P-241T107-001 P-241T111-001 P-241T104-001 P-241T112-001 P-241T108-001 P-241T203-001 P-241T204-001 P-241T110-001 P-241T202-001 P-241T103-001 P-241T101-001 P-241T201-001	65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80	Smear survey, every 365 days	Yes	
P-241TY106-001 P-241TY102-001 P-241TY105-001 P-241TY104-001 P-241TY103-001 P-241TY101-001	81 82 83 84 85 86	Smear survey, every 365 days	Yes	
P-241A 103-001 P-241A 104-001 P-241A 102-001 P-241A 105-001 P-241A 101-001	87 88 90 91 92	Smear survey, every 365 days	Yes	
P-296A 042-001 (296-A-42)	93	Record Sample, Continuous	Yes	
P-241A 106-001 (241-A-106)	94	Smear survey, every 365 days	Yes	

**Table 3. Status of Required Monitoring. (15 Sheets)**

<b>Emission Point (Common Name)</b>	<b>EU ID<sup>a</sup></b>	<b>Required Monitoring</b>	<b>Monitoring Completed? (Yes, No, NA)</b>	<b>Comment</b>
P-204AR-001 (296-A-26)	96	Record Sample, 1-week sample/4 times per year (if operated other than for HEPA filter testing)	NA	Unit did not operate during reporting period.
P-241U103-001 P-241U108-001 P-241U107-001 P-241U203-001 P-241U102-001 P-241U201-001 P-241U101-001 P-241U204-001 P-241U109-001 P-241U202-001 P-241U111-001 P-241U112-001 P-241U104-001 P-241U110-001 P-241U106-001 P-241U105-001	97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112	Smear survey, every 365 days	Yes	
P-241TX117-001 P-241TX107-001 P-241TX112-001 P-241TX105-001 P-241TX113-001 P-241TX104-001 P-241TX114-001 P-241TX103-001 P-241TX110-001 P-241TX116-001 P-241TX108-001 P-241TX102-001 P-241TX115-001 P-241TX106-001 P-241TX101-001 P-241TX109-001 P-241TX118-001 P-241TX111-001	113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130	Smear survey, every 365 days	Yes	
P-241S104-001 P-241S101-001 P-241S103-001 P-241S102-001 P-241S108-001 P-241S109-001 P-241S105-001 P-241S110-001 P-241S106-001 P-241S107-001	131 132 133 134 135 136 137 138 139 140	Smear survey, every 365 days	Yes	

**Table 3. Status of Required Monitoring. (15 Sheets)**

<b>Emission Point (Common Name)</b>	<b>EU ID<sup>a</sup></b>	<b>Required Monitoring</b>	<b>Monitoring Completed? (Yes, No, NA)</b>	<b>Comment</b>
P-242A-002 (296-A-22)	142	Record Sample. One week sample per quarter, and continuous sampling during campaign	Yes	
P-242AL44-001 (LERF Basin #44)	146	Near Field Environmental Sampling. Air - Every 2 weeks continuous/ deposition - annually	Yes	
P-242AL43-001 (LERF Basin #43)	147	Near Field Environmental Sampling. Air - Every 2 weeks continuous/ deposition - annually	Yes	
P-242AL42-001 (LERF Basin #42)	148	Near Field Environmental Sampling. Air - Every 2 weeks continuous/ deposition - annually	Yes	
P-296A028-001 (296-A-28)	156	Record Sample, 1-week sample/4 times per year	Yes	
P-242S-001 (296-S-18)	163	Record Sample, 1-week sample/4 times per year	NA	Unit closed 04/11/18 per AIR 18-401.
P-296A020-001 (296-A-20)	174	Record Sample, 1-week sample/4 times per year	Yes	
P-296W004 001 (296-W-4)	193	Record Sample, Continuous, collect samples bi-weekly at a minimum	No	<p>8-17-20: This notification was due to electrical relay issues that caused both vacuum pumps to fail. Due to the loss of sampling ability that the facility experienced they shut down the stack until sampling could be reinstated.</p> <p>On 8-17-20 a follow-up notification was made to WDOH to let them know that the WRAP stack was operating and the facility was sampling again.</p> <p>9-15-20: Partial exhaust systems shutdown at WRAP putting it outside of its qualification window. This was due to heavy wildfire smoke loading up the filters. WDOH was notified on 9-21-20 that sampling system was running within the</p>

**Table 3. Status of Required Monitoring. (15 Sheets)**

<b>Emission Point (Common Name)</b>	<b>EU ID<sup>a</sup></b>	<b>Required Monitoring</b>	<b>Monitoring Completed? (Yes, No, NA)</b>	<b>Comment</b>
				qualified flow ranges and sampling was as designed.
P-241SX115-001 P-241SX113-001	200 201	Smear survey, every 365 days	Yes	
P-241S111-001	202	Smear survey, every 365 days	Yes	
P-241S-001	203	Smear survey, every 365 days	Yes	
P-296A041-001 (296-A-41)	205	Record Sample, 1-week sample/4 times per year	Yes	
P-296A043-001 (296-A-43)	216	Record Sample, 1-week sample/4 times per year	Yes	.
P-296A018-001 (296-A-18)	217	Record Sample, 1-week sample/4 times per year	Yes	
P-296A019-001 (296-A-19)	218	Record Sample, Continuous	NA	Unit did not operate during the reporting period.
P-296A030-001 (296-A-30)	228	Record Sample, 1-week sample/4 times per year	Yes	
P-241C107-001 P-241C108-001 P-241C112-001 P-241C201-001 P-241C204-001 P-241C102-001 P-241C203-001 P-241C110-001 P-241C109-001 P-241C202-001 P-241C101-001	230 231 232 233 235 237 242 244 245 246 247	Smear survey, every 365 days	Yes	
S-296S021-001 (296-S-21)	254	Record Sample, Continuous	Yes	
P-241BX104-001 P-241BX110-001 P-241BX103-001 P-241BX107-001 P-241BX101-001 P-241BX112-001 P-241BX106-001 P-241BX102-001 P-241BX109-001 P-241BX111-001 P-241BX108-001	255 256 257 258 259 260 261 262 263 264 265	Smear survey, every 365 days	Yes	
P-241B105-001 P-241B201-001 P-241B108-001 P-241B101-001 P-241B102-001 P-241B204-001	266 267 268 269 270 271	Smear survey, every 365 days	Yes	

**Table 3. Status of Required Monitoring. (15 Sheets)**

<b>Emission Point (Common Name)</b>	<b>EU ID<sup>a</sup></b>	<b>Required Monitoring</b>	<b>Monitoring Completed? (Yes, No, NA)</b>	<b>Comment</b>
P-241B104-001	272			
P-241BX105-001	273	Smear survey, every 365 days	Yes	
P-241B112-001	274	Smear survey, every 365 days	Yes	
P-241B107-001	275			
P-241B111-001	276			
P-241B109-001	277			
P-241B110-001	278			
P-241B103-001	279			
P-241B202-001	280			
P-241B106-001	281			
P-241B203-001	282			
P-241BY101-001	283			
P-241BY105-001	284			
P-241BY106-001	285			
P-241BY102-001	286			
P-241BY112-001	287			
P-241BY103-001	288			
P-241BY104-001	289			
P-241BY109-001	290			
P-241BY108-001	291			
P-241BY111-001	292			
P-241BY110-001	293			
P-241BY107-001	294			
P-2025E ETF (296-E-1) (Effluent Treatment Facility)	301	Four-week sample/year on the stack. Near Facility Monitoring Stations N582, N498, N499, N972, and N999	Yes	
P-241AX104-001	302	Smear survey, every 365 days	Yes	
P-241AX102-001	303			
P-241AX103-001	304			
P-241AX101-001	305			
P-291T001-001 (291-T-1)	314	Record Sample, Continuous	No	9-10-20 Planned maintenance created a need to shut down the stack. Compensatory controls were implemented. WDOH was notified on 9-21-20 that the system was operating as designed.  11-19-20 Prefilter Banks 2 and 4: Notified WDOH of planned maintenance as a part of prefilter replacements on 11-20-20. Provided a follow-up notification to WDOH on

**Table 3. Status of Required Monitoring. (15 Sheets)**

<b>Emission Point (Common Name)</b>	<b>EU ID<sup>a</sup></b>	<b>Required Monitoring</b>	<b>Monitoring Completed? (Yes, No, NA)</b>	<b>Comment</b>
				11-24-20 to let them know the system was back up and running but outside of the qualification window. This put the sampling system in an over-reporting configuration.  Prefilter Banks 2 and 4: Notified WDOH of planned maintenance as a part of prefilter replacements on 12-3-20. Updated WDOH on 12-16-20 to let them know that the system was operating as designed.
P-296T007-001 (296-T-7)	315	Record Sample, Continuous, collected monthly when ventilation system is operating (AIR 17-115 Condition 7)	No	7-23-20 Original notification was sent to WDOH on 5-27-20 to postpone NESHAP calibrations. Due to social distancing protocols the facility was unable to complete two of the NESHAPs by the originally anticipated date in July. Ongoing safety and operational controls prevented completion of the required calibration.
P-291S001-001 (291-S-1)	332	Record sample, 4-week sample/year	NA	This emission unit was transitioned to CERCLA authority in spring 2019. (19-ESQ-0086)
P-296S016-001 (296-S-16)	337	Record Sample, 1-week sample/4 times per year	Yes	
P-296B010-001 (296-B-10)	340	Record Sample, Continuous	No	7-23-20 Notification to let WDOH know that the facility lost continuous sampling ability late in the evening of 7-22-20 due to vacuum pump issues. Sampling was returned to normal on 7-23-20.
EP-325-01-S	361	Record Sample - Continuous; Tritium by silica gel - monthly	Yes	
P-291A001-001 (291-A-1)	369	Record Sample, Continuous	No	8-11-20 This stack was originally put in a lay-up condition

**Table 3. Status of Required Monitoring. (15 Sheets)**

<b>Emission Point (Common Name)</b>	<b>EU ID<sup>a</sup></b>	<b>Required Monitoring</b>	<b>Monitoring Completed? (Yes, No, NA)</b>	<b>Comment</b>
				on 3-23-20 due to a reduction of force. Due to the same reduction of force, the DOE and WDOH had agreed to do monthly compensatory control smears on a representative number of facility doors as a means to ensure contamination control. As a means of closing the loop on notifications for this stack, the facility was able to complete the NESHAPs and start sampling again. WDOH was notified on 8-11-20.
P-437MN&ST-001 (437-MN&ST)	385	Record Sample, 4-week sample/year	Yes	Four-week sample completed in August 2020.
P-FFTFRESB-001 (FFTF-RE-SB)	395	Record Sample, 4-week sample/year or continuously whichever is less (if operated)	NA	Unit did not operate during the reporting period.
P-FFTFHTTR-001 (FFTF-HT-TR)	396	Record Sample, 4-week sample/year or continuously whichever is less (if operated)	NA	Unit did not operate during the reporting period.
P-FFTFCEX-001 (FFTF-CB-EX)	397	Annual (calculation)	Yes	
FFTF-402-1 (Sodium Storage Facility)	398	See AIR 17-707, Condition 5	Yes	Periodic Confirmatory Monitoring done per Condition 5 of the license.
P-437-002 (437-1-61)	399	Record Sample, 4 week sample/year	Yes	Four-week sample completed in August 2020.
P-296B001-001 (296-B-1)	402	Record Sample, Continuous	No	7-23-20 This stack was originally put in a lay-up condition on 3-23-20 due to a reduction of force. Due to the same reduction of force, the DOE and WDOH had agreed to do monthly compensatory control smears on a representative number of facility doors as a means to ensure contamination control. Closed the loop with WDOH to let them know that the facility had

**Table 3. Status of Required Monitoring. (15 Sheets)**

Emission Point (Common Name)	EU ID <sup>a</sup>	Required Monitoring	Monitoring Completed? (Yes, No, NA)	Comment
				<p>completed all NESHAPs and sampling had begun on 7-22-20.</p> <p>8-11-20 Due to a maintenance activity that was going to take longer than 48 hours, the facility had made notification that they were going into ALARACT 28.1. A follow-up notification indicated that the facility had exited ALARACT 28.1 on 8-17-20.</p> <p>10-9-20 Notified WDOH of an exhaust and sampling system outage. Facility would start performing ALARACT 28.1 surveys. A follow-up notification to WDOH on 11-18-20 closed the loop on this item as ALARACT 28.1 surveys were discontinued and systems were again operational.</p>
EP-331-01-V (331 Life Sciences Lab)	412	Record Sample, Continuous	Yes	
P-296H212 001 (296-H-212)	435	Record filter replaced monthly and analyzed quarterly using gamma spectrometer calibrated to cesium-137. Record filter counted annually using gamma spectrometer calibrated to cesium-137.	Yes	
S-296S023-001 (296-S-23)	438	One NDA every 2 years	NA	NDA not required, AIR 20-303, NOC 1570, 3/5/2020.
J-CWC 001 (Central Waste Complex)	439	Near Field ambient monitoring program monitors N449, N457, N964, and N433; Quarterly 2-week periodic confirmatory measurements	Yes	
Hanford Sitewide type-1, type-2, type-3 (PTRAEUs)	447	Annual unless specified by the notice of construction; NDA, record sampler, smears of the	Yes	A Type II PTRAEU was used from November 2019 to January 2020. The pertinent log sheets were

**Table 3. Status of Required Monitoring. (15 Sheets)**

<b>Emission Point (Common Name)</b>	<b>EU ID<sup>a</sup></b>	<b>Required Monitoring</b>	<b>Monitoring Completed? (Yes, No, NA)</b>	<b>Comment</b>
		exhaust port or continuous air monitoring		determined to be lost in 1/2021. This was not addressed in DOE/RL-2020-03. Additional information will be provided in the next semiannual report.
Hanford Sitewide Vented Containers	448	Environment Sampling, Air every 2 weeks continuous/deposition – annually	Yes	
200 Area Interim Storage Area	454	Smear survey – annual	Yes	Surveys performed in July and September of 2020.
Hanford Sitewide W-PORTEX 007 (HEPA Vacuums)	455	See AIR 17-113, Condition 5	Yes	
W-PORTEX 011 (Permacon Unit)	461	Quarterly for 2 weeks of operations	NA	Unit did not operate during the reporting period.
Hanford Sitewide Guzzler-001 (Guzzler™) <sup>b</sup>	476	Radiation surveys, NDA testing HEPAs when replaced, and annually screening the HEPA filtration system	Yes	
W-296P047-001 (296-P-47)	498	Record sample, Continuous	NA	Unit did not operate during reporting period.
P-241C-004 (241-C-106)	712	Smear survey, every 365 days	Yes	
P-244CR-002 (244-CR Vault Passive Filter A)	713	Smear survey, every 365 days	Yes	
P-241C-002 (241-C-104)	716	Smear survey, every 365 days	Yes	
P-241C-003 (241-C-105)	717			
P-296A044-001 (296-A-44)	735	Record sample, Continuous	Yes	
P-296A045-001 (296-A-45)	736	Record sample, Continuous	Yes	
P-241C103-001 (241-C-103)	737	Smear survey, every 365 days	Yes	
P-244A-002 (244-A Primary HEPA)	738	Smear survey, every 365 days	Yes	
P-244BX-002 (244-BX Primary HEPA)	740	Smear survey, every 365 days	Yes	
P-244S-002 (244-S Primary HEPA)	742	Smear survey, every 365 days	Yes	

**Table 3. Status of Required Monitoring. (15 Sheets)**

<b>Emission Point (Common Name)</b>	<b>EU ID<sup>a</sup></b>	<b>Required Monitoring</b>	<b>Monitoring Completed? (Yes, No, NA)</b>	<b>Comment</b>
P-244TX-002 (244-TX Primary HEPA)	744	Smear survey, every 365 days	Yes	
W-296P048-001 (296-P-48)	749	Record sample, Continuous	NA	Unit did not operate during reporting period.
P-241AZ301-001 (241-AZ-301)	751	Smear survey, every 365 days	Yes	
Drum Venting System – Active Vent	755	Smears of the exhaust vent at the end of each shift of operation	NA	Unit did not operate during the reporting period.
Drum Venting System – Passive Vent	756	Smears of the exhaust vent at the end of each shift of operation	NA	Unit did not operate during the reporting period.
218W4B-Alpha-1 Caisson	793	Smear sample upstream of HEPA filter, near facility monitoring network samples collected and analyzed annually	Yes	
218W4B-Alpha-2 Caisson	794	Smear sample upstream of HEPA filter, near facility monitoring network samples collected and analyzed annually	Yes	
218W4B-Alpha-3 Caisson	795	Smear sample upstream of HEPA filter, near facility monitoring network samples collected and analyzed annually	Yes	
218W4B-Alpha-4 Caisson	796	Smear sample upstream of HEPA filter, near facility monitoring network samples collected and analyzed annually	Yes	
218W4B-#1 Caisson	798	Smear sample upstream of HEPA filter, near facility monitoring network samples collected and analyzed annually	Yes	
218W4B-#2 Caisson	799	Smear sample upstream of HEPA filter, near facility monitoring network samples collected and analyzed annually	Yes	
218W4B-#3 Caisson	800	Smear sample upstream of HEPA filter, near facility monitoring network samples collected and analyzed annually	Yes	11-24-20 Notified WDOH of permit deviation (License Condition 4, AIR 15-913) from annual aerosol test. Due to multiple reasons discussed in the notification, the work will not be performed until Spring 2021.
218W4B-#4 Caisson	801	Smear sample upstream of HEPA filter, near facility monitoring network samples collected and analyzed annually	Yes	

**Table 3. Status of Required Monitoring. (15 Sheets)**

<b>Emission Point (Common Name)</b>	<b>EU ID<sup>a</sup></b>	<b>Required Monitoring</b>	<b>Monitoring Completed? (Yes, No, NA)</b>	<b>Comment</b>
218W4B-#5 Caisson	802	Smear sample upstream of HEPA filter, near facility monitoring network samples collected and analyzed annually	Yes	
218W4B-#6 Caisson	803	Smear sample upstream of HEPA filter, near facility monitoring network samples collected and analyzed annually	Yes	
218W4B-UNI#1 Caisson	804	Smear sample upstream of HEPA filter, near facility monitoring network samples collected and analyzed annually	Yes	
P-296A046-001 (296-A-46)	855	Record sample, Continuous	Yes	
P-296A047-001 (296-A-47)	856	Record sample, Continuous	Yes	
W-296P049-001 (296-P-49)	885	Record sample, Continuous	Yes	
W-296P050-001 (296-P-50)	886	Record sample, Continuous	Yes	
Hanford Sitewide Tanker Loading of Contaminated Waste Water	888	As listed in the Conditions and Limitations. AIR 09-705, Condition 5.	NA	No shipments during the reporting period.
P-241UX302A-001 (241-UX-302A)	894	Smear survey, every 365 days	Yes	
P-241ER311-001 (ER311)	910	Smear survey, every 365 days	Yes	
P-244A-003 (244-A Annulus HEPA)	912	Smear survey, every 365 days	Yes	
P-244BX-003 (244-BX Annulus HEPA)	922	Smear survey, every 365 days	Yes	
P-244S-003 (244-S Annulus HEPA)	959	Smear survey, every 365 days	Yes	
P-244TX-003 (244-TX Annulus HEPA)	969	Smear survey, every 365 days	Yes	
P-241U301B-001 (241-U-301B)	1129	Smear survey, every 365 days	Yes	
P-241AZ154-001 (241-AZ-154)	1130	Smear survey, every 365 days	Yes	

**Table 3. Status of Required Monitoring. (15 Sheets)**

<b>Emission Point (Common Name)</b>	<b>EU ID<sup>a</sup></b>	<b>Required Monitoring</b>	<b>Monitoring Completed? (Yes, No, NA)</b>	<b>Comment</b>
FFTF PTRAEUs	1176	Samples of waste water, prior to transfer or once per calendar year during operations	NA	Unit did not operate during the reporting period.
Drum Venting System 2	1181	Smears of exhaust vent at end of each shift of operation	NA	Unit did not operate during the reporting period.
S-MO444-001 (WRAP Head Space Gas Sampling)	1183	Per calculations in AIR 17-2017	NA	Unit did not operate during the reporting period.
P-241SX107-001	1207	Smear survey, every 365 days	Yes	
P-241SX108-001	1208			
P-241SX109-001	1209			
P-241SX110-001	1210			
P-241SX111-001	1211			
P-241SX112-001	1212			
P-241SX114-001	1213			
P-241SX101-001	1219			
P-241SX102-001	1220			
P-241SX103-001	1221			
P-241SX104-001	1222			
P-241SX105-001	1223			
P-241SX106-001	1224			
P-241S304-001 (241-S-304)	1227	Smear survey, every 365 days	Yes	
P-6241V-001 (6241-V Vent Station Cross Site)	1228	Smear survey, every 365 days	Yes	
P-241A417-001 (241-A-417)	1229	Smear survey, every 365 days	Yes	
P-6241A-001 6241-A Diversion Box	1230	Smear survey, every 365 days	Yes	
P-241EW151-001 (241-EW-151)	1231	Smear survey, every 365 days	Yes	.
P-241S302-001 (241-S-302)	1232	Smear survey, once per month. NDA of filter, Annually	Yes	
W-TRUDECON-001	1243	Radiological field surveys, per the sitewide ambient monitoring program	NA	Unit did not operate during the reporting period.
W-TRUDECON-002	1244	Radiological field surveys, per the sitewide ambient monitoring program	NA	Unit did not operate during the reporting period.
Decon Trailer 200-East (Intermittent. Powered Exhaust)	1289	Radiological field surveys and near field monitoring	NA	Unit did not operate during the reporting period.

**Table 3. Status of Required Monitoring. (15 Sheets)**

<b>Emission Point (Common Name)</b>	<b>EU ID<sup>a</sup></b>	<b>Required Monitoring</b>	<b>Monitoring Completed? (Yes, No, NA)</b>	<b>Comment</b>
Decon Trailer 200- West (Intermittent Powered Exhaust)	1290	Radiological field surveys and near field monitoring	NA	Unit did not operate during the reporting period.
Decon Trailer 200-East (Collection Tank Vent)	1291	Radiological field surveys and near field monitoring	NA	Unit did not operate during the reporting period.
Decon Trailer 200- West (Collection Tank Vent)	1292	Radiological field surveys and near field monitoring	NA	Unit did not operate during the reporting period.
W-296P107-001 (296-P-107)	1293	Record sample, Continuous	NA	Unit did not operate during the reporting period.
P-242A-003 (296-A-21A)	1294	Record Sample, 1-week sample/4 times per year	Yes	
W-PES-001 (Portable Enclosure System)	1322	Destructive Examination of filters, once per year minimum	NA	Unit did not operate during the reporting period.
296-P-53 (Vapor Extraction System)	1326	Smear survey, 1 per month during operation	NA	Unit did not operate during the reporting period.
296-P-52 (Next Generation Retrieval- Active)	1327	Destructive examination of filters, 1 per month anytime it is operated	NA	Unit did not operate during the reporting period.
P-296A048-001 (296-A-48)	1328	Record sample, Continuous	Yes	
P-296A049-001 (296-A-49)	1329	Record sample, Continuous	Yes	
P-296S26-001 (296-S-26)	1335	Record sample, Continuous	NA	Unit not installed.
P-296S27-001 (296-S-27)	1342	Record sample, Continuous	NA	Unit not installed.
W-MARS-003 (W-MARS-003)	1371	Smear survey, every 365 days	NA	Unit closed 01/29/19 per AIR 19-119.
W-MARS-004 (W-MARS-004)	1384	Smear survey, every 365 days	NA	Unit closed 01/29/19 per AIR 19-119.
A-AZ301 Tanker-001	1406	Smear survey, every 365 days	Yes	
P-296P035-001 (High Purge Gas Core Sampling)	1413	Nondestructive assay, sample of the filter, or other approved method, annual if used during the year	NA	Unit did not operate in high purge gas mode during the reporting period.
WESF Hot Cells F and G and Containment Enclosures	1426	When used, daily smears and fixed head sampler	NA	Unit was not active during this time period.
WESF Hot Cell A	1427	When used, daily smears and fixed head sampler	NA	Unit was not active during this time period.

**Table 3. Status of Required Monitoring. (15 Sheets)**

<b>Emission Point (Common Name)</b>	<b>EU ID<sup>a</sup></b>	<b>Required Monitoring</b>	<b>Monitoring Completed? (Yes, No, NA)</b>	<b>Comment</b>
WESF Hot Cell B	1428	When used, daily smears and fixed head sampler	NA	Unit was not active during this time period.
WESF Hot Cell C	1429	When used, daily smears and fixed head sampler	NA	Unit was not active during this time period.
WESF Hot Cell D and E	1430	When used, daily smears and fixed head sampler	NA	Unit was not active during this time period.
WESF K3N and containment enclosures	1431	When used, daily smears and fixed head sampler	NA	Unit was not active during this time period.
WESF K3 filter pit containment enclosures	1432	When used, daily smears and fixed head sampler	NA	Unit was not active during this time period.
Tank Farm Guzzler <sup>b</sup>	1449	Radiation surveys, NDA testing HEPAs when replaced, and annually screening the HEPA filtration system	NA	Not used during the reporting period.
P-202A Tunnel#1-001 (202A Tunnel #1-001)	1471	Daily smears and final composite of filter samples for analysis	NA	Point source license was closed and established as a fugitive source (EU 1015), via letter 18-ESQ-0040.
P-202A Tunnel#1-002 (202A Tunnel #1-002)	1472	Daily smears and final composite of filter samples for analysis	NA	Point source license was closed and established as a fugitive source (EU 1015), via letter 18-ESQ-0040.
P-202A Tunnel#1-003 (202A Tunnel #1-003)	1473	Daily smears and final composite of filter samples for analysis	NA	Point source license was closed and established as a fugitive source (EU 1015), via letter 18-ESQ-0040.
P-202A Tunnel#1-004 (202A Tunnel #1-004)	1474	Daily smears and final composite of filter samples for analysis	NA	Point source license was closed and established as a fugitive source (EU 1015), via letter 18-ESQ-0040.
P-202A Tunnel#1-005 (202A Tunnel #1-005)	1475	Daily smears and final composite of filter samples for analysis	NA	Point source license was closed and established as a fugitive source (EU 1015), via letter 18-ESQ-0040.
P-202A Tunnel#1-006 (202A Tunnel #1-006)	1476	Daily smears and final composite of filter samples for analysis	NA	Point source license was closed and established as a fugitive source (EU 1015), via letter 18-ESQ-0040.
P-202A Tunnel#1-007 (202A Tunnel #1-007)	1477	Daily smears and final composite of filter samples for analysis	NA	Point source license was closed and established as a fugitive source (EU 1015), via letter 18-ESQ-0040.
P-202A Tunnel#1-008 (202A Tunnel #1-008)	1478	Daily smears and final composite of filter samples for analysis	NA	Point source license was closed and established as a fugitive source (EU 1015), via letter 18-ESQ-0040.
P-202A Tunnel#1-009	1479	Daily smears and final composite of filter samples for analysis	NA	Point source license was closed and established as a

**Table 3. Status of Required Monitoring. (15 Sheets)**

<b>Emission Point (Common Name)</b>	<b>EU ID<sup>a</sup></b>	<b>Required Monitoring</b>	<b>Monitoring Completed? (Yes, No, NA)</b>	<b>Comment</b>
(202A Tunnel #1-009)				fugitive source (EU 1015), via letter 18-ESQ-0040.
P-202A Tunnel#1-010 (202A Tunnel #1-010)	1480	Daily smears and final composite of filter samples for analysis	NA	Point source license was closed and established as a fugitive source (EU 1015), via letter 18-ESQ-0040.

<sup>a</sup> Emission Unit Identification Number

<sup>b</sup> Guzzler® is a register trademark of Guzzler Manufacturing, Inc., Streator, Illinois

ALARACT	= As Low As Reasonably Achievable Control Technology
CERCLA	= <i>Comprehensive Environmental Response, Compensation, and Liability Act</i>
CY	= calendar year
DOE	= U.S. Department of Energy
EU	= Emission Unit
FFTF	= Fast Flux Test Facility
HEPA	= high-efficiency particulate air
LERF	= Liquid Effluent Retention Facility
ISC	= interim storage container
ID	= identification
ISO	= International Standards Organization
MARS	= Mobile Arm Retrieval System
NA	= not applicable
NAC	= Nuclear Assurance Corporation
NDA	= nondestructive assay
NOC	= notice of construction
NESHAP	= National Emission Standards for Hazardous Air Pollutants
PM	= Preventive Maintenance
PTRAEU	= portable temporary radioactive air emission unit
PUREX	= Plutonium Uranium and Reduction Extraction Facility
WDOH	= Washington State Department of Health
WESF	= Waste Encapsulation and Storage Facility
WRAP	= Waste Receiving and Processing Facility

## 6.0 REGULATORY APPROVALS ISSUED DURING THE REPORTING PERIOD

Table 4 lists the regulatory approvals issued by WDOH and Ecology during this reporting period. The information contained in Table 4 is an AOP permit only requirement not mandated in WAC 173-401, “Operating Permit Regulation.”

**Table 4. Regulatory Approvals Issued from July 1, 2020, through December 31, 2020. (3 Sheets)**

<b>Letter</b>	<b>Issue Date</b>	<b>Agency</b>	<b>Title/Subject</b>
AIR 20-701	07-02-20	WDOH	Approval of 296-A-44 Operation
AIR 20-702	07-02-20	WDOH	Approval of 296-A-45 Operation
AIR 20-703	07-02-20	WDOH	Approval of 296-A-46 Operation
AIR 20-704	07-02-20	WDOH	Approval of 296-A-47 Operation

**Table 4. Regulatory Approvals Issued from July 1, 2020, through December 31, 2020. (3 Sheets)**

Letter	Issue Date	Agency	Title/Subject
AIR 20-705	07-02-20	WDOH	Approval of 296-A-48 Operation
AIR 20-706	07-02-20	WDOH	Approval of 296-A-49 Operation
AIR 20-707	07-02-20	WDOH	Approval of 296-S-26 Operation
AIR 20-708	07-02-20	WDOH	Approval of 296-S-27 Operation
AIR 20-709	07-02-20	WDOH	Approval of 296-A-42 Exhauster Operation
AIR 20-710	07-17-20	WDOH	Approval of 296-A-18 Operation
AIR 20-711	07-02-20	WDOH	Approval of 296-A-19 Annulus Exhauster Operation
AIR 20-712	07-02-20	WDOH	Approval of 296-A-20 AZ Tank Farm Annulus Exhauster Operation
AIR 20-721	07-31-20	WDOH	Approval of NOC 1607 for Liquid Effluent Retention Facility (LERF) Basin #42 Operation (EU 148)
AIR 20-722	07-31-20	WDOH	Approval of NOC 1608 for Liquid Effluent Retention Facility (LERF) Basin #43 Operation
AIR 20-723	07-31-20	WDOH	Approval of NOC 1609 for Liquid Effluent Retention Facility (LERF) Basin #44 Operation (EU 146)
AIR 20-724	07-31-20	WDOH	Approval of NOC 1610 for 296-A-22 Operation, 242-A Evaporator (EU 142)
AIR 20-725	07-31-20	WDOH	Approval of NOC 1611 for 296-S-21 Operation, 222-S Laboratory (EU 254)
AIR 20-726	07-31-20	WDOH	Approval of NOC 1612 for 296-E-1 Operation, Effluent Treatment Facility (ETF) (EU 301)
AIR 20-727	07-31-20	WDOH	Approval of NOC 1613 for Decon Trailer 200 East (Int. Powered Exhaust) Operation (EU 1289)
AIR 20-728	07-31-20	WDOH	Approval of NOC 1614 for Decon Trailer 200 East (Collection Tank Vent) Operation (EU 1291)
AIR 20-729	07-31-20	WDOH	Approval of NOC 1615 for Decon Trailer 200 West (Int. Powered Exhaust) Operation (EU 1290)
AIR 20-730	07-31-20	WDOH	Approval of NOC 1616 for Decon Trailer 200 West (Collection Tank Vent) Operation (EU 1292)
AIR 20-731	07-31-20	WDOH	Approval of NOC 1617 for 296-A-21A Operation, 242-A Evaporator Building K-1 Exhauster (EU 1294)
AIR 20-732	07-31-20	WDOH	Approval of NOC 1618 for Core Sampling System in High Purge Gas Mode Operation (EU 1413)
AIR 20-733	07-31-20	WDOH	Approval for NOC 1619 for Tank Farm Non-Point Source and Fugitive Operation (EU 1418)

**Table 4. Regulatory Approvals Issued from July 1, 2020, through December 31, 2020. (3 Sheets)**

Letter	Issue Date	Agency	Title/Subject
AIR 20-734	07-31-20	WDOH	Approval of NOC 1620 for Non-Point Source and Fugitive Operations at Liquid Effluent Retention Facility (LERF) and Effluent Treatment Facility (ETF) (EU 1425)
AIR 20-735	07-31-20	WDOH	Approval of NOC 1621 for Tank Farm Guzzler Operation (EU 1449)
AIR 20-1108	11-20-20	WDOH	Notice of Transition of the Reduction-Oxidation (REDOX) Facility (EU 332)

**7.0 ADDITIONAL INFORMATION REQUIRING SUBMITTAL****Table 5. PSD-02-01 Amendment 3 Semiannual Reporting. (2 Sheets)**

Permit Condition	Requirement	Compliance Method	Compliance Demonstration		
2	Each diesel fire pump, Type 1 emergency generator, and steam plant boiler shall be fired by ultra-low sulfur diesel fuel with a maximum sulfur content of 0.0015% by weight.	Compliance shall be monitored by including a written statement in each semiannual report of the type of fuel purchased.	Diesel fire pump, Type 1 emergency diesel generator, and steam generating boiler operation were fired solely on fuel with a maximum sulfur content of 0.0015 percent by weight.		
8	The operation of the steam generating boilers shall not exceed an annual aggregated fuel consumption limit of 13,400,000 gallons per year summed daily for the previous 365 day.	Compliance shall be monitored by including a written statement in each semiannual report of the total fuel consumption over the previous 12 months.	Engine	6-Month Reporting Period	Sum of Previous 12 Months
			Steam Generating Boilers	174,103 gallons	259,870 gallons
11	The operation of the Type 1 emergency diesel generator shall not exceed 164 hours per year when averaged over 12 consecutive months, calculated once per month.	Compliance shall be monitored by including a written statement in each semiannual report of the hours the Type 1 emergency diesel generator operated in each of the 6 months covered by the report and the summation of hours operated over the previous 12 months.	Engine	6-Month Reporting Period	Sum of Previous 12 Months
			Type 1 Emergency Diesel Generator	0 hours	1 hour

**Table 5. PSD-02-01 Amendment 3 Semiannual Reporting. (2 Sheets)**

Permit Condition	Requirement	Compliance Method	Compliance Demonstration		
			Pump #	6-Month Reporting Period	Sum of Previous 12 Months
15	The operation of each diesel fire pump shall not exceed 230 hours per year averaged over 12 consecutive months, calculated once per month.	Compliance shall be monitored by including a written statement in each semiannual report of the hours the diesel fire pumps operated in each of the 6 months covered by the report and the summation of hours operated over the previous 12 months.			
			A	15.0 hours	83.9 hours
			B	72.2 hours	138.8 hours
17.3 v)	Total NO <sub>x</sub> emissions for the Type 1 emergency diesel generator.	Calculated emissions in each semiannual report.	Engine	6-Month Reporting Period	Sum of Previous 12 Months
			Type 1 Emergency Diesel Generator	0 tons	0.03 tons
17.3 vi)	Total PM <sub>10</sub> emissions for the Type 1 emergency diesel generator.	Calculated emissions in each semiannual report.	Engine	6-Month Reporting Period	Sum of Previous 12 Months
			Type 1 Emergency Diesel Generator	0 tons	0 tons
17.3 v)	Total NO <sub>x</sub> emissions for the steamplant boilers .	Calculated emissions in each semiannual report.	Engine	6-Month Reporting Period	Sum of Previous 12 Months
			Steam Plant Boilers	1.1 tons	1.64 tons
17.3 vi)	Total PM <sub>10</sub> emissions for the steamplant boilers .	Calculated emissions in each semiannual report.	Engine	6-Month Reporting Period	Sum of Previous 12 Months
			Steam Plant Boilers	0.24 tons	0.36 tons

## 8.0 REFERENCES

- 00-05-006, *Hanford Site Title V Air Operating Permit 00-05-006 Renewal 3*, effective August 1, 2019, Washington State Department of Ecology, Washington State Department of Health, and Benton Clean Air Agency, Richland, Washington.
- 18-ESQ-0040, 2018, “Transmittal of License/As Low As Reasonably Achievable Control Technology (ALARACT) Revision Request and Notification of Off-Permit Change, Permit Number 00-05-006, Renewal 2, for the Closure of the Plutonium Uranium Extraction (PUREX) Plant Tunnel 1 Stabilization Licensed Radioactive Air Emission Units (EU) 1471 Through 1480,” external letter to J. Martell, Washington State Department of Health, K. McFadden, U.S. Environmental Protection Agency, and A. K. Smith, Washington State Department of Ecology, from D. Shoop, U.S. Department of Energy, Richland Operations Office, Richland, Washington, March 9.
- 19-ESQ-0086, 2019, “Transition of the Reduction-Oxidation Facility (REDOX) and Stack P-291S001-001 to Regulation under the Comprehensive Environmental Response, Compensation and Liability Act Of 1980 (CERCLA),” external letter to J. Martell, Washington State Department of Health, A. K. Smith, Washington State Department of Ecology, and K. Viswanathan, U.S. Environmental Protection Agency, from B. Vance, U.S. Department of Energy, Richland Operations Office, Richland, Washington, March 9.
- AIR 17-115, 2017, “Final Approval of Notice of Construction (NOC) 1033 (EU 315),” external letter to D. Shoop, U.S. Department of Energy, Richland Operations Office, from J. Martell, Washington State Department of Health, Richland, Washington, January 24.
- AIR 18-401, 2018, “Transition of Emission Unit (EU) 163, 296-S-18 Exhauster, to Table 2-1,” external letter to B. Vance, U.S. Department of Energy, Office of River Protection, from J. Martell, Washington State Department of Health, Richland, Washington, April 11.
- AIR 19-119, 2019, “Closure of Emission Units (EUs) 1371 and 1384 for W-MARS-0003 and W-MARS-004,” external letter to B. Vance, U.S. Department of Energy, Office of River Protection, from J. Martell, Washington State Department of Health, Richland, Washington, January 29.
- AIR 20-303, 2020, “Approval of 296-S-23 Operation (EU 438, NOC 1570),” external letter to B. Vance, U.S. Department of Energy, Office of River Protection, from J. Martell, Washington State Department of Health, Richland, Washington, March 5.
- AIR 20-701, 2020, “Approval of 296-A-44 Operation (EU 735, NOC 1593),” external letter to B. Vance, U.S. Department of Energy, Office of River Protection, from J. Martell, Washington State Department of Health, Richland, Washington, July 2.
- AIR 20-702, 2020, “Approval of 296-A-45 Operation (EU 736, NOC 1594),” external letter to B. Vance, U.S. Department of Energy, Office of River Protection, from J. Martell, Washington State Department of Health, Richland, Washington, July 2.
- AIR 20-703, 2020, “Approval of 296-A-46 Operation (EU 855, NOC 1595),” external letter to B. Vance, U.S. Department of Energy, Office of River Protection, from J. Martell, Washington State Department of Health, Richland, Washington, July 2.

- AIR 20-704, 2020, “Approval of 296-A-47 Operation (EU 856, NOC 1596),” external letter to B. Vance, U.S. Department of Energy, Office of River Protection, from J. Martell, Washington State Department of Health, Richland, Washington, July 2.
- AIR 20-705, 2020, “Approval of 296-A-48 Operation (EU 1328, NOC 1597),” external letter to B. Vance, U.S. Department of Energy, Office of River Protection, from J. Martell, Washington State Department of Health, Richland, Washington, July 2.
- AIR 20-706, 2020, “Approval of 296-A-49 Operation (EU 1329, NOC 1598),” external letter to B. Vance, U.S. Department of Energy, Office of River Protection, from J. Martell, Washington State Department of Health, Richland, Washington, July 2.
- AIR 20-707, 2020, “Approval of 296-S-26 Operation (EU 1335, NOC 1599),” external letter to B. Vance, U.S. Department of Energy, Office of River Protection, from J. Martell, Washington State Department of Health, Richland, Washington, July 2.
- AIR 20-708, 2020, “Approval of 296-S-27 Operation (EU 1342, NOC 1600),” external letter to B. Vance, U.S. Department of Energy, Office of River Protection, from J. Martell, Washington State Department of Health, Richland, Washington, July 2.
- AIR 20-709, 2020, “Approval of 296-A-42 Exhauster Operation (EU 93, NOC 1601),” external letter to B. Vance, U.S. Department of Energy, Office of River Protection, from J. Martell, Washington State Department of Health, Richland, Washington, July 2.
- AIR 20-710, 2020, “Approval of 296-A-18 Operation (EU 217, NOC 1602),” external letter to B. Vance, U.S. Department of Energy, Office of River Protection, from J. Martell, Washington State Department of Health, Richland, Washington, July 17.
- AIR 20-711, 2020, “Approval of 296-A-19 Annulus Exhauster Operation (EU 218, NOC 1603),” external letter to B. Vance, U.S. Department of Energy, Office of River Protection, from J. Martell, Washington State Department of Health, Richland, Washington, July 2.
- AIR 20-712, 2020, “Approval of 296-A-20 AZ Tank Farm Annulus Exhauster Operation (EU 174, NOC 1604),” external letter to B. Vance, U.S. Department of Energy, Office of River Protection, from J. Martell, Washington State Department of Health, Richland, Washington, July 2.
- AIR 20-721, 2020, “Approval of NOC 1607 for Liquid Effluent Retention Facility (LERF) Basin #42 Operation (EU 148, NOC 1607),” external letter to B. Vance, U.S. Department of Energy, Office of River Protection, from J. Martell, Washington State Department of Health, Richland, Washington, July 31.
- AIR 20-722, 2020, “Approval of NOC 1608 for Liquid Effluent Retention Facility (LERF) Basin #43 Operation (EU 147, NOC 1608),” external letter to B. Vance, U.S. Department of Energy, Office of River Protection, from J. Martell, Washington State Department of Health, Richland, Washington, July 31.
- AIR 20-723, 2020, “Approval of NOC 1609 for Liquid Effluent Retention Facility (LERF) Basin #44 Operation (EU 146, NOC 1609),” external letter to B. Vance, U.S. Department of Energy, Office of River Protection, from J. Martell, Washington State Department of Health, Richland, Washington, July 31.

- AIR 20-724, 2020, “Approval of NOC 1610 for 296-A-22 Operation, 242-A Evaporator (EU 142, NOC 1610),” external letter to B. Vance, U.S. Department of Energy, Office of River Protection, from J. Martell, Washington State Department of Health, Richland, Washington, July 31.
- AIR 20-725, 2020, “Approval of NOC 1611 for 296-S-21 Operation, 222-S Laboratory (EU 254, NOC 1611),” external letter to B. Vance, U.S. Department of Energy, Office of River Protection, from J. Martell, Washington State Department of Health, Richland, Washington, July 31.
- AIR 20-726, 2020, “Approval of NOC 1612 for 296-E-1 Operation, Effluent Treatment Facility (ETF) (EU 301, NOC 1612),” external letter to B. Vance, U.S. Department of Energy, Office of River Protection, from J. Martell, Washington State Department of Health, Richland, Washington, July 31.
- AIR 20-727, 2020, “Approval of NOC 1613 for Decon Trailer 200 East (Int. Powered Exhaust) Operation (EU 1289, NOC 1613),” external letter to B. Vance, U.S. Department of Energy, Office of River Protection, from J. Martell, Washington State Department of Health, Richland, Washington, July 31.
- AIR 20-728, 2020, “Approval of NOC 1614 for Decon Trailer 200 East (Collection Tank Vent) Operation (EU 1291, NOC 1614),” external letter to B. Vance, U.S. Department of Energy, Office of River Protection, from J. Martell, Washington State Department of Health, Richland, Washington, July 31.
- AIR 20-729, 2020, “Approval of NOC 1615 for Decon Trailer 200 West (Int. Powered Exhaust) Operation (EU 1290, NOC 1615),” external letter to B. Vance, U.S. Department of Energy, Office of River Protection, from J. Martell, Washington State Department of Health, Richland, Washington, July 31.
- AIR 20-730, 2020, “Approval of NOC 1616 for Decon Trailer 200 West (Collection Tank Vent) Operation (EU 1292, NOC 1616),” external letter to B. Vance, U.S. Department of Energy, Office of River Protection, from J. Martell, Washington State Department of Health, Richland, Washington, July 31.
- AIR 20-731, 2020, “Approval of NOC 1617 for 296-A-21A Operation, 242-A Evaporator Building K-1 Exhauster (EU 1294, NOC 1617),” external letter to B. Vance, U.S. Department of Energy, Office of River Protection, from J. Martell, Washington State Department of Health, Richland, Washington, July 31.
- AIR 20-732, 2020, “Approval of NOC 1618 for Core Sampling System in High Purge Gas Mode Operation (EU 1413, NOC 1618),” external letter to B. Vance, U.S. Department of Energy, Office of River Protection, from J. Martell, Washington State Department of Health, Richland, Washington, July 31.
- AIR 20-733, 2020, “Approval for NOC 1619 for Tank Farm Non-Point Source and Fugitive Operation (EU 1418, NOC 1619),” external letter to B. Vance, U.S. Department of Energy, Office of River Protection, from J. Martell, Washington State Department of Health, Richland, Washington, July 31.
- AIR 20-734, 2020, “Approval of NOC 1620 for Non-Point Source and Fugitive Operations at Liquid Effluent Retention Facility (LERF) and Effluent Treatment Facility (ETF) (EU 1425, NOC 1620),” external letter to B. Vance, U.S. Department of Energy, Office of River Protection, from J. Martell, Washington State Department of Health, Richland, Washington, July 31.

AIR 20-735, 2020, “Approval of NOC 1621 for Tank Farm Guzzler Operation (EU 1449, NOC 1621),” external letter to B. Vance, U.S. Department of Energy, Office of River Protection, from J. Martell, Washington State Department of Health, Richland, Washington, July 31.

AIR 20-1108, 2020, “Notice of Transition of the Reduction-Oxidation (REDOX) Facility (EU 332, ALARACT 28.1),” external letter to B. Vance, U.S. Department of Energy, Richland Operations Office, from J. Martell, Washington State Department of Health, Richland, Washington, November 20.

*Comprehensive Environmental Response, Compensation, and Liability Act of 1980*, 42 USC 9601, et seq.

DOE/RL-2020-03, 2020, *Hanford Site Air Operating Permit Semiannual Report for the Period January 1, 2020, through June 30, 2020*, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

WAC 173-401, “Operating Permit Regulation,” *Washington Administrative Code*, Olympia, Washington.

WAC 246-247, “Radiation Protection-Air Emissions,” *Washington Administrative Code*, Olympia, Washington.

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