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**HANFORD AIR OPERATING PERMIT
PERMIT NUMBER 00-05-006
RENEWAL 3
ATTACHMENT 1**

**STATE OF WASHINGTON DEPARTMENT OF ECOLOGY (ECOLOGY)
NUCLEAR WASTE PROGRAM
3100 PORT OF BENTON BLVD.
RICHLAND, WASHINGTON 99354**

Effective Date: 08/01/2019
Expiration Date: 08/01/2024

Hanford Air Operating Permit
Permit No. 00-05-006
Renewal 3

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**HANFORD AIR OPERATING PERMIT
PERMIT NUMBER 00-05-006
RENEWAL 3
ATTACHMENT 1**

Number: 00-05-006 (Hanford AOP Renewal 3)

State of Washington Department of Ecology (Ecology)
Nuclear Waste Program
3100 Port of Benton Blvd.
Richland, Washington 99354

The permittee is authorized to operate the air emission units identified in this Air Operating Permit Number 00-05-006 and all insignificant emission units not specifically identified in this permit.

Effective Date: 08/01/2019
Expiration Date: 08/01/2024

Hanford Air Operating Permit
Permit No. 00-05-006
Renewal 3

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1 **1.0 EMISSION STANDARDS AND LIMITATIONS**

2 Emission standards and limitations for non-radioactive air pollutants are included in the following
 3 sections.

4 **1.1 General Requirements**

5 All emission units on the Hanford Site are covered by the general regulatory requirements, emission
 6 limits [refer to definition of emission units in WAC 173-401-200 (12)], or work practice standards in
 7 Table 1.1. The general standards in Table 1.1 are the applicable requirements, emission limits, or work
 8 practice standards unless replaced by another emission unit-specific requirement.

9

Table 1.1 General Standards for Maximum Emissions

Requirement citation (WAC or Order Citation)	Regulatory requirement, emission limit, or work practice standard	State-Only enforceable	Periodic monitoring	Periodic monitoring provisions	Test method¹
WAC 173-400-040(2)	20% Opacity. Prohibits visible emissions exceeding 20% opacity for more than 3 minutes in any 1 hour of an air contaminant from any emissions unit or within a reasonable distance of the emission unit except for scheduled soot blowing/grate cleaning or due to documented water.	N (Section 2.8)	Visible emission surveys	2.1	EPA Method 9 of 40 CFR 60, Appendix A.
WAC 173-400-040(3)	Fallout. Prohibits emissions of particulate matter from any source to be deposited beyond the facility boundaries in sufficient quantity to interfere unreasonably with the use and enjoyment of the property upon which the material was deposited.	Y	Record-keeping of complaint investigation.	2.2	

Table 1.1 General Standards for Maximum Emissions

Requirement citation (WAC or Order Citation)	Regulatory requirement, emission limit, or work practice standard	State-Only enforceable	Periodic monitoring	Periodic monitoring provisions	Test method¹
WAC 173-400-040(4)(a)	Fugitive emissions. The Permittee shall take reasonable precautions to prevent the release of air contaminants from any emissions unit engaging in materials handling, construction, demolition, or any other operation that is a source of fugitive emissions.	N	Pre-job planning to determine reasonable control measures ² .	2.3	
WAC 173-400-040(5)	Odor. Requires any facility causing an odor that unreasonably interferes with another person's use and enjoyment of their property to use recognized good practices and procedures to reduce odors to a reasonable minimum.	Y	Record-keeping of complaint investigations.	2.2	
WAC 173-400-040(6)	Emissions detrimental to persons or property. Prohibits emissions of any air contaminant from any source that is detrimental to the health, safety, or welfare of any person, or causes damage to property or business	N	Record-keeping of complaint investigation.	2.2	

Table 1.1 General Standards for Maximum Emissions

Requirement citation (WAC or Order Citation)	Regulatory requirement, emission limit, or work practice standard	State-Only enforceable	Periodic monitoring	Periodic monitoring provisions	Test method¹
WAC 173-400-040(7)	1,000 ppm SO ₂ @ 7% O ₂ on a dry basis. Prohibits emission of a gas containing sulfur dioxide from any emissions unit in excess of 1,000 ppm of a dry basis, corrected to 7% oxygen for combustion sources, and based on the average of any period of 60 consecutive minutes.	N (Section 2.9)	For fossil-fuel combustion units: Record-keeping or certification.	2.7	EPA Method 6 or 6C of 40 CFR 60, Appendix A.
WAC 173-400-040(8)	Concealment and masking. Prohibits the installation or use of any device or use of any means that conceals or masks an emission of an air contaminant that would otherwise violate any provision of WAC 173-400.	N	Record-keeping of complaint investigation.	2.2	
WAC 173-400-040(9)(a)	Fugitive dust. Requires reasonable precautions be taken to prevent fugitive dust from becoming airborne and to minimize dust generation.	N	Pre-job planning to determine reasonable control measures ² .	2.3	

¹ The test methods identified in this table are used as compliance verification tools. A frequency is not applicable unless specified in the table.

² These requirements do not apply to emissions that pass through a stack, chimney, vent, or other functionally equivalent opening.

1 **1.2 Insignificant Emission Units**

2 Insignificant emission units (IEUs) are listed in the Statement of Basis for this Attachment 1. All IEUs
3 shall maintain compliance with the general standards in Table 1.1.

4 All emission units not identified in Section 1.4 Discharge Points that are subject to 40 CFR 61, Subpart H
5 in Attachment 2, Health License, have been determined to represent insignificant sources of non-
6 radioactive regulated air pollutants. For these emission units no additional monitoring, reporting, or
7 recordkeeping is necessary. All requirements identified in Attachment 2, Health License, for this category
8 of emission unit continue to apply, as well as the requirement to annually certify compliance to any
9 applicable requirements identified in Attachment 2, Health License.

10 These insignificant emission units need not be listed individually in the annual compliance certification
11 unless there were observed, documented, or known instances of non-compliance during the certification
12 period. Ecology has authority to establish case-by-case monitoring requirements as set forth in WAC
13 173-400-105 or other provisions of law.

14 [WAC 173-401-530(2)(b) and (2)(c)]

15 **1.3 Emission Units and Activities subject to Monitoring, Reporting, Recordkeeping,
16 and Compliance Certification**

17 Those emission units on the Hanford Site listed in Section 1.4 Discharge Points are subject to the
18 requirement to annually certify compliance with the terms and conditions of this Permit.

19 **1.4 Discharge Points**

20 All emission units identified in this Section are subject to the general requirements listed in Table 1.1.
21 While the emission units identified in this Section are subject to the general requirements listed in Table
22 1.1, the general requirements are not considered an emission unit-specific term or condition and would
23 not require certification per Standard Term and Condition 5.10. More stringent conditions listed for
24 specific discharge points in this Section are used in lieu of the general requirements.

- 1 **1.4.1 Discharge Point: 234-5Z, Boiler 1, 2, and 3 (>5 mmBTU/hr – Fuel Oil)**
- 2 200W Area, 234-5Z Boiler Annex
- 3 Requirement Citation: 40 CFR 60, Subpart Dc (WAC 173-400-115), 97NM-138 (6/6/1997), and
- 4 97NM-138, Amendment 1 (11/19/2009)
- 5 **Condition Approval**
- 6 Condition: 20% opacity: Prohibits visible emissions exceeding 20% opacity for more than 3
- 7 minutes in any 1 hour of an air contaminant from any emissions unit or within a
- 8 reasonable distance of the emission unit except for scheduled soot blowing/grate
- 9 cleaning or due to documented water.
- 10 Periodic Monitoring: Section 2.1.
- 11 Test Method: EPA Method 9 of 40 CFR 60, Appendix A.
- 12 Test Frequency: Quarterly.
- 13 Required Records: As specified in Section 2.1, Tier 1.
- 14 State-Only: No.
- 15 Calculation Model: Not applicable.
- 16 **Condition Approval 6/6/1997**
- 17 Condition: Use of fuel per 97NM-138
- 18 Periodic Monitoring: Compliance will be demonstrated by use of fuel containing no greater
- 19 than 0.05 weight percent sulfur (500 parts per million by weight).
- 20 Test Method: Not applicable.
- 21 Test Frequency: Not applicable.
- 22 Required Records: Vendor certification for diesel fuel sulfur content for all purchases.
- 23 State-Only: No.
- 24 Calculation Model: Not applicable.
- 25 **Condition Approval 6/6/1997**
- 26 Condition: NO_x shall not exceed 0.150 lb/mm BTU and 115 ppm @ 3% O₂.
- 27 Periodic Monitoring: Section 2.6.
- 28 Frequency: Monthly.
- 29 Test Method: EPA Method 7E of 40 CFR 60, Appendix A.
- 30 Test Frequency: Not applicable.
- 31 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).
- 32 State-Only: No.
- 33 Calculation Model: Not applicable.

- 1 **Condition Approval 6/6/1997**
- 2 Condition: SO₂ shall not exceed 0.051 lb/mm BTU.
- 3 Periodic Monitoring: Section 2.6.
- 4 Frequency: Monthly.
- 5 Test Method: EPA Method 6 or 6C of 40 CFR 60, Appendix A.
- 6 Test Frequency: Not Applicable.
- 7 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).
- 8 State-Only: No.
- 9 Calculation Model: Not applicable.
- 10 **Condition Approval 6/6/1997**
- 11 Condition: CO shall not exceed 0.071 lb/mm BTU and 90 ppm @ 3% O₂.
- 12 Periodic Monitoring: Section 2.6.
- 13 Frequency: Monthly.
- 14 Test Method: EPA Method 10 of 40 CFR 60, Appendix A.
- 15 Test Frequency: Not Applicable.
- 16 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).
- 17 State-Only: No.
- 18 Calculation Model: Not applicable.
- 19 **Condition Approval 6/6/1997**
- 20 Condition: Particulate matter (PM₁₀) shall not exceed 0.011 lb/mm BTU.
- 21 Periodic Monitoring: Section 2.6.
- 22 Frequency: Monthly.
- 23 Test Method: EPA Method 5 of 40 CFR 60, Appendix A.
- 24 Test Frequency: Not Applicable.
- 25 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).
- 26 State-Only: No.
- 27 Calculation Model: Not applicable.
- 28 **Condition Approval 6/6/1997**
- 29 Condition: VOC shall not exceed 0.013 lb/mm BTU and 30 ppm @ 3% O₂.
- 30 Periodic Monitoring: Section 2.6.
- 31 Frequency: Monthly.
- 32 Test Method: EPA Method 25 or 25A of 40 CFR 60, Appendix A.
- 33 Test Frequency: Not Applicable.
- 34 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).
- 35 State-Only: No.
- 36 Calculation Model: Not applicable.

- 1 **Condition Approval 6/6/1997**
- 2 Condition: A. Inspect burner.
- 3 B. Inspect boiler exteriors.
- 4 C. Check combustion controls.
- 5 D. Check for leaks.
- 6 E. Check for unusual noise, vibrations, etc.
- 7 Periodic Monitoring: Not Applicable.
- 8 Frequency: Monthly.
- 9 Test Method: Not Applicable.
- 10 Test Frequency: Not Applicable.
- 11 Required Records: Records of inspections.
- 12 State-Only: Yes.
- 13 Calculation Model: Not applicable.
- 14 **Condition Approval 6/6/1997**
- 15 Condition: Visual check of combustion.
- 16 Periodic Monitoring: Not Applicable.
- 17 Frequency: Daily.
- 18 Test Method: Not Applicable.
- 19 Test Frequency: Not Applicable.
- 20 Required Records: Record available operating data.
- 21 State-Only: Yes.
- 22 Calculation Model: Not applicable.
- 23 **Condition Approval 6/6/1997**
- 24 Condition: A. Inspect air supply system and clean and repair if necessary.
- 25 B. Clean and check fuel supply system, replace filters if necessary.
- 26 Periodic Monitoring: Not Applicable.
- 27 Frequency: Semi-annually.
- 28 Test Method: Not Applicable.
- 29 Test Frequency: Not Applicable.
- 30 Required Records: Records of inspections and work performed.
- 31 State-Only: Yes.
- 32 Calculation Model: Not applicable.

- 1 **Condition Approval 6/6/1997**
- 2 Condition: A. Conduct boiler tune-up by manufacturer trained technician or other
3 qualified personnel.
- 4 B. Clean fireside surfaces and breaching.
- 5 C. Inspect refractory.
- 6 Periodic Monitoring: Not Applicable.
- 7 Frequency: Annually.
- 8 Test Method: Not Applicable.
- 9 Test Frequency: Not Applicable.
- 10 Required Records: See Section 2.5.
- 11 State-Only: Yes.
- 12 Calculation Model: Not applicable.

- 1 **1.4.2 Discharge Point: 242-A, Boiler 1, 2, and 3 (>5 mmBTU/hr – Fuel Oil)**
- 2 200E Area, 242-A Boiler Annex
- 3 Requirement Citation: 40 CFR 60, Subpart Dc (WAC 173-400-115), 97NM-138 (6/6/1997), and
- 4 97NM-138, Amendment 1 (11/19/2009)
- 5 **Condition Approval**
- 6 Condition: 20% opacity: Prohibits visible emissions exceeding 20% opacity for more than 3
- 7 minutes in any 1 hour of an air contaminant from any emissions unit or within a
- 8 reasonable distance of the emission unit except for scheduled soot blowing/grate
- 9 cleaning or due to documented water.
- 10 Periodic Monitoring: Section 2.1.
- 11 Test Method: EPA Method 9 of 40 CFR 60, Appendix A.
- 12 Test Frequency: Quarterly.
- 13 Required Records: As specified in Section 2.1, Tier 1.
- 14 State-Only: No.
- 15 Calculation Model: Not applicable.
- 16 **Condition Approval 6/6/1997**
- 17 Condition: Use of fuel per 97NM-138
- 18 Periodic Monitoring: Compliance will be demonstrated by use of fuel containing no greater
- 19 than 0.05 weight percent sulfur (500 parts per million by weight).
- 20 Test Method: Not applicable.
- 21 Test Frequency: Not applicable.
- 22 Required Records: Vendor certification for diesel fuel sulfur content for all purchases.
- 23 State-Only: No.
- 24 Calculation Model: Not applicable.
- 25 **Condition Approval 6/6/1997**
- 26 Condition: NO_x shall not exceed 0.150 lb/mm BTU and 115 ppm @ 3% O₂.
- 27 Periodic Monitoring: Section 2.6.
- 28 Frequency: Monthly.
- 29 Test Method: EPA Method 7E of 40 CFR 60, Appendix A.
- 30 Test Frequency: Not applicable.
- 31 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).
- 32 State-Only: No.
- 33 Calculation Model: Not applicable.

- 1 **Condition Approval 6/6/1997**
- 2 Condition: SO₂ shall not exceed 0.051 lb/mm BTU.
- 3 Periodic Monitoring: Section 2.6.
- 4 Frequency: Monthly.
- 5 Test Method: EPA Method 6 or 6C of 40 CFR 60, Appendix A.
- 6 Test Frequency: Not Applicable.
- 7 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).
- 8 State-Only: No.
- 9 Calculation Model: Not applicable.
- 10 **Condition Approval 6/6/1997**
- 11 Condition: CO shall not exceed 0.071 lb/mm BTU and 90 ppm @ 3% O₂.
- 12 Periodic Monitoring: Section 2.6.
- 13 Frequency: Monthly.
- 14 Test Method: EPA Method 10 of 40 CFR 60, Appendix A.
- 15 Test Frequency: Not Applicable.
- 16 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).
- 17 State-Only: No.
- 18 Calculation Model: Not applicable.
- 19 **Condition Approval 6/6/1997**
- 20 Condition: Particulate matter (PM₁₀) shall not exceed 0.011 lb/mm BTU.
- 21 Periodic Monitoring: Section 2.6.
- 22 Frequency: Monthly.
- 23 Test Method: EPA Method 5 of 40 CFR 60, Appendix A.
- 24 Test Frequency: Not Applicable.
- 25 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).
- 26 State-Only: No.
- 27 Calculation Model: Not applicable.
- 28 **Condition Approval 6/6/1997**
- 29 Condition: VOC shall not exceed 0.013 lb/mm BTU and 30 ppm @ 3% O₂.
- 30 Periodic Monitoring: Section 2.6.
- 31 Frequency: Monthly.
- 32 Test Method: EPA Method 25 or 25A of 40 CFR 60, Appendix A.
- 33 Test Frequency: Not Applicable.
- 34 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).
- 35 State-Only: No.
- 36 Calculation Model: Not applicable.

- 1 **Condition Approval 6/6/1997**
- 2 Condition: A. Inspect burner.
- 3 B. Inspect boiler exteriors.
- 4 C. Check combustion controls.
- 5 D. Check for leaks.
- 6 E. Check for unusual noise, vibrations, etc.
- 7 Periodic Monitoring: Not Applicable.
- 8 Frequency: Monthly.
- 9 Test Method: Not Applicable.
- 10 Test Frequency: Not Applicable.
- 11 Required Records: Records of inspections.
- 12 State-Only: Yes.
- 13 Calculation Model: Not applicable.
- 14 **Condition Approval 6/6/1997**
- 15 Condition: Visual check of combustion.
- 16 Periodic Monitoring: Not Applicable.
- 17 Frequency: Daily.
- 18 Test Method: Not Applicable.
- 19 Test Frequency: Not Applicable.
- 20 Required Records: Record available operating data.
- 21 State-Only: Yes.
- 22 Calculation Model: Not applicable.
- 23 **Condition Approval 6/6/1997**
- 24 Condition: A. Inspect air supply system and clean and repair if necessary.
- 25 B. Clean and check fuel supply system, replace filters if necessary.
- 26 Periodic Monitoring: Not Applicable.
- 27 Frequency: Semi-annually.
- 28 Test Method: Not Applicable.
- 29 Test Frequency: Not Applicable.
- 30 Required Records: Records of inspections and work performed.
- 31 State-Only: Yes.
- 32 Calculation Model: Not applicable.

- 1 **Condition Approval 6/6/1997**
- 2 Condition: A. Conduct boiler tune-up by manufacturer trained technician or other
3 qualified personnel.
- 4 B. Clean fireside surfaces and breaching.
- 5 C. Inspect refractory.
- 6 Periodic Monitoring: Not Applicable.
- 7 Frequency: Annually.
- 8 Test Method: Not Applicable.
- 9 Test Frequency: Not Applicable.
- 10 Required Records: See Section 2.5.
- 11 State-Only: Yes.
- 12 Calculation Model: Not applicable.

1 **1.4.3 Discharge Point: 318 Boiler (<5 mmBTU/hr – Natural Gas)**

2 300 Area, 318 Boiler Annex

3 Requirement Citation: 40 CFR 60, Subpart Dc (WAC 173-400-115), 97NM-138 (6/6/1997), and
4 97NM-138, Amendment 1 (11/19/2009)

5 **Condition Approval**

6 Condition: 20% opacity: Prohibits visible emissions exceeding 20% opacity for more than 3
7 minutes in any 1 hour of an air contaminant from any emissions unit or within a
8 reasonable distance of the emission unit except for scheduled soot blowing/grate
9 cleaning or due to documented water.

10 Periodic Monitoring: Section 2.1.

11 Test Method: EPA Method 9 of 40 CFR 60, Appendix A.

12 Test Frequency: Quarterly.

13 Required Records: As specified in Section 2.1, Tier 2.

14 State-Only: No.

15 Calculation Model: Not applicable.

16 **Condition Approval 6/6/1997**

17 Condition: Visual check of combustion.

18 Periodic Monitoring: Not Applicable.

19 Frequency: Daily.

20 Test Method: Not Applicable.

21 Test Frequency: Not Applicable.

22 Required Records: Record available operating data.

23 State-Only: Yes.

24 Calculation Model: Not applicable.

25 **Condition Approval 6/6/1997**

26 Condition: A. Inspect air supply system and clean and repair if necessary.

27 B. Clean and check fuel supply system, replace filters if necessary.

28 Periodic Monitoring: Not Applicable.

29 Frequency: Semi-annually.

30 Test Method: Not Applicable.

31 Test Frequency: Not Applicable.

32 Required Records: Records of inspections and work performed.

33 State-Only: Yes.

34 Calculation Model: Not applicable.

- 1 **Condition Approval 6/6/1997**
- 2 Condition: A. Inspect burner.
- 3 B. Inspect boiler exteriors.
- 4 C. Check combustion controls.
- 5 D. Check for leaks.
- 6 E. Check for unusual noise, vibrations, etc...
- 7 Periodic Monitoring: Not Applicable.
- 8 Frequency: Monthly.
- 9 Test Method: Not Applicable.
- 10 Test Frequency: Not Applicable.
- 11 Required Records: Records of inspections.
- 12 State-Only: Yes.
- 13 Calculation Model: Not applicable.
- 14 **Condition Approval 6/6/1997**
- 15 Condition: A. Conduct boiler tune-up by manufacturer trained technician or other
- 16 qualified personnel.
- 17 B. Inspect refractory.
- 18 C. Clean fireside surfaces and breaching.
- 19 Periodic Monitoring: Not Applicable.
- 20 Frequency: Every two years.
- 21 Test Method: Not Applicable.
- 22 Test Frequency: Not Applicable.
- 23 Required Records: Records of inspections.
- 24 State-Only: Yes.
- 25 Calculation Model: Not applicable.

Effective Date: 08/01/2019
Expiration Date: 08/01/2024

Hanford Air Operating Permit
Permit No. 00-05-006
Renewal 3

1 **1.4.4 Reserved**

1 **1.4.5 Discharge Point: 3709A Boiler (<5 mmBTU/hr – Natural Gas)**

2 300 Area, 3709A Boiler Annex

3 Requirement Citation: 40 CFR 60, Subpart Dc (WAC 173-400-115), 97NM-138 (6/6/1997), and
4 97NM-138, Amendment 1 (11/19/2009)

5 **Condition Approval**

6 Condition: 20% opacity: Prohibits visible emissions exceeding 20% opacity for more than 3
7 minutes in any 1 hour of an air contaminant from any emissions unit or within a
8 reasonable distance of the emission unit except for scheduled soot blowing/grate
9 cleaning or due to documented water.

10 Periodic Monitoring: Section 2.1.

11 Test Method: EPA Method 9 of 40 CFR 60, Appendix A.

12 Test Frequency: Quarterly.

13 Required Records: As specified in Section 2.1, Tier 2.

14 State-Only: No.

15 Calculation Model: Not applicable.

16 **Condition Approval 6/6/1997**

- 17 Condition: A. Inspect burner.
18 B. Inspect boiler exteriors.
19 C. Check combustion controls.
20 D. Check for leaks.
21 E. Check for unusual noise, vibrations, etc...

22 Periodic Monitoring: Not Applicable.

23 Frequency: Monthly.

24 Test Method: Not Applicable.

25 Test Frequency: Not Applicable.

26 Required Records: Records of inspections.

27 State-Only: Yes.

28 Calculation Model: Not applicable.

29 **Condition Approval 6/6/1997**

30 Condition: Visual check of combustion.

31 Periodic Monitoring: Not Applicable.

32 Frequency: Daily.

33 Test Method: Not Applicable.

34 Test Frequency: Not Applicable.

35 Required Records: Record available operating data.

36 State-Only: Yes.

37 Calculation Model: Not applicable.

- 1 **Condition Approval 6/6/1997**
- 2 Condition: A. Inspect air supply system and clean and repair if necessary.
- 3 B. Clean and check fuel supply system, replace filters if necessary.
- 4 Periodic Monitoring: Not Applicable.
- 5 Frequency: Semi-annually.
- 6 Test Method: Not Applicable.
- 7 Test Frequency: Not Applicable.
- 8 Required Records: Records of inspections and work performed.
- 9 State-Only: Yes.
- 10 Calculation Model: Not applicable.
- 11 **Condition Approval 6/6/1997**
- 12 Condition: A. Conduct boiler tune-up by manufacturer trained technician or other
- 13 qualified personnel.
- 14 B. Inspect refractory.
- 15 C. Clean fireside surfaces and breaching.
- 16 Periodic Monitoring: Not Applicable.
- 17 Frequency: Every two years.
- 18 Test Method: Not Applicable.
- 19 Test Frequency: Not Applicable.
- 20 Required Records: See Section 2.5.
- 21 State-Only: Yes.
- 22 Calculation Model: Not applicable.

1 **1.4.6 Discharge Point: 324 Boiler 1 and Boiler 2(>5 mmBTU/hr – Natural Gas)**

2 300 Area, 324 Boiler Annex

3 Requirement Citation: 40 CFR 60, Subpart Dc (WAC 173-400-115), 97NM-138 (6/6/1997), and
4 97NM-138, Amendment 1 (11/19/2009)

5 **Condition Approval**

6 Condition: 20% opacity: Prohibits visible emissions exceeding 20% opacity for more than 3
7 minutes in any 1 hour of an air contaminant from any emissions unit or within a
8 reasonable distance of the emission unit except for scheduled soot blowing/grate
9 cleaning or due to documented water.

10 Periodic Monitoring: Section 2.1.

11 Test Method: EPA Method 9 of 40 CFR 60, Appendix A.

12 Test Frequency: Quarterly.

13 Required Records: As specified in Section 2.1, Tier 2.

14 State-Only: No.

15 Calculation Model: Not applicable.

16 **Condition Approval 6/6/1997**

17 Condition: SO₂ shall not exceed 0.0006 lb/mm BTU.

18 Periodic Monitoring: Section 2.6.

19 Frequency: Monthly.

20 Test Method: EPA Method 6 or 6C of 40 CFR 60, Appendix A.

21 Test Frequency: Not Applicable.

22 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).

23 State-Only: No.

24 Calculation Model: Not applicable.

25 **Condition Approval 6/6/1997**

26 Condition: NO_x shall not exceed 0.037 lb/mm BTU and 30 ppm @ 3% O₂.

27 Periodic Monitoring: Section 2.6.

28 Frequency: Monthly.

29 Test Method: EPA Method 7E of 40 CFR 60, Appendix A.

30 Test Frequency: Not applicable.

31 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).

32 State-Only: No.

33 Calculation Model: Not applicable.

- 1 **Condition Approval 6/6/1997**
- 2 Condition: CO shall not exceed 0.225 lb/mm BTU and 300 ppm @ 3% O₂.
- 3 Periodic Monitoring: Section 2.6.
- 4 Frequency: Monthly.
- 5 Test Method: EPA Method 10 of 40 CFR 60, Appendix A.
- 6 Test Frequency: Not Applicable.
- 7 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).
- 8 State-Only: No.
- 9 Calculation Model: Not applicable.
- 10 **Condition Approval 6/6/1997**
- 11 Condition: Particulate matter (PM₁₀) shall not exceed 0.012 lb/mm BTU.
- 12 Periodic Monitoring: Section 2.6.
- 13 Frequency: Monthly.
- 14 Test Method: EPA Method 5 of 40 CFR 60, Appendix A.
- 15 Test Frequency: Not Applicable.
- 16 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).
- 17 State-Only: No.
- 18 Calculation Model: Not applicable.
- 19 **Condition Approval 6/6/1997**
- 20 Condition: VOC shall not exceed 0.013 lb/mm BTU and 30 ppm @ 3% O₂
- 21 Periodic Monitoring: Section 2.6.
- 22 Frequency: Monthly.
- 23 Test Method: EPA Method 25 or 25A of 40 CFR 60, Appendix A.
- 24 Test Frequency: Not Applicable.
- 25 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).
- 26 State-Only: No.
- 27 Calculation Model: Not applicable.
- 28 **Condition Approval 6/6/1997**
- 29 Condition: Visual check of combustion.
- 30 Periodic Monitoring: Not Applicable.
- 31 Frequency: Daily.
- 32 Test Method: Not Applicable.
- 33 Test Frequency: Not Applicable.
- 34 Required Records: Record available operating data.
- 35 State-Only: Yes.
- 36 Calculation Model: Not applicable.

- 1 **Condition Approval 6/6/1997**
- 2 Condition: A. Inspect burner.
- 3 B. Inspect boiler exteriors.
- 4 C. Check combustion controls.
- 5 D. Check for leaks.
- 6 E. Check for unusual noise, vibrations, etc...
- 7 Periodic Monitoring: Not Applicable.
- 8 Frequency: Monthly.
- 9 Test Method: Not Applicable.
- 10 Test Frequency: Not Applicable.
- 11 Required Records: Records of inspections.
- 12 State-Only: Yes.
- 13 Calculation Model: Not applicable.
- 14 **Condition Approval 6/6/1997**
- 15 Condition: A. Inspect air supply system and clean and repair if necessary.
- 16 B. Clean and check fuel supply system, replace filters if necessary.
- 17 Periodic Monitoring: Not Applicable.
- 18 Frequency: Semi-annually.
- 19 Test Method: Not Applicable.
- 20 Test Frequency: Not Applicable.
- 21 Required Records: Records of inspections and work performed.
- 22 State-Only: Yes.
- 23 Calculation Model: Not applicable.
- 24 **Condition Approval 6/6/1997**
- 25 Condition: A. Conduct boiler tune-up by manufacturer trained technician or other
- 26 qualified personnel.
- 27 B. Inspect refractory.
- 28 C. Clean fireside surfaces and breaching.
- 29 Periodic Monitoring: Not Applicable.
- 30 Frequency: Annually.
- 31 Test Method: Not Applicable.
- 32 Test Frequency: Not Applicable.
- 33 Required Records: See Section 2.5.
- 34 State-Only: Yes.
- 35 Calculation Model: Not applicable.

1 **1.4.7 Discharge Point: 325 Boiler 1 and Boiler 2(>5 mmBTU/hr – Natural Gas)**

2 300 Area, 325 Boiler Annex

3 Requirement Citation: 40 CFR 60, Subpart Dc (WAC 173-400-115), 97NM-138 (6/6/1997), and
4 97NM-138, Amendment 1 (11/19/2009)

5 **Condition Approval**

6 Condition: 20% opacity: Prohibits visible emissions exceeding 20% opacity for more than 3
7 minutes in any 1 hour of an air contaminant from any emissions unit or within a
8 reasonable distance of the emission unit except for scheduled soot blowing/grate
9 cleaning or due to documented water.

10 Periodic Monitoring: Section 2.1.

11 Test Method: EPA Method 9 of 40 CFR 60, Appendix A.

12 Test Frequency: Quarterly.

13 Required Records: As specified in Section 2.1, Tier 2.

14 State-Only: No.

15 Calculation Model: Not applicable.

16 **Condition Approval 6/6/1997**

17 Condition: SO₂ shall not exceed 0.0006 lb/mm BTU.

18 Periodic Monitoring: Section 2.6.

19 Frequency: Monthly.

20 Test Method: EPA Method 6 or 6C of 40 CFR 60, Appendix A.

21 Test Frequency: Not Applicable.

22 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).

23 State-Only: No.

24 Calculation Model: Not applicable.

25 **Condition Approval 6/6/1997**

26 Condition: NO_x shall not exceed 0.037 lb/mm BTU and 30 ppm @ 3% O₂.

27 Periodic Monitoring: Section 2.6.

28 Frequency: Monthly.

29 Test Method: EPA Method 7E of 40 CFR 60, Appendix A.

30 Test Frequency: Not applicable.

31 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).

32 State-Only: No.

33 Calculation Model: Not applicable.

- 1 **Condition Approval 6/6/1997**
- 2 Condition: CO shall not exceed 0.225 lb/mm BTU and 300 ppm @ 3% O₂.
- 3 Periodic Monitoring: Section 2.6.
- 4 Frequency: Monthly.
- 5 Test Method: EPA Method 10 of 40 CFR 60, Appendix A.
- 6 Test Frequency: Not Applicable.
- 7 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).
- 8 State-Only: No.
- 9 Calculation Model: Not applicable.
- 10 **Condition Approval 6/6/1997**
- 11 Condition: Particulate matter (PM₁₀) shall not exceed 0.012 lb/mm BTU.
- 12 Periodic Monitoring: Section 2.6.
- 13 Frequency: Monthly.
- 14 Test Method: EPA Method 5 of 40 CFR 60, Appendix A.
- 15 Test Frequency: Not Applicable.
- 16 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).
- 17 State-Only: No.
- 18 Calculation Model: Not applicable.
- 19 **Condition Approval 6/6/1997**
- 20 Condition: VOC shall not exceed 0.013 lb/mm BTU and 30 ppm @ 3% O₂.
- 21 Periodic Monitoring: Section 2.6.
- 22 Frequency: Monthly.
- 23 Test Method: EPA Method 25 or 25A of 40 CFR 60, Appendix A.
- 24 Test Frequency: Not Applicable.
- 25 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).
- 26 State-Only: No.
- 27 Calculation Model: Not applicable.
- 28 **Condition Approval 6/6/1997**
- 29 Condition: Visual check of combustion.
- 30 Periodic Monitoring: Not Applicable.
- 31 Frequency: Daily.
- 32 Test Method: Not Applicable.
- 33 Test Frequency: Not Applicable.
- 34 Required Records: Record available operating data.
- 35 State-Only: Yes.
- 36 Calculation Model: Not applicable.

- 1 **Condition Approval 6/6/1997**
- 2 Condition: A. Inspect burner.
- 3 B. Inspect boiler exteriors.
- 4 C. Check combustion controls.
- 5 D. Check for leaks.
- 6 E. Check for unusual noise, vibrations, etc.
- 7 Periodic Monitoring: Not Applicable.
- 8 Frequency: Monthly.
- 9 Test Method: Not Applicable.
- 10 Test Frequency: Not Applicable.
- 11 Required Records: Records of inspections.
- 12 State-Only: Yes.
- 13 Calculation Model: Not applicable.
- 14 **Condition Approval 6/6/1997**
- 15 Condition: A. Inspect air supply system and clean and repair if necessary.
- 16 B. Clean and check fuel supply system, replace filters if necessary.
- 17 Periodic Monitoring: Not Applicable.
- 18 Frequency: Semi-annually.
- 19 Test Method: Not Applicable.
- 20 Test Frequency: Not Applicable.
- 21 Required Records: Records of inspections and work performed.
- 22 State-Only: Yes.
- 23 Calculation Model: Not applicable.
- 24 **Condition Approval 6/6/1997**
- 25 Condition: A. Conduct boiler tune-up by manufacturer trained technician or other
- 26 qualified personnel.
- 27 B. Inspect refractory.
- 28 C. Clean fireside surfaces and breaching.
- 29 Periodic Monitoring: Not Applicable.
- 30 Frequency: Annually.
- 31 Test Method: Not Applicable.
- 32 Test Frequency: Not Applicable.
- 33 Required Records: See Section 2.5.
- 34 State-Only: Yes.
- 35 Calculation Model: Not applicable.

1 **1.4.8 Discharge Point: 331 Boiler 1 and Boiler 2 (<5 mmBTU/hr – Natural Gas)**

2 300 Area, 331 Boiler Annex

3 Requirement Citation: 40 CFR 60, Subpart Dc (WAC 173-400-115), 97NM-138 (6/6/1997), and
4 97NM-138, Amendment 1 (11/19/2009)

5

6 **Condition Approval**

7 Condition: 20% opacity: Prohibits visible emissions exceeding 20% opacity for more than 3
8 minutes in any 1 hour of an air contaminant from any emissions unit or within a
9 reasonable distance of the emission unit except for scheduled soot blowing/grate
10 cleaning or due to documented water.

11 Periodic Monitoring: Section 2.1.

12 Test Method: EPA Method 9 of 40 CFR 60, Appendix A.

13 Test Frequency: Quarterly.

14 Required Records: As specified in Section 2.1, Tier 2.

15 State-Only: No.

16 Calculation Model: Not applicable.

17 **Condition Approval 6/6/1997**

18 Condition: SO₂ shall not exceed 0.0006 lb/mm BTU.

19 Periodic Monitoring: Section 2.6.

20 Frequency: Monthly.

21 Test Method: EPA Method 6 or 6C of 40 CFR 60, Appendix A.

22 Test Frequency: Not Applicable.

23 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).

24 State-Only: No.

25 Calculation Model: Not applicable.

26 **Condition Approval 6/6/1997**

27 Condition: NO_x shall not exceed 0.037 lb/mm BTU and 30 ppm @ 3% O₂.

28 Periodic Monitoring: Section 2.6.

29 Frequency: Monthly.

30 Test Method: EPA Method 7E of 40 CFR 60, Appendix A.

31 Test Frequency: Not applicable.

32 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).

33 State-Only: No.

34 Calculation Model: Not applicable.

- 1 **Condition Approval 6/6/1997**
- 2 Condition: CO shall not exceed 0.225 lb/mm BTU and 300 ppm @ 3% O₂.
- 3 Periodic Monitoring: Section 2.6.
- 4 Frequency: Monthly.
- 5 Test Method: EPA Method 10 of 40 CFR 60, Appendix A.
- 6 Test Frequency: Not Applicable.
- 7 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).
- 8 State-Only: No.
- 9 Calculation Model: Not applicable.
- 10 **Condition Approval 6/6/1997**
- 11 Condition: Particulate matter (PM₁₀) shall not exceed 0.012 lb/mm BTU.
- 12 Periodic Monitoring: Section 2.6.
- 13 Frequency: Monthly.
- 14 Test Method: EPA Method 5 of 40 CFR 60, Appendix A.
- 15 Test Frequency: Not Applicable.
- 16 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).
- 17 State-Only: No.
- 18 Calculation Model: Not applicable.
- 19 **Condition Approval 6/6/1997**
- 20 Condition: VOC shall not exceed 0.013 lb/mm BTU and 30 ppm @ 3% O₂.
- 21 Periodic Monitoring: Section 2.6.
- 22 Frequency: Monthly.
- 23 Test Method: EPA Method 25 or 25A of 40 CFR 60, Appendix A.
- 24 Test Frequency: Not Applicable.
- 25 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).
- 26 State-Only: No.
- 27 Calculation Model: Not applicable.
- 28 **Condition Approval 6/6/1997**
- 29 Condition: Visual check of combustion.
- 30 Periodic Monitoring: Not Applicable.
- 31 Frequency: Daily.
- 32 Test Method: Not Applicable.
- 33 Test Frequency: Not Applicable.
- 34 Required Records: Record available operating data.
- 35 State-Only: Yes.
- 36 Calculation Model: Not applicable.

- 1 **Condition Approval 6/6/1997**
- 2 Condition: A. Inspect burner.
- 3 B. Inspect boiler exteriors.
- 4 C. Check combustion controls.
- 5 D. Check for leaks.
- 6 E. Check for unusual noise, vibrations, etc...
- 7 Periodic Monitoring: Not Applicable.
- 8 Frequency: Monthly.
- 9 Test Method: Not Applicable.
- 10 Test Frequency: Not Applicable.
- 11 Required Records: Records of inspections.
- 12 State-Only: Yes.
- 13 Calculation Model: Not applicable.
- 14 **Condition Approval 6/6/1997**
- 15 Condition: A. Inspect air supply system and clean and repair if necessary.
- 16 B. Clean and check fuel supply system, replace filters if necessary.
- 17 Periodic Monitoring: Not Applicable.
- 18 Frequency: Semi-annually.
- 19 Test Method: Not Applicable.
- 20 Test Frequency: Not Applicable.
- 21 Required Records: Records of inspections and work performed.
- 22 State-Only: Yes.
- 23 Calculation Model: Not applicable.
- 24 **Condition Approval 6/6/1997**
- 25 Condition: A. Conduct boiler tune-up by manufacturer trained technician or other
- 26 qualified personnel.
- 27 B. Inspect refractory.
- 28 C. Clean fireside surfaces and breaching.
- 29 Periodic Monitoring: Not Applicable.
- 30 Frequency: Annually.
- 31 Test Method: Not Applicable.
- 32 Test Frequency: Not Applicable.
- 33 Required Records: See Section 2.5.
- 34 State-Only: Yes.
- 35 Calculation Model: Not applicable.

1 **1.4.9 Discharge Point: Portable Boiler (<5 mmBTU/hr – Dual Fuel)**

2 The portable boiler can be operated with either fuel oil or natural gas as the combustion source.
3 Dependent on the source being used, the emission requirements are different. Each emission condition
4 will list the condition followed by the type of fuel the condition applies to.

5 Hanford Site

6 Requirement Citation: 40 CFR 60, Subpart Dc (WAC 173-400-115), 97NM-138 (6/6/1997), and
7 97NM-138, Amendment 1 (11/19/2009)

8 **1.4.9.1 Natural Gas**

9 **Condition Approval 6/6/1997**

10 Condition: SO₂ shall not exceed 0.0006 lb/mm BTU – fired using natural gas

11 Periodic Monitoring: Section 2.6.

12 Frequency: Monthly.

13 Test Method: EPA Method 6 or 6C of 40 CFR 60, Appendix A.

14 Test Frequency: Not Applicable.

15 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).

16 State-Only: No.

17 Calculation Model: Not applicable.

18 **Condition Approval 6/6/1997**

19 Condition: NO_x shall not exceed 0.037 lb/mm BTU and 30 ppm @ 3% O₂ – fired using
20 natural gas

21 Periodic Monitoring: Section 2.6

22 Frequency: Monthly.

23 Test Method: EPA Method 7E of 40 CFR 60, Appendix A.

24 Test Frequency: Not applicable.

25 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).

26 State-Only: No.

27 Calculation Model: Not applicable.

28 **Condition Approval 6/6/1997**

29 Condition: CO shall not exceed 0.225 lb/mm BTU and 300 ppm @ 3% O₂ – fired using
30 natural gas.

31 Periodic Monitoring: Section 2.6.

32 Frequency: Monthly.

33 Test Method: EPA Method 10 of 40 CFR 60, Appendix A.

34 Test Frequency: Not Applicable.

35 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).

36 State-Only: No.

37 Calculation Model: Not applicable.

- 1 **Condition Approval** **6/6/1997**
- 2 Condition: Particulate matter (PM₁₀) shall not exceed 0.012 lb/mm BTU – fired using natural
3 gas.
- 4 Periodic Monitoring: Section 2.6.
- 5 Frequency: Monthly.
- 6 Test Method: EPA Method 5 of 40 CFR 60, Appendix A.
- 7 Test Frequency: Not Applicable.
- 8 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).
- 9 State-Only: No.
- 10 Calculation Model: Not applicable.
- 11 **Condition Approval** **6/6/1997**
- 12 Condition: VOC shall not exceed 0.013 lb/mm BTU and 30 ppm @ 3% O₂ – fired using
13 natural gas.
- 14 Periodic Monitoring: Section 2.6.
- 15 Frequency: Monthly.
- 16 Test Method: EPA Method 25 or 25A of 40 CFR 60, Appendix A.
- 17 Test Frequency: Not Applicable.
- 18 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).
- 19 State-Only: No.
- 20 Calculation Model: Not applicable.

- 1 **1.4.9.2 Distillate Fuel-Oil**
- 2 **Condition Approval 6/6/1997**
- 3 Condition: Use of fuel per 97NM-138 – fired using distillate fuel-oil.
- 4 Periodic Monitoring: Compliance will be demonstrated by use of fuel containing no greater
5 than 0.0015 weight percent sulfur (15 parts per million by weight).
- 6 Test Method: Not applicable.
- 7 Test Frequency: Not applicable.
- 8 Required Records: Vendor certification for diesel fuel sulfur content for all purchases.
- 9 State-Only: No.
- 10 Calculation Model: Not applicable.
- 11 **Condition Approval 6/6/1997**
- 12 Condition: NO_x shall not exceed 0.150 lb/mm BTU and 115 ppm @ 3% O₂ – fired using
13 distillate fuel-oil.
- 14 Periodic Monitoring: Section 2.6.
- 15 Frequency: Monthly.
- 16 Test Method: EPA Method 7E of 40 CFR 60, Appendix A.
- 17 Test Frequency: Not applicable.
- 18 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).
- 19 State-Only: No.
- 20 Calculation Model: Not applicable.
- 21 **Condition Approval 6/6/1997**
- 22 Condition: SO₂ shall not exceed 0.051 lb/mm BTU – fired using distillate fuel-oil
- 23 Periodic Monitoring: Section 2.6.
- 24 Frequency: Monthly.
- 25 Test Method: EPA Method 6 or 6C10 of 40 CFR 60, Appendix A.
- 26 Test Frequency: Not Applicable.
- 27 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).
- 28 State-Only: No.
- 29 Calculation Model: Not applicable.
- 30 **Condition Approval 6/6/1997**
- 31 Condition: CO shall not exceed 0.071 lb/mm BTU and 90 ppm @ 3% O₂ – fired using
32 distillate fuel-oil.
- 33 Periodic Monitoring: Section 2.6.
- 34 Frequency: Monthly.
- 35 Test Method: EPA Method 10 of 40 CFR 60, Appendix A.
- 36 Test Frequency: Not Applicable.
- 37 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).
- 38 State-Only: No.
- 39 Calculation Model: Not applicable.

- 1 **Condition Approval 6/6/1997**
- 2 Condition: Particulate matter (PM₁₀) shall not exceed 0.011 lb/mm BTU – fired using
3 distillate fuel-oil.
- 4 Periodic Monitoring: Section 2.6.
- 5 Frequency: Monthly.
- 6 Test Method: EPA Method 5 of 40 CFR 60, Appendix A.
- 7 Test Frequency: Not Applicable.
- 8 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).
- 9 State-Only: No.
- 10 Calculation Model: Not applicable.
- 11 **Condition Approval 6/6/1997**
- 12 Condition: VOC shall not exceed 0.013 lb/mm BTU and 30 ppm @ 3% O₂ – fired using
13 distillate fuel-oil.
- 14 Periodic Monitoring: Section 2.6.
- 15 Frequency: Monthly.
- 16 Test Method: EPA Method 25 or 25A of 40 CFR 60, Appendix A.
- 17 Test Frequency: Not Applicable.
- 18 Required Records: Monthly records of fuel use on each boiler (See Section 2.5).
- 19 State-Only: No.
- 20 Calculation Model: Not applicable.

1 **1.4.9.3 Conditions Applicable Regardless of Fuel Used**

2 **Condition Approval**

3 Condition: 20% opacity: Prohibits visible emissions exceeding 20% opacity for more than 3
4 minutes in any 1 hour of an air contaminant from any emissions unit or within a
5 reasonable distance of the emission unit except for scheduled soot blowing/grate
6 cleaning or due to documented water.

7 Periodic Monitoring: Section 2.1.

8 Test Method: EPA Method 9 of 40 CFR 60, Appendix A.

9 Test Frequency: Quarterly.

10 Required Records: As specified in Section 2.1, Tier 2.

11 State-Only: No.

12 Calculation Model: Not applicable.

13 **Condition Approval 6/6/1997**

14 Condition: Visual check of combustion.

15 Periodic Monitoring: Not Applicable.

16 Frequency: Daily.

17 Test Method: Not Applicable.

18 Test Frequency: Not Applicable.

19 Required Records: Record available operating data.

20 State-Only: Yes.

21 Calculation Model: Not applicable.

22 **Condition Approval 6/6/1997**

- 23 Condition: A. Inspect burner
24 B. Inspect boiler exteriors
25 C. Check combustion controls
26 D. Check for leaks
27 E. Check for unusual noise, vibrations, etc...

28 Periodic Monitoring: Not Applicable.

29 Frequency: Monthly.

30 Test Method: Not Applicable.

31 Test Frequency: Not Applicable.

32 Required Records: Records of inspections.

33 State-Only: Yes.

34 Calculation Model: Not applicable.

- 1 **Condition Approval 6/6/1997**
- 2 Condition: A. Inspect air supply system and clean and repair if necessary.
- 3 B. Clean and check fuel supply system, replace filters if necessary.
- 4 Periodic Monitoring: Not Applicable.
- 5 Frequency: Semi-annually.
- 6 Test Method: Not Applicable.
- 7 Test Frequency: Not Applicable.
- 8 Required Records: Records of inspections and work performed.
- 9 State-Only: Yes.
- 10 Calculation Model: Not applicable.
- 11 **Condition Approval 6/6/1997**
- 12 Condition: A. Conduct boiler tune-up by manufacturer trained technician or other
- 13 qualified personnel.
- 14 B. Inspect refractory.
- 15 C. Clean fireside surfaces and breaching.
- 16 Periodic Monitoring: Not Applicable.
- 17 Frequency: Annually.
- 18 Test Method: Not Applicable.
- 19 Test Frequency: Not Applicable.
- 20 Required Records: See Section 2.5.
- 21 State-Only: Yes.
- 22 Calculation Model: Not applicable.

1 **1.4.10 Discharge Point: E-225BC 001**

2 200E Area Internal Combustion Engine 500 Horsepower and Greater

3 Requirement Citation: WAC 173-400-040 (2) and WAC 173-400-040 (7)

4 **Condition Approval**

5 Condition: 20% opacity: Prohibits visible emissions exceeding 20% opacity for more than 3
6 minutes in any 1 hour of an air contaminant from any emissions unit or within a
7 reasonable distance of the emission unit except for scheduled soot blowing/grate
8 cleaning or due to documented water.

9 Periodic Monitoring: Section 2.1, Tier 1

10 Test Method: Section 2.1, Tier 1

11 Test Frequency: Quarterly.

12 Required Records: As specified in Section 2.1

13 State-Only: No.

14 Calculation Model: Not applicable.

15 **Condition Approval**

16 Condition: 1,000 ppm SO₂ @ 7% O₂ on a dry basis. Prohibits emission of a gas containing
17 sulfur dioxide from any emissions unit in excess of 1,000 ppm of a dry basis,
18 corrected to 7% oxygen combustion sources, and based on the average of any
19 period of 60 consecutive minutes.

20 Periodic Monitoring: Section 2.7, Tier 1

21 Frequency: Not Applicable

22 Test Method: EPA Method 6 or 6C of 40 CFR 60, Appendix A

23 Test Frequency: Not Applicable

24 Required Records: 1. Amount and type of fuel burned

25 2. Vendor documentation or fuel analysis once per year.

26 State-Only: No.

27 Calculation Model: Not applicable.

1 **1.4.11 Discharge Point: E-225BG 001**

2 200E Area Internal Combustion Engine 500 Horsepower and Greater

3 Requirement Citation: WAC 173-400-040 (2) and WAC 173-400-040 (7)

4 **Condition Approval**

5 Condition: 20% opacity: Prohibits visible emissions exceeding 20% opacity for more than 3
6 minutes in any 1 hour of an air contaminant from any emissions unit or within a
7 reasonable distance of the emission unit except for scheduled soot blowing/grate
8 cleaning or due to documented water.

9 Periodic Monitoring: Section 2.1, Tier 1

10 Test Method: Section 2.1, Tier 1

11 Test Frequency: Quarterly.

12 Required Records: As specified in Section 2.1.

13 State-Only: No.

14 Calculation Model: Not applicable.

15 **Condition Approval**

16 Condition: 1,000 ppm SO₂ @ 7% O₂ on a dry basis. Prohibits emission of a gas containing
17 sulfur dioxide from any emissions unit in excess of 1,000 ppm of a dry basis,
18 corrected to 7% oxygen combustion sources, and based on the average of any
19 period of 60 consecutive minutes.

20 Periodic Monitoring: Section 2.7, Tier 1

21 Frequency: Not Applicable

22 Test Method: EPA Method 6 or 6C of 40 CFR 60, Appendix A

23 Test Frequency: Not Applicable

24 Required Records: 1. Amount and type of fuel burned

25 2. Vendor documentation or fuel analysis once per year.

26 State-Only: No.

27 Calculation Model: Not applicable.

Effective Date: 08/01/2019
Expiration Date: 08/01/2024

Hanford Air Operating Permit
Permit No. 00-05-006
Renewal 3

1 **1.4.12 Discharge Point: Reserved**
2

Effective Date: 08/01/2019
Expiration Date: 08/01/2024

Hanford Air Operating Permit
Permit No. 00-05-006
Renewal 3

1 **1.4.13 Reserved**

2

- 1 **1.4.14 Discharge Point: CWC**
2 200W Area, Central Waste Complex
3 Requirement Citation (WAC or Order Citation): DE00NWP-002 Revision 1
4 **Condition Approval 6/29/2006**
5 Condition: Visible emissions shall not exceed limits specified in WAC 173-400-040(2).
6 Periodic Monitoring: (1) Section 2.1, Tier 3.
7 (2) Visible emission surveys
8 Frequency: No specified frequency.
9 Test Method: EPA Method 9 of 40 CFR 60, Appendix A
10 Test Frequency: When visible emissions are observed.
11 Required Records: (1) Maintenance records required in AOP Attachment 2 for maintaining
12 abatement control technology.
13 (2) Visible emission records
14 State-Only: No.
15 Calculation Model: Not applicable.
16 **Condition Approval 6/29/2006**
17 Condition: VOC emissions shall not exceed 3.5 tons per year.
18 Periodic Monitoring: Emission estimation (Condition 3.0 of the NOC).
19 Frequency: Annually.
20 Test Method: Material assessment, inventory, and calculation as identified in the NOC
21 Approval Condition 3.0.
22 Test Frequency: Annually.
23 Required Records: Results of analyses.
24 State-Only: No.
25 Calculation Model: Not applicable.
26 **Condition Approval 6/29/2006**
27 Condition: All TAPs, as submitted in the Permittee's Notice of Construction Application,
28 shall be below their respective ASIL.
29 Periodic Monitoring: Emission estimation (Condition 3.0 of this NOC).
30 Frequency: Annually.
31 Test Method: Material assessment, inventory, and calculation as identified in the NOC
32 Approval Condition 3.0.
33 Test Frequency: Annually.
34 Required Records: Results of analyses.
35 State-Only: No.
36 Calculation Model: Not applicable.

1 **1.4.15 Discharge Point: Concrete Batch Plant**

2 200E Area, Vitrification

3 Requirement Citation (WAC or Order Citation): DE01NWP-003 (8/21/2001), 9/24/2002 Revision, and
4 3/12/2003 Revision

5 **Condition Approval 8/21/2001**

6 Condition: Total Emission Limits

7 A. Particulate Matter - Particulates from the bag-house exhaust shall not exceed
8 0.01 grains per dry standard cubic foot, with no visible emissions.

9 Engineering calculations or vendor information that the bag-house, when
10 properly operated and maintained, will control emissions to less than 0.01
11 grains per dry standard cubic foot will be available at the facility. Periodic
12 measurements shall consist of visible emission inspections per EPA Reference
13 Method 22, 40 CFR 60, Appendix A, July 1, 2000.

14 B. Fugitive Dust - Visible emissions from the sand and aggregate transfer points,
15 truck loading station, the piles, or any other source shall not be allowed
16 beyond 100 yards.

17 Periodic Monitoring: A. Recordkeeping

18 Test Method: B. EPA Method 22 of Title 40 Part 60, Appendix A, July 1, 2000.

19 Test Frequency: Not applicable.

20 Required Records: A. Calculations, vendor information, baghouse maintenance logs, surveillance
21 checklists.

22 B. Visible emission survey results.

23 State-Only: No.

24 Calculation Model: Not applicable.

25 **Condition Approval 8/21/2001**

26 Condition: Fugitive Dust

27 All unpaved areas at the CBP and quarry will be controlled by watering,
28 chemical stabilization, or both. Means of chemical stabilization include the
29 application of petroleum resins (EPA 1998). A water spray additive, (such as,
30 "soil cement") will also be considered for application on unpaved roads. Soil
31 cement has been previously used on the Hanford Site with effective results.

32 Vehicle speed limit signs will be posted to control speeds. Paved roads between
33 the quarry and CBP will be kept clear of heavy accumulations of dust and debris.
34 Front-end loaders will be used to pick up any significant spill of sand or
35 aggregate material on the pave roads between the quarry and CBP. The sand and
36 aggregate stockpiles will be kept sprinkled with water to prevent the movement
37 of materials that may migrate because of wind erosion. Transfer points at
38 conveyors, crushers, and screens will also be sprayed with water.

39 Periodic Monitoring: Recordkeeping

40 Test Method: Not specified.

41 Test Frequency: Not applicable.

42 Required Records: Surveillance checklists.

43 State-Only: No.

44 Calculation Model: Not applicable.

- 1 **Condition Approval 8/21/2001**
- 2 Condition: Emission Control Monitors
- 3 Emission equipment control monitors shall include but not be limited to the
- 4 following:
- 5 A. Bag house - None required if there are no visible emissions per section 1.A. of
- 6 the APPROVAL CONDITIONS, and maintenance records indicate proper
- 7 maintenance practices and schedules.
- 8 Periodic Monitoring: Recordkeeping
- 9 Test Method: Not specified.
- 10 Test Frequency: Not applicable.
- 11 Required Records: Surveillance checklists and bag house maintenance logs.
- 12 State-Only: No.
- 13 Calculation Model: Not applicable.
- 14 **Condition Approval 8/21/2001**
- 15 Condition: General Conditions
- 16 A. Visible Emissions: No visible emissions shall be allowed beyond 100 yards of source. During
- 17 periods of high winds, an assessment shall be made to suspend operations or
- 18 initiate a more comprehensive plant watering scheme.
- 19 Periodic Monitoring: Visible Emission Surveys.
- 20 Test Method: Not specified.
- 21 Test Frequency: Not applicable.
- 22 Required Records: Results of visible emission surveys.
- 23 State-Only: No.
- 24 Calculation Model: Not applicable.

- 1 **Condition Approval 3/12/2003**
- 2 **Condition:** Diesel Fuel Oil Boiler
- 3 1. A 4.4 MMBtu diesel fuel oil boiler is permitted to operate at the Concrete
- 4 Batch Plant.
- 5 2. The diesel fuel sulfur content will be less than or equal to 0.05% S, by weight.
- 6 3. Operation of the boiler is limited to 2000 hours per year.
- 7 4. Good combustion engineering practices shall be followed, including adherence
- 8 to the boiler manufacturer's specification for operation, maintenance, and
- 9 combustion control.
- 10 5. Specific combustion feed gas ratios, including the fuel-air ratio, monitoring,
- 11 startup and shutdown procedures shall be followed to maximize combustion
- 12 efficiency and minimize discharge of pollutants into the atmosphere.
- 13 **Periodic Monitoring:** Recordkeeping
- 14 **Test Method:** Not specified.
- 15 **Test Frequency:** Not applicable.
- 16 **Required Records:** 1. Manufacturer's specifications for operation, maintenance, and combustion
- 17 control.
- 18 2. Records of operating hours.
- 19 3. Records of fuel specification (sulfur content).
- 20 4. Records of good combustion engineering practices and operating procedures.
- 21 **State-Only:** No.
- 22 **Calculation Model:** Not applicable.

- 1 **1.4.16 Discharge Point: E-282ED 001**
2 200E Area, Emergency Fire Pump Generators
3 Requirement Citation (WAC or Order Citation): NWP-96-1
4 **Condition Approval 4/30/1996**
5 Condition: Engine E shall operate no more than 350 hours per year.
6 Periodic Monitoring: Recordkeeping.
7 Test Method: Not specified.
8 Test Frequency: Not applicable.
9 Required Records: Maintain records showing all hours of operation.
10 State-Only: No.
11 Calculation Model: Not applicable.
12 **Condition Approval 4/30/1996**
13 Condition: NO_x 75.5 pounds per hour NO_x.
14 Periodic Monitoring: Recordkeeping & average fuel consumption rate determination shall be
15 performed at least once per 12 months.
16 Test Method: EPA Method 7A of 40 CFR 60, Appendix A.
17 Test Frequency: Not applicable.
18 Required Records: 1. Monthly fuel burned (this calculation is based on fuel added to supply tank).
19 2. Hours of operation logged.
20 State-Only: No.
21 Calculation Model: 2B.
22 **Condition Approval 4/30/1996**
23 Condition: Engine E shall burn only No. 2 fuel oil with sulfur content no more than 0.05
24 weight percent.
25 Periodic Monitoring: Recordkeeping for compliance with condition.
26 Test Method: Not specified.
27 Test Frequency: Not applicable.
28 Required Records: Vendor documentation of fuel purchase from retail outlet (i.e., for use in motor
29 vehicles, see 40 CFR 80), or fuel analysis once per year showing ≤0.05wt%
30 sulfur.
31 State-Only: No.
32 Calculation Model: Not applicable.

Effective Date: 08/01/2019
Expiration Date: 08/01/2024

Hanford Air Operating Permit
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Renewal 3

- | | | |
|----|---------------------------|---|
| 1 | Condition Approval | 4/30/1996 |
| 2 | Condition: | Opacity 10 %. |
| 3 | Periodic Monitoring: | Section 2.1, Tier 1. |
| 4 | Frequency: | At least once per quarter, if operates. |
| 5 | Test Method: | EPA Method 9 of 40 CFR 60, Appendix A. |
| 6 | Test Frequency: | Not applicable. |
| 7 | Required Records: | Results of visible emissions survey or records of visual determination of the |
| 8 | | opacity. |
| 9 | State-Only: | No. |
| 10 | Calculation Model: | Not applicable. |

- 1 **1.4.17 Discharge Point: E-282WD 001**
2 200W Area, Generators
3 Requirement Citation (WAC or Order Citation): NWP-96-1
4 **Condition Approval 4/30/1996**
5 Condition: 10 % Opacity.
6 Periodic Monitoring: Section 2.1, Tier 1
7 Frequency: At least once per quarter, if operates.
8 Test Method: EPA Method 9 of 40 CFR 60, Appendix A.
9 Test Frequency: Not applicable.
10 Required Records: Results of visible emissions survey or records of visual determination of the
11 opacity.
12 State-Only: No.
13 Calculation Model: Not applicable.
14 **Condition Approval 4/30/1996**
15 Condition: NO_x 42 pounds per hour.
16 Periodic Monitoring: Recordkeeping & average fuel consumption rate determination shall be
17 performed at least once per 12 months.
18 Test Method: EPA Method 7A of 40 CFR 60, Appendix A.
19 Test Frequency: Not applicable.
20 Required Records: 1. Monthly fuel burned (this calculation is based on fuel added to supply tank).
21 2. Hours of operation logged.
22 State-Only: No.
23 Calculation Model: 2B.
24 **Condition Approval 4/30/1996**
25 Condition: Engine W shall burn only No. 2 fuel oil with sulfur content no more
26 than 0.05 weight percent.
27 Periodic Monitoring: Recordkeeping for compliance with condition.
28 Test Method: Not specified.
29 Test Frequency: Not applicable.
30 Required Records: Vendor documentation of fuel purchase from retail outlet (i.e., for use in motor
31 vehicles, see 40 CFR 80), or fuel analysis once per year showing ≤ 0.05 wt%
32 sulfur.
33 State-Only: No.
34 Calculation Model: Not applicable.

- 1 **Condition Approval** 4/30/1996
- 2 Condition: Engine W shall operate no more than 350 hours per year.
- 3 Periodic Monitoring: Recordkeeping.
- 4 Test Method: Not specified.
- 5 Test Frequency: Not applicable.
- 6 Required Records: Maintain records showing all hours of operation.
- 7 State-Only: No.
- 8 Calculation Model: Not applicable.

1 **1.4.18 Discharge Point: Emergency Diesel Generators**

2 300 Area, Generators

3 Requirement Citation: DE02NWP-001(1/15/2002), DE02NWP-001, Amendment 1(10/18/2011),
4 DE02NWP-001, Amendment 2 (01/26/2012)

5 **Condition Approval 1/15/2002**

6 Condition: Total Emission Limits

7 A. The activities described in the Notice of Construction application will be
8 permitted without additional control technologies required, provided that the total
9 emissions from all activities will not result in an exceedance of WAC 173-460
10 ASILs.

11 B. A new Notice of Construction will be required, if total emissions of toxic
12 air pollutants exceed the Small Quantity Emission Rates, unless dispersion
13 modeling demonstrates that emissions would continue to result in concentrations
14 less than the ASILs. Results of any such dispersion modeling
15 demonstrations/calculations will be maintained on file and made available upon
16 inspection.

17 C. A new NOC also is required if total emissions of criteria pollutants would
18 exceed the WAC 173-400-110 thresholds.

19 Periodic Monitoring: Analyze each proposed change to determine if emissions would exceed
20 an ASIL or NSR threshold.

21 Test Method: Not specified.

22 Test Frequency: Not applicable.

23 Required Records: Results of analyses.

24 State-Only: NSR thresholds – No.
25 ASILs - Yes.

26 Calculation Model: Not applicable.

27 **Condition Approval 1/26/2012**

28 Condition: Emissions Control

29 SO_x emissions will be controlled through use of #2 Diesel Fuel with sulfur
30 content less than 0.5%.

31 Periodic Monitoring: Recordkeeping.

32 Test Method: Not specified.

33 Test Frequency: Per fuel shipment.

34 Required Records: Vendor documentation or fuel analysis showing sulfur content < 0.5%.

35 State-Only: No.

36 Calculation Model: Not applicable.

- 1 **Condition Approval 1/15/2002**
- 2 **Condition:** Monitoring and Recordkeeping
- 3 Specific records shall be kept on-site by the Permittee and made available for
- 4 inspection by Ecology upon request. The records shall be organized in a readily
- 5 accessible manner and cover a minimum of the most recent sixty (60) month
- 6 period. The records to be kept shall include the following:
- 7 A. Maintain records of the hours of operation.
- 8 **Periodic Monitoring:** Recordkeeping.
- 9 **Test Method:** Not specified.
- 10 **Test Frequency:** Not applicable.
- 11 **Required Records:** 1. Hours of operation
- 12 2. Fuel consumption.
- 13 **State-Only:** No
- 14 **Calculation Model:** Not applicable.

1 **1.4.19 Discharge Point: P-2025E ETF**

2 200E Area, Effluent Treatment

3 Requirement Citation: WAC 173-460-070, DE07NWP-003 (6/6/2007), Amendment 1 (8/7/2007) and
4 Amendment 2 (9/27/2007), Revision 1 (8/10/2010)

5 **Condition Approval 6/6/2007 (DE07NWP-003)**

6 Condition: Visible emissions from the ETF stack (Figure 1 of Order DE07NWP-003, Rev. 1)
7 shall not exceed five percent (5%).

8 Periodic Monitoring: (1) Section 2.1, Tier 3.

9 (2) Visible emission surveys

10 Test Method: EPA Method 9 of 40 CFR 60, Appendix A

11 Test Frequency: When visible emissions are observed.

12 Required Records: (1) Maintenance records required in AOP Attachment 2 for maintaining
13 abatement control technology.

14 (2) Visible emission records

15 State-Only: No.

16 Calculation Model: Not applicable.

17 **Condition Approval 6/6/2007 (DE07NWP-003)**

18 Condition: Volatile Organic Compound (VOC) emissions from the ETF (Figure 1 of Order
19 DE07NWP-003) shall not exceed 0.55 gram per cubic meter (g/m^3) at standard
20 conditions or 0.50 gram per minute (g/min).

21 Periodic Monitoring: Initial compliance verified by EPA Method 18 of 40 CFR 60, Appendix A in 1996
22 (NOC-93-3).

23 Test Method: EPA Method 18 or 25A of 40 CFR 60, Appendix A.

24 Test Frequency: Not applicable (initial test condition for construction).

25 Required Records: Testing Results of 1996 EPA Method.

26 State-Only: No.

27 Calculation Model: Not applicable.

28 **Condition Approval 6/6/2007 (DE07NWP-003)**

29 Condition: Volatile Organic Compound (VOC) emissions from ETF operations shall not
30 exceed 4,000 lb/yr. [WAC 173-400-110(5)(b)]

31 Periodic Monitoring: Material emission estimates.

32 Test Method: Calculations and record-keeping.

33 Test Frequency: Annual.

34 Required Records: Records of data and calculations for the VOC emissions from ETF operations.

35 State-Only: No.

36 Calculation Model: Not applicable.

1	Condition Approval	6/6/2007 (DE07NWP-003)
2	Condition:	Particulate matter emissions shall not exceed 1,500 lb/yr.
3	Periodic Monitoring:	HEPA filtration of ETF stack gases
4	Test Method:	See Required Records.
5	Test Frequency:	Not applicable.
6	Required Records:	Maintenance and operating records of all filtration systems.
7	State-Only:	No.
8	Calculation Model:	Not applicable.
9	Condition Approval	6/6/2007 (DE07NWP-003) and 9/27/2007 (Amendment 2), Revision 1
10		(8/10/2010)
11	Condition:	All TAPs in the NOC applications and identified in Table 1 of DE07NWP-003
12		Amendment 2 (9/27/2007) and Revision 1 (8/10/2010), shall not exceed ASILs.
13		[WAC 173-460-070]
14	Periodic Monitoring:	Waste analysis records (see Required Records).
15	Test Method:	Not specified.
16	Test Frequency:	Not applicable.
17	Required Records:	(1) Laboratory or waste analysis results for TAPs identified in Table 1 of
18		DE07NWP-003 Amendment 2 (9/27/2007) and Revision 1 (8/10/2010), and
19		(2) Waste stream influent volumetric records.
20	State-Only:	Yes.
21	Calculation Model:	Not applicable.
22	Condition Approval	6/6/2007 (DE07NWP-003)
23	Condition:	All newly identified TAPs shall not exceed ASILs (with assessment of ASIL
24		compliance). [WAC 173-460-070]
25	Periodic Monitoring:	Assessment of ASIL compliance (see Required Records).
26	Test Method:	Not specified.
27	Test Frequency:	Not applicable.
28	Required Records:	(1) Report laboratory or waste analysis result of newly identified TAPs within 90
29		days of completion of analysis, and
30		(2) Waste stream influent volumetric records.
31	State-Only:	Yes.
32	Calculation Model:	Not applicable.

- 1 **1.4.20 Discharge Point: P-2706T 001**
2 200W Area, T Plant Complex
3 Requirement Citation: DE01NWP-002 Revision 1 (6/29/2006)
4 **Condition Approval 6/29/2006**
5 Condition: Visible Emissions
6 A. Visible emissions from any T-Plant Complex stack will not exceed limits
7 specified in WAC 173-400-040(2).
8 Periodic Monitoring: (1) Section 2.1, Tier 3.
9 (2) Visible emission surveys
10 Test Method: EPA Method 9 of 40 CFR 60, Appendix A
11 Test Frequency: When visible emissions are observed.
12 Required Records: (1) Maintenance records required in AOP Attachment 2 for maintaining
13 abatement control technology.
14 (2) Visible emission records
15 State-Only: No.
16 Calculation Model: Not applicable
17 **Condition Approval 6/29/2006**
18 Condition: Emission Limits
19 A. VOC emission will not exceed 3.5 tons per year.
20 B. All TAPs, as submitted in the Permittee's Notice of Construction Application,
21 will be below their respective ASIL.
22 Periodic Monitoring: Analyze each proposed changed to determine if emissions would exceed
23 Emission limits.
24 Test Method: Section 3.0 of the Approval Order DE01NWP-002 Revision 1
25 Test Frequency: Section 3.0 of the Approval Order DE01NWP-002 Revision 1
26 Required Records: Results of analyses.
27 State-Only: No.
28 Calculation Model: Not applicable.

Effective Date: 08/01/2019
Expiration Date: 08/01/2024

Hanford Air Operating Permit
Permit No. 00-05-006
Renewal 3

1 **1.4.21 Reserved**

2

1 **1.4.22 Discharge Point: P-296W004 001**

2 200W Area, Waste Receiving and Processing

3 Requirement Citation: DE03NWP-002

4 **Condition Approval 5/21/2003**

5 Condition: Emission Controls Monitors: Source data from an Organic Vapor Analyzer using
6 a Photoionization detector (PID) with at least an 11.7eV lamp, or other device
7 capable of detecting TAPs, was conducted by the facility in providing verification
8 of de minimis (i.e., parts per million levels) fugitive emissions in the drum
9 storage and NDE/NDA areas. The results of source test information, conducted
10 on or at the source(s) locations in lieu of downstream at the stack, have been
11 provided to the permit writer under separate cover. This information has been
12 determined to satisfy the previous approval order condition for this source in
13 performing one-time monitoring to demonstrate TAP emissions are below the
14 estimates provided in the NOC application and T-BACT analysis for the drum
15 storage and NDE/NDA areas. As such, no additional sampling or monitoring will
16 be required under this approval order. The facility will continue to perform at
17 least once every two years, and make available upon request or inspection, results
18 from any Industrial Hygiene program measurements to further demonstrate
19 compliance with limits contained herein. The test plan for conducting these
20 measurements shall also be maintained on file and made available upon request
21 and/or inspection by Ecology.

22 Periodic Monitoring: IH Program measurements as specified in NOC, including alternative
23 methods.

24 Test Method: Not specified.

25 Test Frequency: Once every two years.

26 Required Records: Test plan.

27 Measurement results.

28 State-Only: Yes.

29 Calculation Model: Not applicable.

- 1 **Condition Approval 5/21/2003**
- 2 **Condition:** Total Emission Limits: For toxic compounds not included in the T-BACT
3 analysis, the emission limits shall be the Small Quantity Emission Rate (SQER).
4 A modification submittal of a Notice of Construction (NOC) application will be
5 required if the SQER limit would be exceeded for compounds not addressed
6 under the T-BACT assessment. The calculation/measurement methods described
7 in section 4 of the NOC Approval Order DE03NWP-002, or other method as
8 approved by Ecology, may be used to document compliance with the SQER
9 limit.
- 10 **Periodic Monitoring:** PID or other device capable of detecting TAPs measurements.
- 11 **Test Method:** Not specified.
- 12 **Test Frequency:** Once every 2 years.
- 13 **Required Records:** 1. IH Test Plan.
14 2. Results of measurements.
- 15 **State-Only:** Yes.
- 16 **Calculation Model:** Not applicable.
- 17 **Condition Approval 5/21/2003**
- 18 **Condition:** An internal annual assessment of the facility container tracking system, such as
19 SWITS of the data management system (DMS), shall be conducted by the facility
20 to document/verify de minimus emissions from the source. This assessment will
21 be maintained on file, made available for Ecology inspector requests, and
22 compiled into emission estimates that will be reported annually beginning as part
23 of the Calendar Year 2003 nonradioactive inventory of airborne emissions.
- 24 **Periodic Monitoring:** Recordkeeping; Comparison to threshold.
- 25 **Test Method:** Not specified.
- 26 **Test Frequency:** Annually.
- 27 **Required Records:** 1. Throughput records, SWITs query evaluation if > 1,000 drums.
28 2. Nonradioactive air emissions inventory report required by WAC 173-
29 400-105.
- 30 **State-Only:** Yes.
- 31 **Calculation Model:** Not applicable.

1 **Condition Approval 5/21/2003**

2 Condition: Total Emission Limits: The processing and repackaging activities described in
3 the Notice of Construction application will be permitted without requiring
4 additional emission controls, provided that the emissions from the stack, venting
5 the 100 and 300 Series Waste Process Lines, the 200 and 400 Restricted Waste
6 process Lines, the process area, and the storage areas are maintained below the
7 level described in and meeting T-BACT (according to WRAP Module 1 Best
8 Available Control Technology Assessment, WHC-SD-W026-TI-005, January
9 1993, Westinghouse Hanford Company, Richland, Washington).

10 Periodic Monitoring: Recordkeeping.

11 Test Method: Not specified.

12 Test Frequency: Not applicable.

13 Required Records: Documentation implementing T-BACT.

14 State-Only: Yes.

15 Calculation Model: Not applicable.

16

1 **1.4.23 Discharge Point: P-WTP-001**

2 200E Area, Vitrification

3 Requirement Citation: WAC 173-400-040(9)(a); DE02NWP-002, Revision 2; and PSD-02-01,
4 Amendment 3.

5 **Condition Approval 11/13/2006**

6 Condition: FUGITIVE DUST CONTROL

7 The Construction Phase Fugitive Dust Control Plan(s), prepared using EPA and
8 Ecology guidelines, shall address fugitive dust control at the WTP construction
9 site adjacent to the Hanford 200 Area and the Material Handling Facility. A copy
10 of this plan(s) shall be maintained on-site at all times in a place known to facility
11 employees that are responsible for complying with the requirements contained
12 therein and shall be retrievable by those employees at all times when activities
13 regulated by the documents are occurring. These documents shall be made
14 available to Ecology upon request.

15 Periodic Monitoring: Not applicable. The owner or operator shall take reasonable precautions (such as
16 pre-job planning) to prevent fugitive dust from becoming airborne.

17 Test Method: Construction Phase Fugitive Dust Control Plan

18 Test Frequency: During construction or routine/*ad hoc* dust suppression

19 Required Records: Fugitive Dust Control Plan and records of actions taken to minimize fugitive dust

20 State-Only: No.

21 Calculation Model: Not applicable.

22 **Condition Approval 11/24/2003**

23 Condition: Opacity from each Pretreatment, HLW, and LAW process off-gas exhaust stack
24 shall not exceed 5%. Compliance will be conducted over a 6 minute average as
25 measured by EPA Reference Method 9 of 40 CFR 60, Appendix A, or an
26 equivalent method approved in advance by Ecology. A certified opacity reader
27 shall read and record the opacity concurrent with any source testing.

28 Periodic Monitoring: (1) For Pretreatment, HLW, and LAW process off-gas exhaust stacks, See Section
29 2.1, Tier 3.

30 (2) Visible emission surveys

31 Test Method: EPA Reference Method 9 of 40 CFR 60, Appendix A.

32 Test Frequency: When visible emissions are observed.

33 Required Records: (1) Maintenance records required in AOP Attachment 2 for maintaining
34 abatement control technology.

35 (2) Visible emission records

36 State-Only: No.

37 Calculation Model: Not applicable.

- 1 **Condition Approval 11/24/2003**
- 2 Condition: Opacity from each (Pretreatment, HLW, and LAW) process off-gas stack shall
3 not exceed 5%. Compliance shall be conducted over a 6 minute average as
4 measured by EPA Reference Method 9 of 40 CFR 60, Appendix A, or an
5 equivalent method approved in advance by Ecology. A certified opacity reader
6 shall read and record the opacity concurrent with any source testing.
- 7 Periodic Monitoring: For boilers, generators, and fire pumps, See Section 2.1, Tier 1.
- 8 Test Method: EPA Reference Method 9 of 40 CFR 60, Appendix A.
- 9 Test Frequency: At least once per calendar quarter.
- 10 Required Records: Test records.
- 11 State-Only: No.
- 12 Calculation Model: Not applicable.
- 13 **Condition Approval 11/24/2003**
- 14 Condition: Opacity from each exhaust stack from process facilities (Pretreatment, HLW, and
15 LAW) shall not exceed 5%, other facility stacks shall not exceed 10 percent, over
16 a 6-minute average as measured by EPA Reference Method 9 of 40 CFR 60,
17 Appendix A, or an equivalent method approved in advance by Ecology. A
18 certified opacity reader shall read and record the opacity concurrent with any
19 source testing.
- 20 Periodic Monitoring: (1) Section 2.1, Tier 3.
21 (2) Visible emission surveys
- 22 Test Method: EPA Method 9 of 40 CFR 60, Appendix A
- 23 Test Frequency: When visible emissions are observed.
- 24 Required Records: (1) Maintenance records required in AOP Attachment 2 for maintaining
25 abatement control technology.
26 (2) Visible emission records
- 27 State-Only: No.
- 28 Calculation Model: Not applicable.
- 29 **Condition Approval 11/24/2003**
- 30 Condition: All boilers, emergency diesel generator, emergency turbine generators, and the
31 diesel fire pumps shall be fired on Ultra-Low Sulfur Diesel Fuel (ULSD). ULSD
32 means fuel oil with a sulfur content of 0.0015% (15ppm) or less by weight.
33 Compliance shall be monitored by maintaining records of fuel purchases.
- 34 Periodic Monitoring: Recordkeeping and Semiannual report.
- 35 Test Method: Not Specified.
- 36 Test Frequency: Not Applicable.
- 37 Required Records: Records of monthly fuel purchases and use and an annual certification, from the
38 fuel distributor, stating the sulfur content of the fuel that was purchased.
39 (PSD-02-01 Cond 17.3)
- 40 State-Only: No.
- 41 Calculation Model: Not applicable.

1 **Condition Approval 11/10/2005**

2 Condition: The operation of the six steam generating boilers shall not exceed an annual
3 aggregated fuel consumption limit of 13,400,000 gallons per year summed daily
4 for the previous 365 days.

5 Periodic Monitoring: Fuel purchase records and a written statement in each semiannual report of the
6 total fuel consumption over the previous 12 months.

7 Test Method: Not Specified.

8 Test Frequency: Daily.

9 Required Records: Maintain fuel purchase records (PSD-02-01, Cond 17.3).

10 State-Only: No.

11 Calculation Model: Not applicable.

12 **Condition Approval 4/4/2013**

13 Condition: Each emergency turbine generator and Type I emergency diesel generator shall
14 not operate for more than 164 hours per year on a 12 month rolling summation
15 calculated once per month. Compliance shall be monitored by installing and
16 operating non-resettable totalizers on each generator. Compliance shall be
17 monitored by including a written statement in each semiannual report of the
18 hours the emergency generators operated in each of the six (6) months covered
19 by the report and the summation of hours operated over the previous 12 months.

20 Periodic Monitoring: Recordkeeping.

21 Test Method: Not Specified.

22 Test Frequency: Monthly.

23 Required Records: Records showing all hours of operation.

24 State-Only: No.

25 Calculation Model: Not applicable.

26 **Condition Approval 4/4/2013**

27 Condition: Each emergency diesel fire pump shall not operate for more than 230 hours per
28 year on a 12 month rolling summation calculated once per month. Compliance
29 shall be monitored by installing and operating a non-resettable totalizer on each
30 fire pump. Compliance shall be monitored by including a written statement in
31 each semiannual report of the hours the emergency diesel fire pumps operated in
32 each of the six (6) months covered by the report and the summation of hours
33 operated over the previous 12 months.

34 Periodic Monitoring: Recordkeeping.

35 Test Method: Not Specified.

36 Test Frequency: Not Applicable.

37 Required Records: Monthly.

38 State-Only: No.

39 Calculation Model: Not applicable.

- 1 **Condition Approval 11/24/2003**
- 2 Condition: The activities and proposed control technologies described in the application for
3 DE02NWP-002, Revision 2 shall not exceed WAC 173-460 ASILs or the criteria
4 pollutants estimate listed in the Emissions section of the Approval Order.
- 5 Periodic Monitoring: Recordkeeping
- 6 Test Method: Not Specified.
- 7 Test Frequency: At least once per calendar year.
- 8 Required Records: 1. Calculations of TAPs emissions derived from waste feed characterization.
9 2. Calculations of ammonia emissions from LAW and HLW.
10 3. Calculations of criteria pollutants.
- 11 State-Only: Yes.
- 12 Calculation Model: Not applicable.
- 13 **Condition Approval 11/24/2003**
- 14 Condition: A new NOC will be required, if total emissions of toxic air pollutants exceed
15 WAC 173-460 ASILs or result in criteria pollutant emission increases. These
16 values shall be confirmed by emission calculations, for indicator constituents,
17 derived from waste characterization data obtained through implementation of the
18 Ecology approved Regulatory Data Objectives Supporting Tank Waste
19 Remediation System Privatization Project (PNNL-12040). The mass feed rates
20 for the indicator constituents will be verified to be less than or equal to the mass
21 feed rates used in the Integrated Emissions Baseline Report for the Hanford Tank
22 Waste Treatment and Immobilization Plant (24590-WTP-RPT-PO-03-008, Rev.
23 0). Results of any such calculations will be maintained on file and made
24 available upon inspection/request.
- 25 Periodic Monitoring: Recordkeeping
- 26 Test Method: Not Specified.
- 27 Test Frequency: At least once per calendar year.
- 28 Required Records: 1. Calculations of TAPs emissions derived from waste feed characterization.
29 2. Calculations of ammonia emissions from LAW and HLW.
30 3. Calculations of criteria pollutants.
- 31 State-Only: Yes.
- 32 Calculation Model: Not applicable.

1 **Condition Approval 11/24/2003**

2 Condition: Within 180-days of achieving the optimized feed rate of simulant at which the
3 LAW and HLW vitrification facilities will be operated, the permittee shall
4 demonstrate initial compliance through a performance demonstration conducted
5 per an Ecology approved Performance Demonstration Plan. The permittee shall
6 utilize the Performance Demonstration Plan requirements identified in the
7 Dangerous Waste Portion of the Resource Conservation and Recovery Act Permit
8 for the Treatment, Storage, and Disposal of Dangerous Waste Hanford Tank
9 Waste Treatment and Immobilization Plant (DWP), condition III.10.H.5.f (LAW)
10 and III.10.J.5.f (HLW). Ecology shall be notified at least 30 days prior to the test
11 and invited to participate in the test activities at least one week prior to testing.

12 Periodic Monitoring: Recordkeeping.

13 Test Method: Not specified.

14 Test Frequency: Not applicable.

15 Required Records: 1. Notification Documentation.
16 2. Performance Demonstration Plan.

17 State-Only: No.

18 Calculation Model: Not applicable.

19 **Condition Approval 11/24/2003**

20 Condition: Testing per the initial compliance testing identified in 3.1 shall be conducted in
21 accordance with the frequency identified in the DWP, condition III.10.I.1.h
22 (LAW) and II.10.K.1.h (HLW).

23 Periodic Monitoring: Recordkeeping, measurements, and emission calculations.

24 Test Method: As stated in DWP conditions III.10.I.1.h (LAW) and III.10.K.1.h (HLW).

25 Test Frequency: At startup and at least once every 5 years thereafter.

26 Required Records: Test records.

27 State-Only: No.

28 Calculation Model: Not applicable.

1 **Condition Approval 11/24/2003; 11/12/03 (PSD)**

2 Condition: Within 180 days of initial startup, boiler, emergency diesel generator, emergency
 3 turbine generators and LAW, HLW, and PT process facility off-gas source testing
 4 shall be conducted according to the following methods, unless an alternate
 5 method has been proposed in writing by the permittee and approved by Ecology
 6 in writing in advance of the testing.

Tested Pollutant	Reference Method (40 CFR 60 Appendix A unless otherwise defined), as of 7/1/2000
Carbon Monoxide	Method 10
Nitrogen Oxides	Method 7E
Volatile Organic Compounds	Method 18
Sulfur Dioxide	Method 6C
Visible Emissions	Method 9
Particulate Matter	40 CFR 60 Appendix A Method 5; 40 CFR 51 Appendix M Method 201 or 201A for the front half analysis and 40 CFR 51 Appendix M Method 202 for the back half

7 Periodic Monitoring: Recordkeeping, measurements, and emission calculations.

8 Test Method: As stated in condition.

9 Test Frequency: Initial startup and every 5 years thereafter.

10 Required Records: Test Records.

11 State-Only: No.

12 Calculation Model: Not applicable.

13 **Condition Approval 11/24/2003**

14 Condition: During the boiler source testing, a direct-reading measurement device for carbon
 15 monoxide with a minimum measurement accuracy of five percent or less shall
 16 take readings according to methods proposed by the permittee and approved by
 17 Ecology in writing in advance of the testing. The direct-reading instrument shall
 18 be calibrated for future use, using the results of the source testing.

19 Periodic Monitoring: Recordkeeping, measurements, and emission calculations.

20 Test Method: Portable emissions analyzer calibrated during most recent source test.

21 Test Frequency: Initial startup.

22 Required Records: Logs of boiler tune-ups and significant boiler maintenance activities will be
 23 maintained.

24 State-Only: No.

25 Calculation Model: Not applicable.

1	Condition Approval	11/24/2003
2	Condition:	Emissions from boilers shall be monitored for CO, and Oxygen by means of a
3		portable emissions analyzer (direct-reading measurement device) at initial startup
4		and after routinely scheduled maintenance activities and burner/control
5		adjustments such as fuel/air metering ratio control and oxygen trim control.
6	Periodic Monitoring:	Recordkeeping, measurements, and emission calculations.
7	Test Method:	Portable emissions analyzer calibrated during most recent source test.
8	Test Frequency:	Initial startup and after routinely scheduled maintenance activities and
9		burner/control adjustments such as fuel/air metering ratio control and oxygen
10		trim control.
11	Required Records:	Logs of boiler tune-ups and significant boiler maintenance activities will be
12		maintained.
13	State-Only:	No.
14	Calculation Model:	Not applicable.
15	Condition Approval	10/10/2005 Steam Generating Boilers, Diesel Fire Pumps, Type I Emergency
16		Generators, and Emergency Turbine Generators
17	Condition:	Use Ultra-low sulfur fuel $\leq 0.0015\%$ by wt.
18	Periodic Monitoring:	Not applicable.
19	Test Method:	Recordkeeping
20	Test Frequency:	Semiannually
21	Required Records:	Fuel purchase records and a written statement in each semiannual report of the
22		type of fuel used.
23	State-Only:	No.
24	Calculation Model:	Not applicable.
25	Condition Approval	10/10/2005 Pretreatment Plant
26	Condition:	PM10 ≤ 0.02 g/dscf 24- hour average <i>OR</i> 0.456 lb/hr 24-hour average
27	Periodic Monitoring:	Not applicable.
28	Test Method:	40 CFR 60 Appendix A, Method 5, 40 CFR 51 Appendix M Method 201 <i>OR</i>
29		201A for the front half analysis and 40 CFR 51 Appendix M Method 202 for the
30		back half.
31	Test Frequency:	5 years
32	Required Records:	Calculations based on testing results and hours of operation.
33	State-Only:	No.
34	Calculation Model:	Not applicable

1	Condition Approval	10/10/2005 LAW Vitrification Plant
2	Condition:	PM10 \leq 0.36 lb/hr at 21% O ₂ , 24-hr average.
3	Periodic Monitoring:	Not applicable.
4	Test Method:	40 CFR 60 Appendix A, Method 5, 40 CFR 51 Appendix M Method 201 <u>OR</u>
5		201A for the front half analysis and 40 CFR 51 Appendix M Method 202 for the
6		back half.
7	Test Frequency:	5 years
8	Required Records:	Calculations based on testing results and hours of operation.
9	State-Only:	No.
10	Calculation Model:	Not applicable
11	Condition Approval	10/10/2005 LAW Vitrification Plant
12	Condition:	NO _x \leq 477 ppm dry per volume at 21% O ₂ , 24 hr average <u>OR</u> 200.1 lb/day
13		averaged over 30 consecutive days
14	Periodic Monitoring:	Not applicable.
15	Test Method:	40 CFR 60 Appendix A, Method 7E
16	Test Frequency:	Continuous; using a Continuous Emission Monitor (CEM) for NO _x and a flow
17		meter
18	Required Records:	Testing results CEM for NO _x and flow meter, and CEM performance evaluation.
19	State-Only:	No.
20	Calculation Model:	Not applicable
21	Condition Approval	10/10/2005 HLW Vitrification Plant
22	Condition:	PM10 \leq 0.135 lb/hr at 21% O ₂ , when averaged over 24 consecutive hours.
23	Periodic Monitoring:	Not applicable.
24	Test Method:	40 CFR 60 Appendix A, Method 5, 40 CFR 51 Appendix M Method 201 <u>OR</u>
25		201A for the front half analysis and 40 CFR 51 Appendix M Method 202 for the
26		back half.
27	Test Frequency:	5 years
28	Required Records:	Calculations based on testing results and hours of operation.
29	State-Only:	No.
30	Calculation Model:	Not applicable
31	Condition Approval	10/10/2005 HLW Vitrification Plant
32	Condition:	NO _x 352 ppm _{dv} at 21% O ₂ , over a 24 hr averaging period <u>OR</u> 23.3 lb/day
33		averaged over 30 consecutive days.
34	Periodic Monitoring:	Not applicable.
35	Test Method:	40 CFR 60 Appendix A, Method 7E, CEM
36	Test Frequency:	CEM Continuous
37	Required Records:	Testing results CEM for NO _x and flow meter, and CEM performance evaluation.
38	State-Only:	No.
39	Calculation Model:	Not applicable

- 1 **Condition Approval 10/10/2005 Steam Boilers**
- 2 Condition: Maximum aggregated fuel consumption for steam boilers 1, 2, 3, 4, 5, and 6 shall
3 not exceed 13,400,000 gallons per year
- 4 Periodic Monitoring: Not applicable.
- 5 Test Method: Verification of fuel purchases.
- 6 Test Frequency: Semiannual
- 7 Required Records: Fuel purchase records and a written statement in each semiannual report of the
8 total fuel consumption over the previous 12 months.
- 9 State-Only: No.
- 10 Calculation Model: Not applicable
- 11 **Condition Approval 10/10/2005 Steam Boilers**
- 12 Condition: PM or PM₁₀ from each steam boiler ≤ 0.02 lb/MMBtu ***OR*** 1.0 lb/hr averaged
13 over 24 consecutive hours.
- 14 Periodic Monitoring: Not applicable.
- 15 Test Method: 40 CFR 60 Appendix A, Method 5, 40 CFR 51 Appendix M Method 201 ***OR***
16 201A for the front half analysis and 40 CFR 51 Appendix M Method 202 for the
17 back half
- 18 Test Frequency: 5 years
- 19 Required Records: Testing results and hours of operation.
- 20 State-Only: No.
- 21 Calculation Model: Not applicable
- 22 **Condition Approval 10/10/2005 Steam Boilers**
- 23 Condition: NO_x ≤ 0.09 lb/MMBtu 3% O₂, ***OR*** 4.52 lb/hr averaged over 24 consecutive hours
- 24 Periodic Monitoring: Not applicable.
- 25 Test Method: EPA Method 7E of 40 CFR 60 Appendix A
- 26 Test Frequency: 5 years
- 27 Required Records: Calculations based on source testing results and gallons of fuel.
- 28 State-Only: No.
- 29 Calculation Model: Not applicable
- 30 **Condition Approval 10/10/2005 Steam Boilers**
- 31 Condition: Use Ultra-low sulfur fuel $\leq 0.0015\%$ by wt.
- 32 Periodic Monitoring: Not applicable.
- 33 Test Method: Recordkeeping
- 34 Test Frequency: Semiannually
- 35 Required Records: Fuel purchase records
- 36 State-Only: No.
- 37 Calculation Model: Not applicable.

- 1 **Condition Approval 10/10/2005 Emergency Generators**
- 2 Condition: Use Ultra-low sulfur fuel $\leq 0.0015\%$ by wt.
- 3 Periodic Monitoring: Not applicable.
- 4 Test Method: Recordkeeping
- 5 Test Frequency: Semiannually
- 6 Required Records: Fuel purchase records.
- 7 State-Only: No.
- 8 Calculation Model: Not applicable.
- 9 **Condition Approval 10/10/2005 Emergency Turbine Generators**
- 10 Condition: Each Type I or Type II emergency turbine generator shall not exceed 164 hours
11 per year when averaged over 12 consecutive months, calculated once per month.
- 12 Periodic Monitoring: Not applicable.
- 13 Test Method: Installing and operating a non-resettable totalizer on each generator.
- 14 Test Frequency: Semiannually
- 15 Required Records: Written statement in each semiannual report of the hours the emergency
16 generators operated in each of the six (6) months covered by the report and the
17 summation of hours operated over the previous 12 months.
- 18 State-Only: No.
- 19 Calculation Model: Not applicable.
- 20 **Condition Approval 10/10/2005 Emergency Generators**
- 21 Condition: NO_x Type I Generator ≤ 391.1 lb/day averaged over 24 consecutive hours.
- 22 Periodic Monitoring: Not applicable.
- 23 Test Method: EPA Method 7E of 40 CFR 60, Appendix A
- 24 Test Frequency: 5 years
- 25 Required Records: Calculations based on testing results and hours of operation.
- 26 State-Only: No.
- 27 Calculation Model: Not applicable.
- 28 **Condition Approval 10/10/2005 Emergency Turbine Generators**
- 29 Condition: Emissions of NO_x from the Emergency Turbine Generators shall not exceed 69.8
30 lb/hr (each), when averaged over 1 hour and 164 hours per year averaged over 12
31 consecutive months.
- 32 Periodic Monitoring: Not applicable.
- 33 Test Method: EPA Method 7E of 40 CFR 60, Appendix A
- 34 Test Frequency: 5 years
- 35 Required Records: Calculations based upon testing results and hours of operation.
- 36 State-Only: No.
- 37 Calculation Model: Not applicable.

Effective Date: 08/01/2019
Expiration Date: 08/01/2024

Hanford Air Operating Permit
Permit No. 00-05-006
Renewal 3

- | | | |
|---|---------------------------|--|
| 1 | Condition Approval | 10/10/2005 Diesel Fire Water Pumps |
| 2 | Condition: | Use Ultra-low sulfur fuel $\leq 0.0015\%$ by wt. |
| 3 | Periodic Monitoring: | Not applicable. |
| 4 | Test Method: | Recordkeeping |
| 5 | Test Frequency: | Semiannually |
| 6 | Required Records: | Fuel purchase records |
| 7 | State-Only: | No. |
| 8 | Calculation Model: | Not applicable. |

- 1 **1.4.24 Discharge Point: Integrated Disposal Facility (IDF)**
2 200E, General Standards
3 Requirement Citation: WAC 173-400-040(9)(a), DE05NWP-004
4 **Condition Approval 05/31/2005**
5 Condition: FUGITIVE DUST
6 Requires reasonable precautions be taken to prevent fugitive dust from becoming
7 airborne and to minimize dust generation.
8 Periodic Monitoring: Pre-job planning to determine reasonable control measures.
9 Test Method: Not specified.
10 Test Frequency: Not applicable.
11 Required Records: None listed.
12 State-Only: No.
13 Calculation Model: Not applicable.
14 **Condition Approval 05/31/2005**
15 Condition: FUGITIVE EMISSIONS
16 The permittee shall take reasonable precautions to prevent the release of air
17 contaminants from any emissions unit engaging in materials handling,
18 construction, demolition, or any other operation that is a source of fugitive
19 emissions.
20 Periodic Monitoring: Pre-job planning to determine reasonable control measures.
21 Test Method: Not specified.
22 Test Frequency: Not applicable.
23 Required Records: None listed.
24 State-Only: No.
25 Calculation Model: Not applicable.
26 **Condition Approval 05/31/2005**
27 Condition: EMISSION LIMITS FOR WASTE COVERING OPERATIONS
28 During waste covering operations, aggregate, a mixture of minerals, sand and
29 soil, will be used to cover the waste package at the IDF. Dust control for
30 covering the waste package will consist of watering and/or chemical wetting
31 agents. Waste covering operations will be curtailed during high winds in
32 accordance with abnormal operating procedures for high winds. Prior to long
33 periods of inactivity, an assessment shall be made to implement more
34 comprehensive dust control methods, such as chemical stabilization, on
35 disturbed areas. A reassessment will be made once per week.
36 Periodic Monitoring: Recordkeeping.
37 Test Method: Not specified.
38 Test Frequency: Not applicable.
39 Required Records: Daily activity reports, logs, pre-job reviews, management assessments,
40 surveillances, or similar documents.
41 State-Only: Yes.
42 Calculation Model: Not applicable.

- 1 **Condition Approval: 05/31/2005**
- 2 Condition: EMISSION LIMITS FOR TRAVEL ON UNPAVED ROADS
- 3 Surface treatment for dust control will consist of watering and/or chemical
- 4 stabilization. Minimize vehicle use on unpaved road. Perform regular
- 5 maintenance of road surface. Reduce vehicle speed limit on unpaved roads.
- 6 Periodic Monitoring: Recordkeeping
- 7 Test Method: Not specified.
- 8 Test Frequency: Not applicable.
- 9 Required Records: Daily activity reports, logs, pre-job reviews, management assessments,
- 10 surveillances, or similar documents.
- 11 State-Only: Yes.
- 12 Calculation Model: Not applicable.
- 13 **Condition Approval 05/31/2005**
- 14 Condition: EMISSION LIMITS FOR AGGREGATE COVER COMPACTING ACTIVITIES
- 15 A water truck will be provided, and operated as needed to spray water for
- 16 compaction. Waste covering operations will be curtailed during high winds in
- 17 accordance with abnormal operating procedures for high winds. Prior to long
- 18 periods of inactivity an assessment shall be made to implement more
- 19 comprehensive dust control methods, such as chemical stabilization, on disturbed
- 20 areas. A reassessment will be made once per week.
- 21 Periodic Monitoring: Recordkeeping.
- 22 Test Method: Not specified.
- 23 Test Frequency: Not applicable.
- 24 Required Records: Daily activity reports, logs, pre-job reviews, management assessments,
- 25 surveillances, or similar documents.
- 26 State-Only: Yes.
- 27 Calculation Model: Not applicable.
- 28 **Condition Approval 05/31/2005**
- 29 Condition: EMISSION LIMITS FOR AGGREGATE STORAGE PILE
- 30 Watering will be utilized to minimize wind erosion during storage pile operation.
- 31 Storage pile work will be curtailed during high winds in accordance with abnormal
- 32 operating procedures for high winds. Prior to long periods of inactivity, an
- 33 assessment shall be made to implement more comprehensive dust control methods,
- 34 such as chemical stabilization, on disturbed areas. A reassessment will be made
- 35 once per week. Minimize vehicle traffic. Minimize areas of disturbance.
- 36 Periodic Monitoring Recordkeeping.
- 37 Test Method: Not specified.
- 38 Test Frequency: Not applicable.
- 39 Required Records: Daily activity reports, logs, pre-job reviews, management assessments,
- 40 surveillances, or similar documents.
- 41 State-Only: Yes.
- 42 Calculation Model: Not applicable.

1 **1.4.25 Discharge Point: Ventilation Systems for 241-AN and 241AW-Tank Farms**

2 200E, Tank Farms – Ventilation Systems for 241-AN and 241 AW Tank Farms

3 Requirement Citation (WAC or Order Citation): WAC 173-400-040(2), DE05NWP-001 (2/18/2005),
4 Rev 1 (7/31/2007), and Amd A (3/26/2013)

5 **Condition Approval 2/18/2005 (DE05NWP-001)**

6 Condition: EMISSION LIMITS

7 Visible emissions from each stack shall not exceed five (5) percent.

8 Periodic Monitoring: Compliance and monitoring shall be met by Section 2.1, Tier 3 Visible Emissions
9 Survey requirements. Should visible emissions be observed which are not solely
10 attributable to water condensation, compliance shall be met by performing an
11 opacity determination utilizing 40 CFR 60, Appendix A, Method 9, providing that
12 such determination shall not place the visible emission observer in hazard greater
13 than that identified for the general worker.

14 Test Method: 40 CFR 60, Appendix A, Method 9, as applicable.

15 Test Frequency: None specified (as needed for monitoring and compliance with AOP Attachment
16 2).

17 Required Records: (1) Maintenance records required in AOP Attachment 2 for maintaining
18 abatement control technology.

19 (2) Visible emission surveys records

20 State-Only: No.

21 Calculation Model: Not applicable.

22 **Condition Approval 2/18/2005 (DE05NWP-001)**

23 Condition: EMISSION LIMITS

24 Primary tank ventilation exhauster systems shall not exceed 4,000 ft³/min (at
25 standard temperature and pressure).

26 Periodic Monitoring: Compliance and monitoring of this condition shall be demonstrated by stack gas
27 flow and temperature measurement.

28 Test Method: Not specified.

29 Test Frequency: None specified (as needed for monitoring and compliance with AOP Attachment
30 2).

31 Required Records: (1) Records of exhauster system stack flow rates and temperature records.

32 (2) Records of calibration of stack gas flow rate and temperature measurement
33 devices.

34 State-Only: No.

35 Calculation Model: Not applicable.

- 1 **Condition Approval** 7/31/2007 (DE05NWP-001 Rev 1) and 3/26/2013 (Amd A)
- 2 Condition: EMISSION LIMITS
- 3 All TAPs, as shown in Table 2 of Approval Order DE05NWP-001, Rev 1. and
- 4 Amd A, shall be below their respective ASIL or Screening Level of Table 1 of
- 5 Approval Order DE05NWP-001 Rev 1.
- 6 Periodic Monitoring: Compliance and monitoring shall be met by operating the exhauster systems only
- 7 when in accord with T-BACT emission controls for the project. T-BACT for this
- 8 project has been determined to be operation of the primary tank ventilation
- 9 exhauster systems not exceeding 4,000 cubic feet per minute with moisture de-
- 10 entrainment, pre-heater, and HEPA filtration in service in the treatment train.
- 11 Test Method: Not specified.
- 12 Test Frequency: None specified (as needed for monitoring and compliance).
- 13 Required Records: Documentation and record-keeping of T-BACT compliance of emission control
- 14 found for this project (operation of the primary tank ventilation exhauster system
- 15 not exceeding 4,000 ft³/min with moisture de-entrainment, pre-heater, and HEPA
- 16 filtration in service in the treatment train).
- 17 State-Only: Yes.
- 18 Calculation Model: Not applicable.

1	Condition Approval	3/26/2013 (DE05NWP-001 Amd A)
2	Condition:	EMISSIONS LIMITS
3		Emissions of ammonia shall not exceed 2.9 pounds per hour (3.63E-01
4		gram/second) from either primary tank ventilation exhauster system. The term
5		'either exhauster system' shall mean each individual primary tank ventilation
6		exhauster system within the 241-AN and 241-AW Tank Farms, where an
7		exhauster system may be operated in single-train or dual-train modes.
8	Periodic Monitoring:	Conduct of ammonia concentration readings and apply these concentration
9		readings with contemporaneous stack flow rate and temperatures to determine
10		instantaneous mass release rate of ammonia.
11	Test Method:	Ammonia sampling and analysis will be in accord with approved alternative
12		sampling procedures including the use of Draeger tubes to measure stack gas
13		concentration of ammonia providing such devices are spanned to appropriately
14		measure the stack gas ammonia concentration. Stack flow rate and temperature
15		will be applied with the ammonia stack gas concentration to report ammonia
16		emission in terms of grams per second.
17	Test Frequency:	In order to assess baseline emission concentrations from each exhauster system,
18		emission levels of ammonia will be assessed between 12 and 24 hours after
19		initiation of exhauster operation (single train or dual train). Ammonia stack
20		concentrations shall be sampled a minimum of three times.
21	<u>Baseline Assessments</u>	Baseline assessments shall be conducted within ninety (90) days of
22		commencement of operations. Should dual exhauster train operation not be
23		required by the Permittee during this ninety (90) day period, assessment of dual
24		train operation emissions shall be conducted on the first occasion of dual train
25		operation which is anticipated to exceed 24 hours duration.
26	<u>Bi-Annual Assessment</u>	In order to maintain reasonable assurance of continued compliance with emission
27		limitations from these exhauster systems, bi-annual assessment of ammonia stack
28		emissions will be conducted beginning the second calendar year following
29		completion of single train exhauster operation assessment. A minimum of three
30		samples shall be used to assess these emissions.
31	Required Records:	Results of emission assessments, baseline and bi-annual emission monitoring
32		results, supporting data and calculations to demonstrate compliance with
33		ammonia limits.
34	State-Only:	Yes.
35	Calculation Model:	Not applicable.

- 1 **Condition Approval 2/18/2005 (DE05NWP-001)**
- 2 Condition: REPORTING
- 3 Visible emission surveys conducted and a report of the maintenance conducted to
- 4 maintain the subject exhaust system's T-BACT operations shall be submitted to
- 5 Ecology within 30 days of completion of the survey with an assessment of the
- 6 cause of visible emissions.
- 7 Periodic Monitoring: Compliance of this condition is met by submitting to Ecology within thirty (30)
- 8 days of completion of the survey with an assessment of the cause of visible
- 9 emissions.
- 10 Test Method: Not specified.
- 11 Test Frequency: Not applicable.
- 12 Required Records: Visible emission surveys conducted and a report of the maintenance.
- 13 State-Only: No.
- 14 Calculation Model: Not applicable.
- 15 **Condition Approval 2/18/2005 (DE05NWP-001)**
- 16 Condition: REPORTING
- 17 Identification of any TAP not previously identified within the Notice of
- 18 Construction Application or Supplement emissions estimates shall be submitted
- 19 to Ecology within ninety (90) days of completion of laboratory analyses which
- 20 verify emissions of that toxic air pollutant from the project.
- 21 Periodic Monitoring: Compliance of this condition is met by submitting to Ecology within ninety (90)
- 22 days of completion of laboratory analyses which verify emissions of that toxic air
- 23 pollutant from the project.
- 24 Test Method: Not specified.
- 25 Test Frequency: Not applicable.
- 26 Required Records: Laboratory analysis.
- 27 State-Only: No.
- 28 Calculation Model: Not applicable.
- 29 **Condition Approval 2/18/2005 (DE05NWP-001)**
- 30 Condition: REPORTING
- 31 Results of emission assessments conducted shall be submitted to Ecology within
- 32 90 days of completion of the assessment.
- 33 Periodic Monitoring: Compliance of this condition is met by submitting to Ecology within ninety (90)
- 34 days of completion of such assessment.
- 35 Test Method: Not specified.
- 36 Test Frequency: Not applicable.
- 37 Required Records: Emission assessment results.
- 38 State-Only: No.
- 39 Calculation Model: Not applicable

1 **1.4.26 Discharge Point: 200 Area SST Categorical Waste Retrieval**

2 200 Area SST Categorical Waste Retrieval

3 Requirement Citation: WAC 173-400-040(2), DE05NWP-002 (2/18/2005), Rev. 1 (10/12/2005), and
4 Rev 2 (7/31/2007).

5 **Condition Approval 2/18/2005 (DE05NWP-002)**

6 Condition: EMISSION LIMITS

7 Visible emissions from each tank ventilation exhauster stack or aggregated
8 exhauster stack shall not exceed five percent.

9 Periodic Monitoring: (1) Section 2.1, Tier 3.

10 (2) Visible emission surveys

11 Test Method: 40 CFR 60, Appendix A, Method 9, as applicable.

12 Test Frequency: When visible emissions are observed.

13 Required Records: (1) Maintenance records required in AOP Attachment 2 for maintaining
14 abatement control technology.

15 (2) Visible emission records

16 State-Only: No.

17 Calculation Model: Not applicable.

18 **Condition Approval 2/18/2005 (DE05NWP-002)**

19 Condition: EMISSION LIMITS

20 Tank ventilation exhauster systems for the 241-C SST farm 100 series tank (241-
21 C-101 through 241-C-112) shall not exceed cumulative flow rates of 7,000
22 ft³/min (at standard temperature and pressure) for three exhausters individually
23 limited to 1,000 ft³/min, 3,000 ft³/min, and 3,000 ft³/min, respectively (at standard
24 temperature and pressure).

25 Periodic Monitoring: Compliance and monitoring of this condition shall be demonstrated by stack gas
26 flow and temperature measurement.

27 Test Method: Not specified.

28 Test Frequency: None specified (as needed for monitoring and compliance with AOP Attachment
29 2).

30 Required Records: (1) Records of exhauster system stack flow rates and temperature records.

31 (2) Records of calibration of stack gas flow rate and temperature measurement
32 devices.

33 State-Only: No.

34 Calculation Model: Not applicable.

- 1 **Condition Approval 2/18/2005 (DE05NWP-002)**
- 2 Condition: EMISSION LIMITS
- 3 SST ventilation exhauster systems for the retrieval of wastes other than those of
- 4 the 241-C tank farm 100 series tanks shall not exceed 1,000 ft³/min (at standard
- 5 temperature and pressure).
- 6 Periodic Monitoring: Compliance and monitoring of this condition shall be demonstrated by stack gas
- 7 flow and temperature measurement.
- 8 Test Method: Not specified.
- 9 Test Frequency: None specified (as needed for monitoring and compliance with AOP Attachment
- 10 2).
- 11 Required Records: (1) Records of exhauster system stack flow rates and temperature records.
- 12 (2) Records of calibration of stack gas flow rate and temperature measurement
- 13 devices.
- 14 State-Only: No.
- 15 Calculation Model: Not applicable.

- 1 **Condition Approval** 7/31/2007 (DE05NWP-002, Rev 2)
- 2 **Condition:** EMISSION LIMITS
- 3 All TAPs, as submitted in the permittee's NOC Applications, shall be below their
4 respective ASIL or Screening Level of Table 1 in Approval Order DE05NWP-
5 002, Rev 2.
- 6 **Periodic Monitoring:** Compliance and monitoring with this condition shall be met by:
- 7 (1) Operating the exhauster systems only when in accord with T-BACT emission
8 controls found for this project (operation of the tank ventilation exhauster
9 systems with moisture de-entrainment, pre-heater, and HEPA filtration in
10 service in the treatment train).
- 11 (2) Development and implementation of a sampling and analysis plan (SAP) for
12 each tank retrieval. For each retrieval, the SAP shall address the emission of
13 a minimum of the three TAPs with the higher potential ambient concentration
14 relative to their ASILs of WAC 173-460-150 and WAC-173-460-160 or
15 relative to their Screening Level of Table 1 of the Approval Order
16 DE05NWP-002, Rev 2. The TAPs addressed in the SAP shall be identified
17 from Table 2 of the Approval Order DE05NWP-002, Rev 2, and based upon
18 best engineering judgment and most current tank content data. Analytical
19 methods for the analysis shall be the United States EPA, OSHA, or NIOSH
20 approved, or by approved equivalent method.
- 21 **Test Method:** Not specified.
- 22 **Test Frequency:** None specified (as needed for monitoring and compliance).
- 23 **Required Records:** (1) All monitoring and operations records required to operate and maintain the
24 emission control equipment which implements T-BACT as required in
25 Periodic Monitoring above.
- 26 (2) SAPs developed for compliance demonstration as described in Periodic
27 Monitoring above.
- 28 (3) Laboratory analysis result summaries of any samples undertaken after the
29 effective date of the Approval Order DE05NWP-002, Rev 2, from SST tank
30 farm tank headspaces or SST ventilation system exhaust which are examined
31 for organic species or other TAPs.
- 32 **State-Only:** Yes.
- 33 **Calculation Model:** Not applicable.

- 1 **Condition Approval 2/18/2005 (DE05NWP-002)**
- 2 Condition: REPORTING
- 3 Visible emission surveys, conducted pursuant to Compliance Demonstration
- 4 requirement 1.3.2, per NOC approval DE05NPW-002, and a report of the
- 5 maintenance conducted to maintain the subject exhaust system's T-BACT
- 6 operations.
- 7 Periodic Monitoring: The reporting condition shall be submitted to Ecology within thirty (30) days of
- 8 completion of the survey with an assessment of the cause of visible emissions.
- 9 Test Method: Not specified.
- 10 Test Frequency: Not applicable.
- 11 Required Records: Visible emission surveys conducted and a report of the maintenance.
- 12 State-Only: No.
- 13 Calculation Model: Not applicable.
- 14 **Condition Approval 10/12/2005 (DE05NWP-002, Rev. 1)**
- 15 Condition: REPORTING
- 16 Identification of any TAP not previously identified within the Notice of
- 17 Construction Application or Supplement emissions estimates as defined in Table
- 18 2, per NOC approval DE05NWP-002R1, shall be submitted to Ecology within
- 19 ninety (90) days of completion of laboratory analyses which verify emissions of
- 20 that toxic air pollutant from the project.
- 21 Periodic Monitoring: The reporting condition shall be submitted to Ecology within ninety (90) days of
- 22 completion of laboratory analyses which verify emissions of that toxic air
- 23 pollutant from the project.
- 24 Test Method: Not specified.
- 25 Test Frequency: Not applicable.
- 26 Required Records: Laboratory analysis.
- 27 State-Only: Yes.
- 28 Calculation Model: Not applicable.
- 29 **Condition Approval 2/18/2005 (DE05NWP-002)**
- 30 Condition: REPORTING
- 31 An annual schedule (Federal fiscal year basis) of anticipated operations and
- 32 installations of exhauster systems.
- 33 Periodic Monitoring: The reporting condition shall be submitted by November first of each year.
- 34 Test Method: Not specified.
- 35 Test Frequency: Not applicable.
- 36 Required Records: Annual Schedule.
- 37 State-Only: Yes.
- 38 Calculation Model: Not applicable.

- 1 **Condition Approval 2/18/2005 (DE05NWP-002)**
- 2 Condition: OPERATIONAL NOTICE
- 3 Notification shall be made at least ten (10) days prior to initial operation of any
- 4 exhauster system covered by this ORDER DE05NWP-002 when installed to
- 5 ventilate a tank not previously actively ventilated under this ORDER.
- 6 Periodic Monitoring: Not applicable.
- 7 Test Method: Not specified.
- 8 Test Frequency: Not applicable.
- 9 Required Records: Not applicable.
- 10 State-Only: Yes.
- 11 Calculation Model: Not applicable.

1 **1.4.27 Discharge Point: E-85 Fuel Station**

2 200E Area, E-85 Automotive Fuel Tank and Dispensing Facility

3 Requirement Citation: DE06NWP-001 (4/17/2006)

4 **Condition Approval 4/17/2006**

5 Condition: Emission Limits

6 A. Emissions of Volatile Organic Compounds shall not exceed 40 tons per year.

7 B. All TAPs, as submitted in the Permittee's NOC Application, shall be below
8 their respective ASIL.

9 Periodic Monitoring: Record fuel storage tank loading of the E-85 fuel and verify NOC Condition 1.6
10 requirements for each load received.

11 Test Method: Compliance of the approval condition shall be demonstrated by installation of
12 BACT and T-BACT emission controls including: (1) submerged or bottom fill
13 pipe such that the pipe inlet is fully submerged when the fluid level in the tank is
14 six inches (15.2 cm) or greater, and (2) fitting to vapor balance gasoline vapors
15 with the delivery transport tank.

16 Test Frequency: Not applicable (maintenance records).

17 Required Records: Retention of fuel storage tank loading records detailed in NOC (DE06NWP-001)
18 Approval Condition 1.6.

19 State-Only: No.

20 Calculation Model: Not applicable.

1 **1.4.28 Discharge Point: HAMMER Training and Education Facility**

2 Volpentest Hazardous Materials Management and Emergency Response (HAMMER) Training and
3 Education Facility (2890 Horn Rapids Road, Richland, Washington)

4 Requirement Citation: DE07NWP-001(4/9/2007) and Amendment 1 (7/31/2007)"

5 **Condition Approval 4/19/2007**

6 Condition: Visible emissions from training operations shall not exceed twenty (20) percent
7 opacity. [WAC 173-400-040(2)]

8 Periodic Monitoring: Section 2.1, Tier 2

9 Test Method: Section 2.1, Tier 2 and/or EPA Method 9 of 40 CFR 60, Appendix A.

10 Test Frequency: Once per year, if visible emissions are observed (see Periodic Monitoring).

11 Required Records: Records of Tier 2 visible emission event surveys including EPA Method 9 results.

12 State-Only: No.

13 Calculation Model: Not applicable.

14 **Condition Approval 4/19/2007**

15 Condition: Fugitive emissions from training operations shall be minimized. [WAC 173-400-
16 040(4)(a)]

17 Periodic Monitoring: Use of operating procedures: (1) keep containers closed when not in use, and (2)
18 ensure proper handling and storage to minimize unintentional losses.

19 Test Method: Not specified.

20 Test Frequency: Not applicable.

21 Required Records: Records of (1) fugitive release control procedure training, and (2) events which
22 detail non-compliance with fugitive release control procedures or unintentional
23 releases and response to such events.

24 State-Only: No.

25 Calculation Model: Not applicable.

26 **Condition Approval 4/19/2007**

27 Condition: Particulate Matter emissions from training materials shall not exceed 1,500
28 pounds per year (lb/yr). [WAC 173-400-110(5)(b)]

29 Periodic Monitoring: Material record keeping.

30 Test Method: Not applicable.

31 Test Frequency: Not applicable.

32 Required Records: Material balance records which detail materials receipt and disposal, with a
33 summary assessment of losses calculated each calendar quarter.

34 State-Only: No.

35 Calculation Model: Not applicable.

36 **Condition Approval 4/19/2007 (DE07NWP-001)**

37 Condition: Volatile Organic Compound (VOC) emissions from training materials shall not
38 exceed 4,000 pounds per year (lb/yr). [WAC 173-400-110(5)(b)]

39 Periodic Monitoring: Materials record keeping.

40 Test Method: Not applicable.

41 Test Frequency: Not applicable.

- 1 Required Records: Material balance records which detail materials receipt and disposal with a
2 summary assessment of losses, calculated each calendar quarter.
- 3 State-Only: No.
- 4 Calculation Model: Not applicable.
- 5 **Condition Approval 4/19/2007 (DE07NWP-001) and 7/31/2007 (Amd 1)**
- 6 Condition: Emissions of all TAPs, as identified in Table 1 of NOC Order DE07NWP-001
7 (4/19/2007) and Amd 1 (7/31/2007), or newly identified, shall be below their
8 respective SQERs. [WAC 173-460-150]
- 9 Periodic Monitoring: Materials record-keeping.
- 10 Test Method: Not applicable.
- 11 Test Frequency: Not applicable.
- 12 Required Records: Material balance records which detail materials receipt and disposal with a
13 summary assessment of losses, calculated each calendar quarter. Emission of any
14 TAP exceeding SQERs detailed in Table 1 of Order DE07NWP-001 shall be
15 reported to Ecology in accord with WAC 173-400-107. Identification of any TAP
16 not previously identified within Order DE07NWP-001, shall be submitted to
17 Ecology within 90 days of initiation of use in training with an estimate of annual
18 emissions.
- 19 State-Only: Yes.
- 20 Calculation Model: Not applicable.
- 21

1 **1.4.29 Discharge Point: 100B-181B/182B**

2 100 Area, Emergency Diesel Engines

3 Requirement Citation: DE07NWP-002, Revision 2

4 **Condition Approval 12/2/2015**

5 Condition: (1) Visible emissions will not exceed 20 % during acceleration mode [WAC 173-
6 400-040(2), 40 CFR §60.4205(b), and 40 CFR §89.113(a)(1)].

7 (2) Visible emissions will not exceed 15 % during lugging mode [40 CFR
8 §60.4205(b), and 40 CFR §89.113(a)(2)].

9 (3) Visible emissions will not exceed 50 % during peak in either acceleration or
10 lugging mode. [WAC 173-400-040(2)(a), 40 CFR §60.4205(b), and 40 CFR
11 §89.113(a)(3)].

12 Periodic Monitoring: Use Tier 1 Visible Emission Survey (Section 2.1 of AOP Attachment 1), unless
13 otherwise specified (see Test Frequency below).

14 Test Method: Tier 1 Visible Emissions Survey and EPA Method 9 (40 CFR §60, Appendix A).

15 Test Frequency: Each engine authorized by this order shall be surveyed for visible emissions
16 during maintenance and readiness testing and emergency-use based upon the
17 following frequency or events:

18 (1) During maintenance and readiness testing, a visible emission survey shall be
19 conducted with each readiness test startup,

20 (2) During emergency-use operations exceeding, or anticipated to exceed, eight
21 hours duration, a visible emissions survey shall be conducted daily,

22 (3) Visible emissions of each engine shall be determined by procedures detailed
23 in 40 CFR 86 Subpart I (40 CFR §86.884 et seq.) within 90 days of initial startup
24 and as required by Ecology.

25 Required Records: Results of visible emissions survey and EPA Method 9 tests conducted pursuant
26 to periodic monitoring.

27 State-Only: No.

28 Calculation Model: Not applicable.

1 **Condition Approval 12/2/2015**

- 2 Condition: Emissions of Polyaromatic Hydrocarbons (PAHs) will not result in ambient
 3 concentrations exceeding $4.8E-04 \mu\text{g}/\text{m}^3$ [WAC 173-460-080(2)].
- 4 Periodic Monitoring: Compliance will be demonstrated by calculation of the sum of PAH TAP
 5 emissions from all engines employing air pollution emission factors of AP 42,
 6 Table 3.3-2, for engines less than 600 HP, and AP-42, Table 3.4-4, for engines
 7 600 HP and higher.
- 8 Test Method: Not applicable.
- 9 Test Frequency: Not applicable.
- 10 Required Records: Calculations and dispersion analyses prepared semiannually in concert with
 11 cumulative operating hour calculations, retained for a minimum of 60 months.
 12 AP 42, fifth edition, shall be used for the calculation. Dispersion analysis only
 13 needs to be performed if the calculated emissions exceed the SQERs.
 14 [WAC 173-460-080(2)(b)]
- 15 State-Only: Yes.
- 16 Calculation Model: Not applicable.

17 **Condition Approval 12/2/2015**

- 18 Condition: Emissions of Toxic Air Pollutants (TAPs), as identified in the table below, will
 19 not exceed SQERs of WAC 173-460-080(2)(e).

TAPs	Chemical Abstracts Service Registry Number	TAP Class	SQER	
			Lb/yr	Lb/hr
Benzene	71-43-2	A	20	
Toluene	108-88-3	B		5
Xylene	1330-20-7	B		5
1,3-Butadiene	106-99-0	A	0.5	
Formaldehyde	50-00-0	A	20	
Acetaldehyde	75-07-0	A	50	
Acrolein	107-02-8	B		0.02

- 20 Periodic Monitoring: Compliance will be demonstrated by calculation of the sum of TAP emissions
 21 from all engines employing air pollution emission factors of AP 42, Table 3.3-2,
 22 for engines less than 600 HP, and AP-42, Table 3.4-3, for engines 600 HP and
 23 higher.
- 24 Test Method: Not applicable.
- 25 Test Frequency: Not applicable.
- 26 Required Records: Calculations prepared semiannually in concert with cumulative operating hour
 27 calculations, retained for a minimum of 60 months. AP 42, fifth edition, shall be
 28 used for the calculation. Table 3.4-3 of AP-42 does not estimate emissions of
 29 1,3-Butadiene for larger engines. An emission factor of zero shall be applied to
 30 1,3-Butadiene for engines 600 HP or larger.
- 31 State-Only: Yes.
- 32 Calculation Model: Not applicable.

- 1 **Condition Approval 12/2/2015**
2 Condition: Emissions of sulfur dioxide will not exceed two tons per year [WAC 173-
3 400-110(5)(b)].
4 Periodic Monitoring: Compliance will be demonstrated by use of fuel containing no greater
5 than 0.0015 weight percent sulfur (15 parts per million by weight) on and
6 after June 1, 2010 [40 CFR §60.4207(b), 40 CFR §80.510(b)].
7 Test Method: Not applicable.
8 Test Frequency: Not applicable.
9 Required Records: Diesel fuel quality shall be documented by annual fuel analysis or vendor
10 documentation of fuel purchases from retail outlet(s) that demonstrate
11 compliance with diesel fuel quality standards of 40 CFR §80.510 for all
12 purchases.
13 State-Only: No.
14 Calculation Model: Not applicable.

1	Condition Approval	12/2/2015
2	Condition:	Emissions of Nitrogen Oxides (NO _x) and Non-methane Hydrocarbons (NMHC)
3		will not exceed 14.2 tons per year [WAC 173-400-091, AP 42 emission factors
4		for engines in NOC application operating 500 hours per year].
5		Emissions of Carbon Monoxide (CO) will not exceed 5 tons per year [WAC 173-
6		400-110(5)(b)].
7		Emissions of particulate matter (PM) will not exceed 0.75 tons per year [WAC
8		173-400-110(5)(b)].
9	Periodic Monitoring:	Compliance will be demonstrated by:
10		(A) Engine Limitation
11		(1) Installation of engines certified to meet emission limitations of 40 CFR
12		§89 [40 CFR §60.4211(c)], and
13		(2) Installation of one engine rated no higher than 450 horsepower (HP) and
14		two engines rated no higher than 900 HP each; and
15		(B) Operational Limitation
16		(1) All recommended operation and equipment maintenance provisions
17		supplied by the manufacturer(s) of the engine(s) will be current [40 CFR
18		§60.4211(a)],
19		(2) Operational monitoring in accord with installed non-resettable hour meter
20		on each engine [40 CFR §60.4209(a)],
21		(3) Operational hours of use for each engine, for purposes of maintenance
22		checks and readiness testing shall not exceed 100 hours per year unless
23		approved by the Administrator of the United States Environmental Protection
24		Agency [40 CFR §60.4211(e)], and
25		(4) Operational hours of use during emergency conditions shall not be
26		limited provided maintenance of records of emergency use are consistent
27		with Required Records below.
28	Test Method:	Not applicable.
29	Test Frequency:	Not applicable.
30	Required Records:	(1) Manufacturer's engine certifications,
31		(2) Maintenance records, and
32		(3) Records of cumulative operating hours for each engine, calculated
33		semiannually, retained for a minimum of 60 months.
34	State-Only:	No.
35	Calculation Model:	Not applicable.

1 **Condition Approval 12/2/2015**

2 Condition: Emission rates of installed engines shall not exceed values identified in the table
 3 below [40 CFR §60.4205(b) and 40 CFR §89.112].

Pollutant	Engine Rating	Gram/kilowatt-hour (g/kW-hr)	Pound/horsepower-hour (lb/HP-hr)
Carbon Monoxide	130 to 560 kW (174 to 751 HP)	3.5	5.8E-03
Particulate Matter	130 to 560 kW (174 to 751 HP)	0.2	3.3E-04
Non-methane Hydrocarbons and Nitrogen Oxides	130 to 560 kW (174 to 751 HP)	4.0	6.6E-03
	>560 kW (>751 HP)	6.4	1.1E-02

4 Periodic Monitoring: Compliance shall be demonstrated by:
 5 (1) Procuring and installing only engines certified to emission standards of 40
 6 CFR §60.4205(b) for the same model year and maximum engine rating [40
 7 CFR §60.4211(c)].
 8 (2) Operating and maintaining the stationary compression ignition internal
 9 combustion engines and control devices according to the manufacturer's
 10 written instructions or procedures developed by the owner or operator that
 11 are approved by the engine manufacturer [40 CFR §60.4211(a)].
 12 (3) Installing and configuring the engines according to manufacturer
 13 specifications [40 CFR §60.4211(c)].
 14 (4) Maintaining records of engine certification as detailed in the Required
 15 Records below.

16 Test Method: Not applicable.

17 Test Frequency: Not applicable.

18 Required Records: (1) Manufacturer's engine certifications.
 19 (2) Records of cumulative operating hours for each engine, calculated semi-
 20 annually, will be retained for a minimum of 60 months.
 21 (3) Records of emergency use operational duration and the basis of the
 22 emergency.

23 State-Only: No.

24 Calculation Model: Not applicable.

1 **1.4.30 Discharge Point: WTP Heaters and Dehumidifiers**

2 200 Area, Hanford Tank Waste Treatment and Immobilization Plant (WTP)

3 Requirement Citation: WAC 173-400-110, WAC 173-460-070, and DE07NWP-004 (11/21/2007)

4 **Condition Approval 11/21/2007**

5 Condition: Emission Limits:

6 (1) Total Suspended Particulates emission shall not exceed 1.25 tons per year
7 [WAC 173-400-110(5)(b)].

8 (2) PM-10 particulate emission shall not exceed 0.75 tons per year [WAC 173-
9 400-110(5)(b)].

10 Periodic Monitoring: Compliance shall be monitored by:

11 (1) Emission of visible emissions of no more than five percent opacity during
12 normal operation of diesel-fired heaters.

13 (2) Diesel-fired heaters exceeding five percent opacity shall be removed from
14 operation until maintenance of the unit results in visible emissions in
15 compliance (no more than 5%).

16 (3) Compliance with visible emissions survey requirements of Approval
17 Condition 3.0 of the Approval Order DE07NWP-004. Visible emissions
18 (VE) from diesel-fired heaters in normal operation (not start-up or shut-
19 down) will be monitored through a VE survey described herein. A minimum
20 representation of 20 percent of active diesel-fired heaters under this ORDER
21 shall be subject to VE survey. If VEs from one of these emission units are
22 observed for more than 10 consecutive minutes, an attempt to identify the
23 cause(s) of the VEs will be made and those results recorded. The recorded
24 entry also will identify any corrective actions taken and the likely frequency
25 of a future reoccurrence. If the event is likely to be re-occurring, and can not
26 be demonstrated to consist of water vapor, a determination of opacity will be
27 made using EPA Method 9 of 40 CFR 60, Appendix A. A VE survey shall be
28 conducted weekly for a period of three months. If weekly VE surveys do not
29 demonstrate emissions in excess of Approval Condition 1.3.1, the VE survey
30 frequency will reduce to once every three months for a period of six months.
31 After nine months of no excess visible emissions, visible emission surveys
32 will be performed for any diesel-fired heater subject to this ORDER only
33 when visible emissions are observed during normal operation.

34 Test Method: VE Surveys and/or EPA Method 9 of 40 CFR 60, Appendix A (if needed).

35 Test Frequency: Not specified.

36 Required Records: (1) VE Surveys and/or EPA Method 9 of 40 CFR 60, Appendix A, results.
37 (2) Maintenance records for any diesel-fired heater removed from service.

38 State-Only: No.

39 Calculation Model: Not applicable.

40 **Condition Approval 11/21/2007**

41 Condition: Emission Limits:

42 Sulfur Oxides (SO_x) emission shall not exceed 2.0 tons per year [WAC 173-400-
43 110(5)(b)].

44 Periodic Monitoring: Compliance shall be monitored by:

- 1 (1) Combustion of distillate fuel oil No. 2 with a sulfur content no greater than
2 0.0015 wt percent (15 ppm) for diesel heaters.
- 3 (2) Combustion of no greater than 933,100 gallons of distillate fuel oil per year,
4 based upon a daily rolling summation.
- 5 Test Method: Record-keeping.
- 6 Test Frequency: Per daily rolling summation and/or fuel shipment.
- 7 Required Records: Fuel analysis data and consumption rates, including supporting data and
8 calculations.
- 9 State-Only: No.
- 10 Calculation Model: Not specified.
- 11 **Condition Approval 11/21/2007**
- 12 Condition: Emission Limits:
- 13 (1) Nitrogen Oxides (NO_x) emission shall not exceed 16.2 tons per year [WAC
14 173-400-110(2)(a)].
- 15 (2) Total Volatile Organic Compounds emission shall not exceed 2.0 tons per
16 year [WAC 173-400-110(5)b)].
- 17 (3) Carbon Monoxide emissions shall not exceed 5.0 tons per year [WAC 173-
18 400-110(5)(b)].
- 19 (4) Toxic Air Pollutant (TAP) emissions as specified in Table 1 of Approval
20 Order DE07NWP-004 [WAC 173-460-070].
- 21 Periodic Monitoring: Compliance shall be monitored by:
- 22 (1) Operation in compliance with BACT/T-BACT (implementation of vendor-
23 recommended combustion and maintenance practices).
- 24 (2) Fuel Limitation: (a) combustion of no greater than 933,100 gallons of
25 distillate fuel oil per year, based upon a daily rolling summation, and (b)
26 combustion of no greater than 1,109,500 gallons of propane per year, based
27 upon a daily rolling summation.
- 28 Test Method: Record-keeping.
- 29 Test Frequency: Per daily rolling summation and/or fuel shipment.
- 30 Required Records: Fuel analysis data and consumption rates, including supporting data and
31 calculations.
- 32 State-Only: No.
- 33 Calculation Model: Not specified.

1 **1.4.31 Discharge Point: 300 Area/339A**

2 300 Area Building 339A, Emergency Diesel Engine

3 Requirement Citation: NSPS Subpart III Requirement Citation: NSPS Subpart III
4 (Emergency diesel, Cylinder Displacement – 8.1 L, 347 horsepower (259
5 kW))

6 **Condition Approval**

7 Condition: Use of fuel per 40 CFR §60.4207.

8 Periodic Monitoring: Compliance will be demonstrated by use of fuel containing (1) no greater
9 than 0.05 weight percent sulfur (500 parts per million by weight) from
10 installation to May 31, 2010 [40 CFR §60.4207(a), 40 CFR §80.510(a)],
11 and (2) no greater than 0.0015 weight percent sulfur (15 parts per million
12 by weight) on and after June 1, 2010 [40 CFR §60.4207(b), 40 CFR
13 §80.510(b)].

14 Test Method: Not applicable.

15 Test Frequency: Not applicable.

16 Required Records: Diesel fuel quality shall be documented by annual fuel analysis or vendor
17 documentation of fuel purchases from retail outlet(s) that demonstrate
18 compliance with diesel fuel quality standards of 40 CFR §80.510 for all
19 purchases.

20 State-Only: No.

21 Calculation Model: Not applicable.

1 **Condition Approval**

2 Condition: Emission rates of installed engine shall not exceed values identified in the table
 3 below [40 CFR §60.4205(a), NSPS III Table 1].

Pollutant	Engine Rating	Gram/kilowatt-hour (g/kW-hr)	Pound/horsepower-hour (lb/HP-hr)
Hydrocarbons	225≤kW<450 (300≤HP<600)	1.3	2.20E-03
Carbon Monoxide		11.4	1.87E-02
Particulate Matter		0.54	8.82E-04
Nitrogen Oxides		9.2	1.52E-02

4 Periodic Monitoring: Compliance shall be demonstrated by:
 5 (1) Procuring and installing an engine compliant with emission standards of 40
 6 CFR §60.4205(a) for the same model year and maximum engine rating [40
 7 CFR §60.4211(b)(3) with emission standards expressed in Table 1 to NSPS
 8 III].
 9 (2) Operating and maintaining the stationary compression ignition internal
 10 combustion engines and control devices according to the manufacturer's
 11 emission-related written instructions or procedures developed by the owner
 12 or operator that are approved by the engine manufacturer [40 CFR
 13 §60.4211(a)].
 14 (3) Maintaining records of engine manufacturing data as detailed in the Required
 15 Records below.

16 Test Method: Not applicable.

17 Test Frequency: Not applicable.

18 Required Records: (1) Manufacturer's engine data will be retained through the life of the engine.
 19 (2) Maintenance records for Periodic Monitoring (2) above shall be retained for
 20 60 months minimum.
 21 (3) Records of cumulative operating hours for the engine, recorded annually, will
 22 be retained for 60 months minimum.
 23 (4) Records of emergency use operational duration and the basis of the
 24 emergency.

25 State-Only: No.

26 Calculation Model: Not applicable.

- 1 **1.4.32 Discharge Point: 241-AP, 241-SY, and 241-AY/AZ Ventilation**
2 200E Area, Tank Farms - Ventilation
3 Requirement Citation: NOC Approval Order DE11NWP-001, Rev. 4(03/03/2016)
4 **Condition Approval** 03/03/2016
5 Condition: EMISSION LIMITS
6 Visible emissions will not exceed five (5)% opacity.
7 Periodic Monitoring: Compliance and monitoring shall be met by Tier 3 visible Emission Survey
8 requirements of the Hanford AOP, Section 2. Should visible emissions be
9 observed which are not solely attributable to water condensation, compliance
10 shall be met by performing an opacity determination utilizing 40 CFR 60,
11 Appendix A, Method 9, providing that such determination shall not place the
12 visible emission observer in hazard greater than that identified for the general
13 worker.
14 Test Method: 40 CFR 60, Appendix A, Method 9
15 Test Frequency: Not specified except when visible emissions are observed.
16 Required Records: (1) Visible emission survey records in which a visible emission was observed
17 and is not solely attributable to water condensation.
18 (2) 40 CFR 60, Appendix A, Method 9 results if conducted.
19 (3) Visible emission survey records shall be submitted to Ecology within thirty
20 (30) days of completion of the survey with an assessment of the cause of visible
21 emissions and a report of the maintenance conducted to maintain the subject
22 system's tBACT operations.
23 State-Only: No.
24 Calculation Model: Not applicable.

1 **Condition Approval** 03/03/2016

2 **Condition:** EMISSION LIMITS

3 VOC emissions shall not exceed the amounts listed in the table below from the
 4 241-AP, 241-SY, and 241-AY/AZ ventilation systems. As the ventilation systems
 5 become fully operational, the volatile organic emissions shall not be exceeded
 6 emission limits established for the respective exhausters systems.

Tank Farm(s)	Maximum Amount (tons per year)
Total for the 241-AP, 241-SY, and 241-AY/AZ ventilation systems	10.1
241-SY	3.2
241-AP	3.6
241-AY/AZ combined ventilation system (the 241-AY/AZ combined ventilation system is comprised of the initial AY/AZ exhauster system and the AY-102 annulus system)	3.3

7 **Periodic Monitoring:** (1) Compliance with this condition shall be demonstrated by VOC stack
 8 sampling and calculations as described in Section 3.0, and applying these
 9 concentration readings with contemporaneous stack flow rate and temperatures to
 10 determine the mass release rate of VOCs in pounds per year.

11 (2) During solids mixing, disturbing bulk tank solids, removal of enough
 12 supernatant to potentially create a gas release event, or Waste Feed Delivery
 13 operations to the Hanford Waste Treatment and Immobilization Plant operations
 14 compliance with Approval Condition shall be demonstrated by monitoring
 15 emissions of all TAP emission limits as described in Section 3.5.

16 **Test Method:** (1) VOC emissions shall be assessed quarterly in accord with EPA approved
 17 procedures for each exhauster system.
 18 (2) As described in Section 3.5 during solids mixing, disturbing bulk tank solids,
 19 removal of enough supernatant to potentially create a gas release event, or Waste
 20 Feed Delivery operations to the Hanford Waste Treatment and Immobilization
 21 Plant.

22 **Test Frequency:** (1) Quarterly.
 23 (2) As described in Section 3.5 during solids mixing, disturbing bulk tank solids,
 24 removal of enough supernatant to potentially create a gas release event, or Waste
 25 Feed Delivery operations to the Hanford Waste Treatment and Immobilization
 26 Plant.

27 **Required Records:** (1) Records of exhauster system stack flow rates and temperature records.
 28 (2) Laboratory analysis result summaries or emission monitoring results from
 29 tank headspaces or primary tank ventilation system exhaust for VOCs.
 30 (3) Supporting data and calculations to demonstrate compliance of VOC
 31 emission limits.

32 **State-Only:** No.

33 **Calculation Model:** Not applicable.

- 1 **Condition Approval** 03/03/2016
- 2 **Condition:** EMISSION LIMITS
- 3 All TAPs, as shown in Table 7, 8 or 9 of Approval Order DE11NWP-001, Rev. 4
4 shall be below their respective ASIL or approved through a Second Tier review.
5 Approved TAP emissions per ventilation system are detailed in Table 7 for the
6 241-SY ventilation system, Table 8 for the 241-AP ventilation system, and Table
7 9 for the 241-AY/AZ ventilation system.
- 8 **Periodic Monitoring:** Compliance with this condition shall be met by:
- 9 (1) Development and implementation of an annual sampling and analysis plan
10 (SAP) for each exhauster system on a calendar year basis to meet requirements of
11 DE11NWP-001, Rev. 4 Section 3.3. Each SAP shall address the emission of a
12 minimum of three TAPs with the highest potential ambient concentration relative
13 to their ASILs of WAC 173-460-150 in addition to dimethyl mercury, n-
14 nitrosodimethylamine, and chromium hexavalent: soluble, except chromic
15 trioxide. The TAPs addressed in the SAP shall be identified from DE11NWP-
16 001, Rev. 4 Table 7, 8 and 9 and based on engineering judgment and most current
17 tank content data. Analytical methods for the analyses shall be the EPA,
18 Occupational Safety and Health Administration (OSHA), or National Institute for
19 Occupational Safety and Health (NIOSH) approved, or by approved equivalent
20 method.
- 21 (2) Stack sampling for each exhauster system as described in Section 3 of the
22 DE11NWP-001 for TAPs, and applying these concentration readings with
23 contemporaneous stack flow rates and temperatures to determine the mass release
24 rates of these TAPs in pounds and their respective release rate averaging times
25 per WAC 173-460-150. Identification of any TAP not previously identified
26 within the NOC application shall be submitted to Ecology within ninety (90)
27 days of completion of laboratory analyses which verify emissions of that TAP.
28 Approved TAP emissions per ventilation system are detailed in DE11NWP-001,
29 Rev. 4 Table 7 for the 241-SY ventilation system, DE11NWP-001, Rev. 4 Table 8
30 for the 241-AP ventilation system, and DE11NWP-001, Rev. 4 Table 9 for the
31 241-AY/AZ ventilation system.
- 32 (3) During solids mixing, disturbing bulk tank solids, removal of enough
33 supernatant to potentially create a gas release event, or Waste Feed Delivery
34 operations to the Hanford Waste Treatment Plant (WTP) operations compliance
35 with Approval Condition 1.1.3 shall be demonstrated by monitoring emissions of
36 all TAP emission limits as described in Section 3.5.
- 37 (4) Operating the exhauster systems in accordance with BACT and tBACT
38 emission controls in place. These controls are operation of each primary tank
39 ventilation exhauster system not exceeding the maximum ventilation rates shown
40 in the DE11NWP-001, Rev. 4 Table 5 with the appropriate moisture de-
41 entrainers, heaters, condensers, pre-filters, and/or two-stage high Efficiency
42 Particulate Air (HEPA) filtration systems in service in each treatment train. Each
43 treatment train must be consistent with the appropriate design specified in
44 DE11NWP-001, Rev. 4, Finding 14.
- 45 (5) Identification of any exceedance of TAP emission limits shall be submitted to
46 Ecology within ninety (90) days of identification.
- 47 **Test Method:** Sampling and calculations identified in the DE11NWP-001 Section 3.3.
- 48 **Test Frequency:** Annually.

- 1 Required Records: Records shall be organized in a readily accessible manner and cover a minimum
2 of the most recent sixty (60) month period. The records include:
3 (1) Records of exhauster system stack flow rates and temperature records.
4 (2) Records of calibration of stack gas flow rate and temperature measurement
5 devices.
6 (3) Emission monitoring results required in DE11NWP-001, Rev. 4 Section 3.0.
7 (4) Supporting data and calculations to demonstrate compliance as detailed in
8 DE11NWP-001, Rev. 4 Condition 3.3 and 1.1.3
9 (5) Laboratory analysis result summaries taken in accordance with DE11NWP-
10 001, Rev. 4 from 241-AP, 241-SY, or 241-AY/AZ tank farm tank headspaces or
11 primary tank ventilation system exhaust for which are examined for organic
12 species or other TAPs .
13 (6) Documentation and record-keeping of BACT and tBACT compliance of
14 emission controls.
- 15 State-Only: No.
- 16 Calculation Model: Not applicable.

1 **Condition Approval** 03/03/2016

2 **Condition:** EMISSION LIMITS

3 Ammonia emissions shall not exceed the amounts listed in the table below from
 4 the 241-AP, 241-SY, and 241-AY/AZ ventilation systems. As the ventilation
 5 systems become fully operational, the ammonia emissions shall not be exceeded
 6 from the respective exhauster systems.

Tank Farm(s)	Maximum Amount (pounds per 24 hours)
Total for the 241-AP, 241-SY, and 241-AY/AZ ventilation systems	59.9
241-SY	19.2
241-AP	21.1
241-AY/AZ combined ventilation system (the 241-AY/AZ combined ventilation system is comprised of the initial AY/AZ exhauster system and the AY-102 annulus system)	19.6

7 **Periodic Monitoring:** (1) Compliance with Approval Condition 1.1.4 shall be demonstrated by stack
 8 sampling as described in Section 3.0 for ammonia, and applying these
 9 concentration readings with contemporaneous stack flow rate and temperatures to
 10 determine daily release rate of ammonia.

11 (2) During solids mixing, disturbing bulk tank solids, removal of enough
 12 supernatant to potentially create a gas release event, or Waste Feed Delivery
 13 operations to the Hanford Waste Treatment and Immobilization Plant operations
 14 compliance with approval condition 1.1.4 shall be demonstrated by monitoring
 15 emissions of all TAP emission limits as described in Section 3.5.

16 **Test Method:** Ammonia sampling and analysis will be in accord with approved alternative
 17 sampling procedures including the use of Draeger tubes or direct reading
 18 instruments to measure stack gas concentration of ammonia providing such
 19 devices are spanned to appropriately measure the stack gas ammonia
 20 concentration. Stack flow rate and temperature will be applied with the ammonia
 21 stack gas concentration to report ammonia emission in terms of pounds per day.

22 **Test Frequency:** Baseline Assessments Baseline assessment of ammonia stack concentrations
 23 shall be sampled a minimum of three times within ninety (90) days of
 24 commencement of operations. Results of baseline emission assessments shall be
 25 submitted to Ecology within ninety (90) days of completion of such assessment.

26 Quarterly Assessment In order to maintain reasonable assurance of continued
 27 compliance with emission limitations from these exhauster systems, quarterly
 28 assessment of ammonia stack emissions will be conducted according to
 29 DE11NWP-001, Rev. 4, Section 3.1.1 and 3.4. A minimum of three samples or
 30 measurements shall be taken each quarter to assess these emissions.

31 **Required Records:** Results of baseline assessments, quarterly assessments, and ammonia monitoring
 32 as required by DE11NWP-001, Rev. 4, as well as supporting data and
 33 calculations to demonstrate compliance with ammonia limits of DE11NWP-001,
 34 Rev. 4.

35 **State-Only:** No.

36 **Calculation Model:** Not applicable.

1 **Condition Approval** 03/03/2016

2 **Condition:** EMISSION LIMITS

3 Dimethyl mercury emissions shall not exceed the amounts listed in the Table
 4 below from the 241-AP, 241-SY, and 241-AY/AZ ventilation systems. As the
 5 ventilation systems become fully operational, the dimethyl mercury emissions
 6 shall not be exceeded from the respective exhausters systems.

Tank Farm(s)	Maximum Amount (pounds per 24 hours)
Total for the 241-AP, 241-SY, and 241-AY/AZ ventilation systems	3.23E-3
241-SY	1.04E-3
241-AP	1.14E-3
241-AY/AZ combined ventilation system (the 241-AY/AZ combined ventilation system is comprised of the initial AY/AZ exhauster system and the AY-102 annulus system)	1.06E-3

7 **Periodic Monitoring:** During solids mixing, disturbing bulk tank solids, removal of enough supernatant
 8 to potentially create gas release event, or Waste Feed Delivery operations to the
 9 Hanford Waste Treatment and Immobilization Plant (WTP) operations
 10 compliance with Approval Conditions, Dimethyl Mercury Emission Limits shall
 11 be demonstrated by monitoring emissions of all TAP emission limits as described
 12 in section 3.5 of DE11NWP-001, Rev. 4.

13 **Test Method:** All samples collection activities will follow EPA approved procedures for each
 14 exhauster system or submission with subsequent approval by Ecology of an
 15 alternative procedure.

16 **Test Frequency:** Dimethyl mercury sample collection will start no sooner than 12 hours and be
 17 completed no later than 24 hours after the start of the activity described in 3.5.2.1
 18 that requires sample collection.

19 Analytical results will be reported to Ecology as soon as possible, but no later
 20 than 30 days after collection of sample. It is acceptable to report to preliminary
 21 data and to use an informal transmittal method (e.g. email).

22 The permittee will evaluate the data to determine, (3.5.2.2.1) if dimethyl mercury
 23 have remained below permit conditions

24 **Required Records:** Results of emission assessments, supporting data and calculations to demonstrate
 25 compliance with dimethyl mercury limits.

26 **State-Only:** No.

27 **Calculation Model:** Not applicable.

1 **Condition Approval** 03/03/2016

2 **Condition:** EMISSION LIMITS

3 N-Nitrosodimethylamine emissions shall not exceed the amounts listed in the
 4 table below from the 241-AP, 241-SY, and 241-AY/AZ ventilation systems. As
 5 the ventilation systems become fully operational, the N-Nitrosodimethylamine
 6 emissions shall not be exceeded from the respective exhausters systems.

Tank Farm(s)	Maximum Amount (pounds per year)
Total for the 241-AP, 241-SY, and 241-AY/AZ ventilation systems	199.9
241-SY	61.3
241-AP	74.6
241-AY/AZ combined ventilation system (the 241-AY/AZ combined ventilation system is comprised of the initial AY/AZ exhauster system and the AY-102 annulus system)	64

7 **Periodic Monitoring:** During solids mixing, disturbing bulk tank solids, removal of enough supernatant
 8 to potentially create gas release event, or Waste Feed Delivery operations to the
 9 Hanford Waste Treatment and Immobilization Plant (WTP) operations
 10 compliance with Approval Conditions, n-Nitrosodimethylamine Emission Limits
 11 shall be demonstrated by monitoring emissions of all TAP emission limits as
 12 described in section 3.5 of DE11NWP-001, Rev. 4.

13 **Test Method:** All samples collection activities will follow EPA approved procedures for each
 14 exhauster system or submission with subsequent approval by Ecology of an
 15 alternative procedure.

16 **Test Frequency:** The permittee will evaluate the data to determine, if n-Nitrosodimethylamine
 17 have remained below permit conditions.

18 **Required Records:** Results of emission assessments, supporting data and calculations to demonstrate
 19 compliance with n-Nitrosodimethylamine limits.

20 **State-Only:** No.

21 **Calculation Model:** Not applicable.

1 **Condition Approval** 03/03/2016

2 **Condition:** EMISSION LIMITS

3 Ammonia shall be monitored as an indicator for compliance with TAP emission
4 limits during solid mixing, disturbing bulk tank solids, removal of enough
5 supernatant to potentially create a gas release event, or Waste Feed Delivery
6 operations to the WTP as it can be measured near real time, is readily emitted by
7 all tank farm exhausters and the rate of ammonia release is expected to change
8 (increase) with tank waste solid disturbances. A maximum concentration of
9 ammonia in parts per million (ppm) by volume of ammonia emitted will be used
10 as an indicator for compliance with release rates of TAPs. The ppm value was
11 calculated for each exhauster from the release rate of ammonia in the application.
12 Table 6 of DE11NWP-001, Rev. 4, lists the maximum allowable ammonia
13 reading in ppm for the exhausters in the AY/AZ and AP tank farms during solid
14 mixing, disturbing bulk tank solids, removal of enough supernatant to potentially
15 create a gas release event, or Waste Feed Delivery operations.

16 Ecology must be notified within 24 hours of any readings exceeding Table 6
17 values. This notification can be performed electronically (e.g. email) and shall
18 include, at a minimum, the reading(s) in exceedance, the exhauster system
19 involved, and the elapsed time between compliant readings as discussed in
20 Section 3.5.1. Ecology will keep a copy of Table 6 values current and available
21 for public viewing on Ecology's website
22 (<https://fortress.wa.gov/ecy/nwp/permitting/>).

23 If stack effluent readings exceed Table 6 values, tank operations (i.e. waste
24 disturbing activities) shall cease in a safe and controlled manner. Tank operations
25 may resume when stack effluent readings confirm that cumulative emissions will
26 not exceed time weighted average emissions identified in Table 6. The initial
27 start time in calculating the cumulative time weighted average emissions shall be
28 the time of collection of the effluent readings that exceed Table 6 values.

29 The establishment of ammonia concentrations limit in Table 6 was calculated
30 from the best currently available data on tank waste characteristics and
31 engineering judgement on actual tank emission activity compared to theoretical
32 tank emission activity. To confirm and then adjust the emission limits as actual
33 performance data is collected during solids mixing, disturbing bulk tank solids,
34 removal of enough supernatant to potentially create a gas release event, or Waste
35 Feed Delivery operations, a method of updating the limits is established in the
36 following sections.

37 During the start of tank activities that include solids mixing, disturbing bulk tank
38 solids, removal of enough supernatant to potentially create a gas release event, or
39 Waste Feed Delivery operations; the exhauster shall be sampled for, at a
40 minimum, dimethyl mercury, n-Nitrosodimethylamine, chromium hexavalent:
41 soluble, except chromic trioxide, and ammonia. All sample collection activities
42 will follow EPA approved procedures for each exhauster system or submission
43 with subsequent approval by Ecology of an alternative procedure.

44 Ammonia samples, at a minimum, will be collected at the start of dimethyl
45 mercury sample collection, mid-way through the dimethyl mercury sample
46 collection, and at the end of the dimethyl mercury sample collection.

1 Dimethyl mercury sample collection will start no sooner than 12 hours and be
2 completed no later than 24 hours after the start of the activity described in 3.5.2.1
3 that requires sample collection.

4 Chromium hexavalent: soluble, except chromic trioxide, sample collection will
5 start no sooner than 12 hours and be completed no later than 48 hours after the
6 start of the activity described in 3.5.2.1 that requires sample collection.

7 Analytical results will be reported to Ecology as soon as possible, but no later
8 than 30 days after collection of the sample. It is acceptable to report preliminary
9 data and to use an informal transmittal method (e.g. email).

10 The permittee will evaluate the data to determine (3.5.2.2.1) if ammonia,
11 dimethyl mercury and n- Nitrosodimethylamine have remained below permit
12 conditions and (3.5.2.2.2) if ammonia limits provided sufficient indicator for
13 emissions of other toxic air pollutants.

14 If the sampled ratio would result in an increased emission limit in Table 6, the
15 permittee will need to specifically request for the increased emission limit to be
16 entered into Table 6 (informal request is acceptable). The new emission limit
17 will be effective on the date entered in Table 6 in the 'Update Date' column.

18 If the sampled ratio results in a decreased emission limit in Table 6, the permittee
19 will notify Ecology, and Ecology will enter the new limit into Table 6. The new
20 emission limit will be effective on the date entered in Table 6 in the 'Update
21 Date' column.

22 Stack effluent readings of ammonia (as a surrogate compound) in ppm will be
23 collected at least hourly during solids mixing, disturbing bulk tank solids,
24 removal of enough supernatant to potentially create a gas release event, or Waste
25 Feed Delivery operations to the WTP. The collected ppm reading will be
26 recorded along with, at a minimum, the date and time of reading collection and
27 activity type occurring in the tank during reading collection (e.g., pumping,
28 sluicing, etc.).

29 A reduction in frequency of ammonia readings is allowed when the conditions
30 below are met. Any frequency reduction will be reset to one hour reading
31 collection when the tank activities change (e.g. from pumping to sluicing, or
32 sluicing to pumping, sluicing to extended reach sluicing, etc...) or a reading
33 above Table 6 values is recorded.

34 Upon collection of 100 representative readings (readings collected must have
35 occurred during the activity being evaluated in for reading frequency reduction)
36 and at least five (5) working days of reading collection.

37 The permittee can request a reading frequency reduction by submitting to
38 Ecology (electronic submittal is acceptable) all of the readings and calculations
39 used. Ecology will review the submission and electronically notify the permittee
40 of their decision within five (5) working days, unless Ecology notifies the
41 permittee of additional time needed to complete the review. The permittee must
42 have Ecology's approval before reducing reading frequency.

43 Reading frequency relief will occur in two steps. The first step is reducing
44 reading collection from one hour to four hours. The second step is reducing
45 reading collection from four hours to eight hours. Each relief step must
46 independently meet condition 3.5.3.2 and 3.5.3.3.

1 When tanks are acting as receiver tanks for solids mixing, disturbing bulk tank
2 solids, removal of enough supernatant to potentially create a gas release event, or
3 Waste Feed Delivery operations or providing supernatant for sluicing activities in
4 other tanks, the reading frequency will start at 4 hours. Relief to 8 hour reading
5 frequency following the requirements of 3.5.3.2 and 3.5.3.3 is allowed.

6 Changes in active mixing, retrieval, or Waste Feed Delivery operations in Tanks
7 sending to the AP Farm will cause the reading frequency to reset to 4 hour
8 intervals.

9 The permittee can request from Ecology relief of the AP Farm reading frequency
10 reset when enough data exits to support exhauster emissions remain consistent
11 regardless of the activities in active mixing, retrieval, or Waste Feed Delivery
12 operations from the feed tanks.

13 Operation of the subject primary tank ventilation systems is intended for the
14 storage, treatment, sampling, and Waste Feed Delivery of waste contained in the
15 tanks as described in the NOC application. For the purposes of this
16 authorization, "Waste Feed Delivery" includes mixing and pumping as necessary
17 and sufficient for transfer of wastes to or from the subject tank. Waste Feed
18 Delivery operations may encompass waste sampling activity but such sampling
19 shall not, in and of itself, be deemed the basis for identifying operations as Waste
20 Feed Delivery operations.

21 Periodic Monitoring: Compliance and monitoring shall be demonstrated as described above.

22 Test Method: All sample collection activities will follow EPA approved procedures for each
23 exhauster system or submission with subsequent approval by Ecology of an
24 alternative procedure.

25 Test Frequency: Not specified.

26 Required Records: (1) Records of exhauster system stack flow rates and temperature records.
27 (2) Records of calibration of stack gas flow rate and temperature measurement
28 devices.
29 (3) Emission monitoring results required in DE11NWP-001, Rev. 4, Section 3.0.
30 (4) Supporting data and calculations to demonstrate compliance as detailed in
31 DE11NWP-001, Rev. 4, Conditions 3.5, 1.1.2, 1.1.3, 1.1.4, 1.1.5, and 1.1.6.
32 (5) Laboratory analysis result summaries taken in accordance with DE11NWP-
33 001, Rev. 4 from 241-AP, 241-SY, or 241-AY/AZ tank farm tank headspaces or
34 primary tank ventilation system exhaust for which are examined for organic
35 species or other TAPs .
36 (6) Documentation and record-keeping of BACT and tBACT compliance of
37 emission controls.
38 (7) Waste Feed Delivery operations will be recorded into operation records
39 sufficient to determine the onset and cessation of such operations for each tank
40 subject to DE11NWP-001, Rev. 4.
41 (8) Operations and Maintenance (O&M) manuals.

42 State-Only: No.

43 Calculation Model: Not applicable.

1 **Condition Approval** 03/03/2016

2 Condition: OPERATIONAL LIMITS

3 Normal Double-Shell Tank (DST) primary tank ventilation system flow rates
 4 during Normal Operations (e.g. storage, retrieval, and sampling) are shown in the
 5 Table below. The maximum flow rates for the DST ventilation systems shall not
 6 exceed ventilation rates for Maximum Operations (Table below).

Ventilation Rates

Tank Farm(s)	Normal Operations (scfm)	Maximum Operations (scfm)
241-SY	1,360	2,500
241-AP (Upgraded System)	1,500	1,750
241-AP (Existing System)	850	1,000
241-AY/AZ	850	1,000
AY-102 Annulus	1,000	3,800
AY-102 Portable	1,600	3,000

scfm = standard cubic foot per minute, 1 atmosphere pressure at 20°C

7 Periodic Monitoring: Stack gas flow measurement at the same intervals as required by RAELs.

8 Frequency: Same intervals as required by RAELs.

9 Test Method: None Specified.

10 Required Records: 1) Records of calibration of stack gas flow rate and temperature measurement
 11 devices.

12 2) Records of exhaust system stack flow rate and temperature.

13 State-Only: No.

14 Calculation Model: Not applicable.

1	Condition Approval	03/03/2016
2	Condition:	EMISSION LIMITS: Baseline Assessments
3		(1) Ammonia stack concentrations shall be sampled or measured a minimum of
4		three times. Stack flow rate and temperature will be applied with ammonia stack
5		gas concentration to report ammonia emission in terms of pounds per day.
6		(2) Dimethyl mercury sampling and analysis will be in accord with U.S. EPA
7		approved procedures for each exhauster system.
8	Periodic Monitoring:	Ammonia sampling and analysis will be in accord with approved alternative
9		sampling procedures including the use of Draeger tubes or direct reading
10		instruments to measure stack gas concentration of ammonia providing such
11		devices are spanned to appropriately measure the stack gas ammonia
12		concentration.
13	Test Method:	(1) Approved sampling procedures including the use of Draegar tubes or direct
14		reading instruments to measure stack gas concentrations of ammonia.
15		(2) EPA approved procedures for Dimethyl mercury
16	Test Frequency:	Within 90 days after commencement of operations of each exhauster system.
17	Required Records:	(1) Stack flow rate and temperature readings
18		(2) Ammonia emissions and concentrations
19		(3) Sample collection methods for ammonia and dimethyl mercury
20		(4) Dimethyl mercury concentrations
21	State-Only:	No.
22	Calculation Model:	Not applicable.

- 1 **Condition Approval 03/03/2016**
- 2 Condition: OPERATIONAL LIMITS
- 3 No more than two of the three tanks in the 241-SY Tank Farm (241-SY-101
4 through 241-SY-103) shall be under active mixing and Waste Feed Delivery
5 operations at any one time. Waste Feed Delivery operations are defined as those
6 which mix and transfer waste, including transfers to the Waste Treatment and
7 Immobilization Plant.
- 8 Periodic Monitoring: Waste Feed Delivery operations recorded into operational records sufficient to
9 determine onset and cessation of such operations for each tank.
- 10 Test Method: Not specified
- 11 Test Frequency: Not applicable.
- 12 Required Records: Operational records sufficient to determine the onset and cessation of Waste Feed
13 Delivery operations for each tank subject to this Order.
- 14 State-Only: No.
- 15 Calculation Model: Not applicable.
- 16 **Condition Approval 03/03/2016**
- 17 Condition: OPERATIONAL LIMITS
- 18 No more than two of the four tanks in the 241-AY and 241-AZ Tank Farms (241-
19 AY-101, 241-AY-102, 241-AZ-101, and 241-AZ-102) shall be under active
20 mixing and Waste Feed Delivery operations at any one time. Waste Feed
21 Delivery operations are defined as those which mix and transfer waste, including
22 transfers to the Waste Treatment and Immobilization Plant.
- 23 Periodic Monitoring: Waste Feed Delivery operations recorded into operational records sufficient to
24 determine onset and cessation of such operations for each tank.
- 25 Test Method: Not specified
- 26 Test Frequency: Not applicable.
- 27 Required Records: Operational records sufficient to determine the onset and cessation of Waste Feed
28 Delivery operations for each tank subject to this Order.
- 29 State-Only: No.
- 30 Calculation Model: Not applicable.

- 1 **Condition Approval 03/03/2016**
- 2 Condition: OPERATIONAL LIMITS
- 3 No more than two of the eight tanks in the 241-AP Tank Farm (241-AP-101
- 4 through 241-AP-108) shall be under active mixing and Waste Feed Delivery
- 5 operations at any one time. Waste Feed Delivery operations are defined as those
- 6 which mix and transfer waste, including transfers to the Waste Treatment and
- 7 immobilization Plant.
- 8 Periodic Monitoring: Waste Feed Delivery operations recorded into operational records sufficient to
- 9 determine onset and cessation of such operations for each tank.
- 10 Test Method: Not specified
- 11 Test Frequency: Not applicable.
- 12 Required Records: Operational records sufficient to determine the onset and cessation of Waste Feed
- 13 Delivery operations for each tank subject to this Order.
- 14 State-Only: No.
- 15 Calculation Model: Not applicable.
- 16 **Condition Approval 03/03/2016**
- 17 Condition: OPERATIONAL LIMITS
- 18 The ventilation systems shall be operated in compliance with tBACT controls
- 19 identified in DE11NWP-001, Rev.4.
- 20 Periodic Monitoring: Compliance with the condition shall be met by operating the exhauster systems in
- 21 accordance with tBACT emission controls for this project, as found in
- 22 DE11NWP-001, Rev. 4.
- 23 Test Method: Not specified
- 24 Test Frequency: Not applicable.
- 25 Required Records: All monitoring and operation records required to operate and maintain the
- 26 emission control equipment which implements tBACT.
- 27 State-Only: No.
- 28 Calculation Model: Not applicable.

1 **1.4.33 Discharge Point: Lagoon Treatment System**

2 200W Area

3 Requirement Citation: NOC Approval Order DE12NWP-001, Rev. 1 (7/24/2013)

4 **Condition Approval 2/6/2012**

5 Condition: All TAPs, as submitted in the Permittee's Notice of Construction Application,
6 shall be below their respective ASIL.

7 Periodic Monitoring: Annual collection and analysis of wastewater between the wastewater truck
8 discharge point and the truck unloading chamber.

9 Test Method: Surrogate wastewater sample analyzed with an EPA approved method in 40CFR
10 Part 136.

11 Test Frequency: Annually.

12 Required Records: Results of analyses.

13 State-Only: No.

14 Calculation Model: Not applicable.

15

1 **1.4.34 Discharge Point: SST Retrieval Direct Fired Water Heaters**

2 200 Area

3 Requirement Citation: NOC Approval Order DE12NWP-003 (2/6/2013)

4 **Condition Approval 2/6/2013**

5 Condition: OPERATIONAL LIMITS

6 Maximum number of units is 10 and maximum accumulated heating capacity is
7 25 MBtu/hr.

8 Periodic Monitoring: Compliance will be determined by submittal of operational notification prior to
9 initial operation of each unit with information required to completely update
10 Table 1 of the Approval Order.

11 Test Method: Not applicable.

12 Test Frequency: Not applicable.

13 Required Records: Manufacturer's data for information required to complete Table 1 of the Approval
14 Order.

15 State-Only: Yes.

16 Calculation Model: Not applicable.

17 **Condition Approval 2/6/2013**

18 Condition: EMISSION LIMIT

19 Emission of sulfur dioxide (SO₂) will not exceed 1.63 tons/yr.

20 Periodic Monitoring: Compliance will be demonstrated by use of fuel containing no greater
21 than 0.0015 weight percent sulfur (15 parts per million by weight).

22 Test Method: Not applicable.

23 Test Frequency: Not applicable.

24 Required Records: Vendor certification for diesel fuel sulfur content for all purchases.

25 State-Only: No.

26 Calculation Model: Not applicable.

- 1 **Condition Approval 2/6/2013**
- 2 Conditions: EMISSION LIMITS
- 3 Emission of Nitrogen Oxides (NO_x) will not exceed 0.78 tons/yr.
- 4 Emission of Carbon Monoxide (CO) will not exceed 0.22 tons/yr.
- 5 Emission of Volatile Organic Carbon (VOC) will not exceed 0.08 tons/yr.
- 6 Emission of particulate matter (PM) will not exceed 0.08 tons/yr.
- 7 Periodic Monitoring: Compliance will be demonstrated by:
- 8 (A) Use of high efficiency burners
- 9 (B) Operation of no more than 10 diesel fueled water heaters at any time.
- 10 (C) Operating and maintaining the heater in accordance with manufacturer's
- 11 specifications.
- 12 (D) Installation and use of non-resettable hour meter.
- 13 (E) Limiting operating hours equal to or less than 1.0 as calculated by Equation 1
- 14 in the Approval Order.
- 15 Test Method: Calculation of ratio using Equation 1.
- 16 Test Frequency: Monthly.
- 17 Required Records: (1) Manufacturer's data and instructions,
- 18 (2) Maintenance records, and
- 19 (3) Twelve-month cumulative operating hours for each engine, calculated
- 20 monthly.
- 21 State-Only: No.
- 22 Calculation Model: Not applicable.
- 23 **Condition Approval 2/6/2013**
- 24 Condition: REPORTING
- 25 Emissions will be compiled into estimates and reported annually,
- 26 beginning as part of the calendar year 2013 non-radioactive inventory of
- 27 airborne emissions, pursuant to WAC 173-400-105.
- 28 Periodic Monitoring: The estimated emissions shall be reported annually.
- 29 Test Method: Not specified.
- 30 Test Frequency: Not applicable.
- 31 Required Records: Emissions estimates.
- 32 State-Only: No.
- 33 Calculation Model: Not applicable.

- 1 **Condition Approval 2/6/2013**
- 2 Condition: REPORTING
- 3 Monthly operating hours per unit and cumulative annual operating hours
- 4 on a month-by-month basis will be reported annually, beginning as part
- 5 of the calendar year 2013 non-radioactive inventory of airborne
- 6 emissions, pursuant to WAC 173-400-105.
- 7 Periodic Monitoring: The monthly operating hours and cumulative annual operating hours
- 8 shall be reported annually.
- 9 Test Method: Not specified.
- 10 Test Frequency: Not applicable.
- 11 Required Records: Twelve-month cumulative operating hours for each heater.
- 12 State-Only: No.
- 13 Calculation Model: Not applicable.

1 **1.4.35 Discharge Point: Hanford Site Asbestos Landfill**

2 600 Area

3 Requirement Citation: 40 CFR 61.151(a), 40 CFR 61.151(d), WAC 173-400-040(2), and WAC 173-400-
4 040(7)

5 **Condition Approval**

6 Condition: 40 CFR 61.151(a)

7 (1) Either discharge no visible emissions to the outside air from an
8 inactive waste disposal site subject to this paragraph; or

9 (2) Cover the asbestos-containing waste material with at least 15
10 centimeters (6 inches) of compacted nonasbestos-containing material,
11 and grow and maintain a cover of vegetation on the area adequate to
12 prevent exposure of the asbestos-containing waste material. In desert
13 areas where vegetation would be difficult to maintain, at least 8
14 additional centimeters (3 inches) of well-graded, nonasbestos crushed
15 rock may be placed on top of the final cover instead of vegetation and
16 maintained to prevent emissions; or

17 (3) Cover asbestos-containing waste with at least 60 centimeter of
18 compacted nonasbestos-containing material, and maintain to prevent
19 exposure.

20 Periodic Monitoring: Not applicable.

21 Test Method: Not applicable.

22 Test Frequency: Not applicable.

23 Required Records: Not applicable.

24 State-Only: No.

25 Calculation Model: Not applicable.

26 **Condition Approval**

27 Condition: 40 CFR 61.151(d)

28 Notify in writing at least 45 days prior to excavation. If construction will
29 begin on a date other than the one in the original notice, notice of the new
30 date must be provided at least 10 working days in advance.

31 (1) Notice shall contain starting and completion dates.

32 (2) Notice shall contain reason for disturbing the waste.

33 (3) Notice shall contain procedures to be used to control emissions

34 (4) Notice shall contain a location for any temporary storage site and the
35 final disposal site.

36 Periodic Monitoring: Not applicable.

37 Test Method: Not applicable.

38 Test Frequency: Not applicable.

39 Required Records: Not applicable.

40 State-Only: No.

41 Calculation Model: Not applicable.

1 **Condition Approval**

2 Condition: WAC 173-400-040(2)
3 Permittee is considered to be in compliance if no complaints are
4 forwarded or generated by Ecology.

5 Periodic Monitoring: Not applicable.

6 Test Method: Not applicable.

7 Test Frequency: Not applicable.

8 Required Records: Not applicable.

9 State-Only: No.

10 Calculation Model: Not applicable.

11 **Condition Approval**

12 Condition: WAC 173-400-040(7)
13 Permittee is considered to be in compliance if no complaints are
14 forwarded or generated by Ecology.

15 Periodic Monitoring: Monitor per Section 2.7, Tier 2.

16 Test Method: Not applicable.

17 Test Frequency: Not applicable.

18 Required Records: Not applicable.

19 State-Only: No.

20 Calculation Model: Not applicable.

1 **1.4.36 Discharge Point: 600 Area Gas Distribution**

2 600 Area

3 Requirement Citation: WAC 173-491-040(4)(b), WAC 173-491-040(4)(d), WAC 173-491-040(6)(d),
4 WAC 173-400-040(2), and WAC 173-400-040(7)

5 **Condition Approval**

6 Condition: WAC 173-491-040(4)(b)

7 All gasoline storage tanks shall be equipped with submerged or bottom
8 fill lines and fittings to vapor balance gasoline vapors with the delivery
9 transport tank.

10 Periodic Monitoring: Not applicable.

11 Test Method: Not applicable.

12 Test Frequency: Not applicable.

13 Required Records: Not applicable.

14 State-Only: No.

15 Calculation Model: Not applicable.

16 **Condition Approval**

17 Condition: WAC 173-491-040(4)(d)

18 The owner or operator shall not permit the loading of gasoline into a
19 storage tank equipped with vapor balance fittings from a transport tank
20 equipped with vapor balance fittings unless the vapor balance system is
21 attached to the transport tank and operated satisfactorily.

22 Periodic Monitoring: Not applicable.

23 Test Method: Not applicable.

24 Test Frequency: Not applicable.

25 Required Records: Not applicable.

26 State-Only: No.

27 Calculation Model: Not applicable.

1 **Condition Approval**

- 2 Condition: WAC 173-491-040(6)(d)
- 3 (i) The owner or operator of a gasoline transport tank or vapor collection system
4 shall maintain records of all certification tests and repairs for at least two years
5 after the test or repair is completed.
- 6 (ii) The records of certification tests required by this section shall, as a minimum,
7 contain:
- 8 (A) The transport tank identification number;
 - 9 (B) The initial test pressure and the time of the reading;
 - 10 (C) The final test pressure and the time of the reading;
 - 11 (D) The initial test vacuum and the time of the reading;
 - 12 (E) The final test vacuum and the time of the reading;
 - 13 (F) At the top of each report page the company name, date, and location
14 of the tests on that page; and
 - 15 (G) Name and title of the person conducting the test.
- 16 (iii) The owner or operator of a gasoline transport tank shall annually certify that
17 the transport tank passed the required tests.
- 18 (iv) Copies of all records required under this section shall immediately be made
19 available to the department, upon written request, at any reasonable time.

- 20 Periodic Monitoring: As established by the condition.
- 21 Test Method: Not applicable
- 22 Test Frequency: Not applicable
- 23 Required Records: As established by the condition.
- 24 State-Only: No.
- 25 Calculation Model: Not applicable.

26 **Condition Approval**

- 27 Condition: WAC 173-400-040(2)
- 28 Permittee is considered to be in compliance if no complaints are
29 forwarded or generated by Ecology.
- 30 Periodic Monitoring: Not applicable.
- 31 Test Method: Not applicable.
- 32 Test Frequency: Not applicable.
- 33 Required Records: Not applicable.
- 34 State-Only: No.
- 35 Calculation Model: Not applicable.

1 **Condition Approval**

- 2 Condition: WAC 173-400-040(7)
3 Ecology has determined, based on process knowledge, that these
4 emission units do not emit significant levels of SO₂.
5 Periodic Monitoring: Not applicable.
6 Test Method: Not applicable.
7 Test Frequency: Not applicable.
8 Required Records: The Permittee shall annually certify that the processes have not been
9 modified to increase SO₂ emissions and no SO₂ monitoring is required.
10 State-Only: No.
11 Calculation Model: Not applicable.

12

Effective Date: 08/01/2019
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1 **1.4.37 Reserved**

2

1 **1.4.38 Discharge Point: 100K Water Treatment Plant**

2 100K Water Treatment Plant

3 Requirement Citation: NSPS Subpart IIII

4 **Condition Approval**

5 Condition: (1) Non-methane hydrocarbons (NMHC) and nitrogen oxides (NO_x) emission
6 limit of 4.0 g/KW-hr.

7 (2) Particulate matter emission limit of 0.20 g/KW-hr.

8 Compliance Requirement: (1) Compliance will be demonstrated by (A) operating and maintaining
9 the engine and control devices according to the manufacturer's emission-related
10 written instructions and (B) change only those emission-related settings that are
11 permitted by the manufacturer.

12 (2) If you do not install, configure, operate or maintain your engine and control
13 device according to manufacturer's emission related written instructions, or you
14 change emission-related settings in a way that is not permitted by the
15 manufacturer, you must demonstrate compliance by keeping a maintenance plan
16 and records of conducted maintenance and must, to the extent practicable,
17 maintain and operate the engine in a manner consistent with good air pollution
18 control practice for minimizing emissions.

19 Required Records: (1) Manufacturer's maintenance or operation manual.

20 (2) Developed maintenance plan, if applicable.

21 (3) Performance test, if applicable.

22 (4) Documentation of maintenance performed.

23 (5) Hours of operation.

24 State-Only: No.

25 Calculation Model: Not applicable.

26 **Condition Approval**

27 Condition: Use of fuel per 40 CFR 60.4207 (b).

28 Periodic Monitoring: Compliance will be demonstrated by use of fuel containing no greater
29 than 0.0015 weight percent sulfur (15 parts per million by weight).

30 Test Method: Not applicable.

31 Test Frequency: Not applicable.

32 Required Records: Vendor certification for diesel fuel sulfur content for all purchases.

33 State-Only: No.

34 Calculation Model: Not applicable.

1 **1.4.39 Discharge Point: 385 Building**

2 385 Building

3 Requirement Citation: NSPS Subpart IIII

4 **Condition Approval**

5 Condition: (1) Non-methane hydrocarbons (NMHC) and nitrogen oxides (NO_x) emission
6 limit of 4.0 g/KW-hr.

7 (2) Particulate matter emission limit of 0.30 g/KW-hr.

8 Compliance Requirement: Compliance will be determined by operating and maintaining the engine
9 and control device according to the manufacturer's written instructions.

10 Required Records: (1) Manufacturer's maintenance or operation manual.

11 (2) Documentation of maintenance performed.

12 (3) Hours of operation.

13 State-Only: No.

14 Calculation Model: Not applicable.

15 **Condition Approval**

16 Condition: Use of fuel per 40 CFR 60.4207 (b).

17 Periodic Monitoring: Compliance will be demonstrated by use of fuel containing no greater
18 than 0.0015 weight percent sulfur (15 parts per million by weight).

19 Test Method: Not applicable.

20 Test Frequency: Not applicable.

21 Required Records: Vendor certification for diesel fuel sulfur content for all purchases.

22 State-Only: No.

23 Calculation Model: Not applicable.

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Renewal 3

1 **1.4.40 Reserved**

2

Effective Date: 08/01/2019
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Hanford Air Operating Permit
Permit No. 00-05-006
Renewal 3

1 **1.4.41 Reserved**

2

Effective Date: 08/01/2019
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Hanford Air Operating Permit
Permit No. 00-05-006
Renewal 3

1 **1.4.42 Reserved**

2

1 **1.4.43 Discharge Point: WTP MHF South-40 Laydown Critical Equipment Storage**

2 WTP MHF South-40 Laydown Critical Equipment Storage

3 Requirement Citation: NSPS Subpart IIII

4 **Condition Approval**

5 Condition: (1) Non-methane hydrocarbons (NMHC) and nitrogen oxides (NO_x) emission
6 limit of 4.7 g/KW-hr.

7 (2) Carbon monoxide (CO) emission limit of 5.0 g/KW-hr.

8 (3) Particulate matter emission limit of 0.40 g/KW-hr.

9 Compliance Requirement: (1) Compliance will be demonstrated by (A) operating and maintaining
10 the engine and control devices according to the manufacturer's emission-related
11 written instructions and (B) change only those emission-related settings that are
12 permitted by the manufacturer.

13 (2) If you do not install, configure, operate or maintain your engine and control
14 device according to manufacturer's emission related written instructions, or you
15 change emission-related settings in a way that is not permitted by the
16 manufacturer, you must demonstrate compliance by keeping a maintenance plan
17 and records of conducted maintenance and must, to the extent practicable,
18 maintain and operate the engine in a manner consistent with good air pollution
19 control practice for minimizing emissions. In addition, if you do not install and
20 configure the engine and control device according to manufacturer's emission-
21 related written instructions, or you change the emission related settings in a way
22 that is not permitted by the manufacturer, you must conduct an initial
23 performance test to demonstrate compliance with the applicable emission
24 standards within 1 year of such action.

25 Required Records: (1) Manufacturer's maintenance or operation manual.

26 (2) Developed maintenance plan, if applicable.

27 (3) Performance test, if applicable.

28 (4) Documentation of maintenance performed.

29 (5) Hours of operation.

30 State-Only: No.

31 Calculation Model: Not applicable.

32 **Condition Approval**

33 Condition: Use of fuel per 40 CFR 60.4207 (b).

34 Periodic Monitoring: Compliance will be demonstrated by use of fuel containing no greater
35 than 0.0015 weight percent sulfur (15 parts per million by weight).

36 Test Method: Not applicable.

37 Test Frequency: Not applicable.

38 Required Records: Vendor certification for diesel fuel sulfur content for all purchases.

39 State-Only: No.

40 Calculation Model: Not applicable.

1 **1.4.44 Discharge Point: 2720EA**

2 2720EA

3 Requirement Citation: NSPS Subpart JJJ

4 **Condition Approval**

5 Condition: (1) Hydrocarbons (HC) and nitrogen oxides (NO_x) emission limit of 13.4 g/kW-
6 hr.

7 (2) Carbon monoxide (CO) emission limit of 519 g/kW-hr.

8 Compliance Requirement: (1) Compliance will be demonstrated by operating and maintaining
9 engine and control device according to the manufacturer's emission-related
10 written instructions and keep records of conducted maintenance.

11 (2) If you do not operate and maintain the engine and control device according
12 to manufacturer's emission related written instructions, you must demonstrate
13 compliance by keeping a maintenance plan and keep records of conducted
14 maintenance and must, to the extent practicable, maintain and operate the engine
15 in a manner consistent with good air pollution control practice for minimizing
16 emissions.

17 Required Records: (1) Manufacturer's maintenance or operation manual.

18 (2) Developed maintenance plan, if applicable.

19 (3) Documentation of maintenance performed.

20 (4) Hours of operation.

21 State-Only: No.

22 Calculation Model: Not applicable.

1 **1.4.45 Discharge Point: Rattle Snake Barricade**

2 Rattle Snake Barricade

3 Requirement Citation: NSPS Subpart JJJJ

4 **Condition Approval**

5 Condition: (1) Hydrocarbons (HC) and nitrogen oxides (NO_x) emission limit of 8 g/kW-hr.

6 (2) Carbon monoxide (CO) emission limit of 610 g/kW-hr.

7 Compliance Requirement: (1) Compliance will be demonstrated by operating and maintaining the
8 engine and control device according to the manufacturer's emission-related
9 written instructions and keep records of conducted maintenance.

10 (2) If you do not operate and maintain the engine and control device according
11 to manufacturer's emission related written instructions you must demonstrate
12 compliance by keeping a maintenance plan and records of conducted
13 maintenance and must, to the extent practicable, maintain and operate the engine
14 in a manner consistent with good air pollution control practice for minimizing
15 emissions. Required Records: (1) Manufacturer's maintenance or operation
16 manual.

17 (2) Developed maintenance plan, if applicable.

18 (3) Documentation of maintenance performed.

19 (4) Hours of operation.

20 State-Only: No.

21 Calculation Model: Not applicable.

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- 1 **1.4.46 Reserved**
- 2 .

1 **1.4.47 Discharge Point: 242-A**

2 242-A Evaporator

3 Requirement Citation: NESHAP Subpart ZZZZ

4 **Condition Approval**

5 Condition: (1) Operate and maintain the engine in accordance with Manufacturer's
6 recommendations or instructions; or develop a written maintenance plan in a
7 manner consistent with good air pollution control practice for minimizing
8 emissions.

9 (2) Change oil and filter every 500 hours of operation or annually, whichever
10 comes first.

11 (3) Inspect air cleaner every 1,000 hours of operation or annually, whichever
12 comes first.

13 (4) Inspect all hoses and belts every 500 hours of operation or annually,
14 whichever comes first, and replace as necessary.

15 Compliance Requirement: Compliance will be demonstrated by operating and maintaining the
16 engine and after treatment control devices according to the manufacturer's
17 emission-related written instructions or develop your own maintenance plan
18 which must provide to the extent practicable for the maintenance and operation
19 of the engine in a manner consistent with good air pollution control practice for
20 minimizing emissions.

21 Required Records: (1) Manufacturer's maintenance or operation manual.

22 (2) Developed maintenance plan, if applicable.

23 (3) Documentation of maintenance performed.

24 (4) Hours of operation.

25 State-Only: No.

26 Calculation Model: Not applicable.

1 **1.4.48 Discharge Point: 234-5Z**

2 234-5Z

3 Requirement Citation: NESHAP Subpart ZZZZ

4 **Condition Approval**

5 Condition: (1) Operate and maintain the engine in accordance with Manufacturer's
6 recommendations or instructions.

7 (2) Change oil and filter every 500 hours of operation or annually, whichever
8 comes first.

9 (3) Inspect air cleaner every 1,000 hours of operation or annually, whichever
10 comes first.

11 (4) Inspect all hoses and belts every 500 hours of operation or annually,
12 whichever comes first, and replace as necessary.

13 Compliance Requirement: Compliance will be determined by operating and maintaining the engine
14 and control device according to the manufacturer's written instructions.

15 Required Records: (1) Manufacturer's maintenance or operation manual.

16 (2) Documentation of maintenance performed.

17 (3) Hours of operation.

18 State-Only: No.

19 Calculation Model: Not applicable.

1 **1.4.49 Discharge Point: 400 Area**

2 400 Area

3 Requirement Citation: NESHAP Subpart ZZZZ

4 **Condition Approval**

5 Condition: (1) Operate and maintain the engine in accordance with Manufacturer's
6 recommendations or instructions.

7 (2) Change oil and filter every 500 hours of operation or annually, whichever
8 comes first.

9 (3) Inspect air cleaner every 1,000 hours of operation or annually, whichever
10 comes first.

11 (4) Inspect all hoses and belts every 500 hours of operation or annually,
12 whichever comes first, and replace as necessary.

13 Compliance Requirement: Compliance will be demonstrated by operating and maintaining the
14 engine and after treatment control devices according to the manufacturer's
15 emission-related written instructions or develop your own maintenance plan
16 which must provide to the extent practicable for the maintenance and operation
17 of the engine in a manner consistent with good air pollution control practice for
18 minimizing emissions.

19 Required Records: (1) Manufacturer's maintenance or operation manual.

20 (2) Developed maintenance plan, if applicable.

21 (3) Documentation of maintenance performed.

22 (4) Hours of operation.

23 State-Only: No.

24 Calculation Model: Not applicable.

1 **1.4.50 Discharge Point: 600 Area Fire Station (Building 609A)**

2 600 Area Fire Station (Building 609A)

3 Requirement Citation: NESHAP Subpart ZZZZ

4 **Condition Approval**

5 Condition: (1) Operate and maintain the engine in accordance with Manufacturer's
6 recommendations or instructions.

7 (2) Change oil and filter every 500 hours of operation or annually, whichever
8 comes first.

9 (3) Inspect spark plugs every 1,000 hours of operation or annually, whichever
10 comes first.

11 (4) Inspect all hoses and belts every 500 hours of operation or annually,
12 whichever comes first, and replace as necessary.

13 Compliance Requirement: Compliance will be demonstrated by operating and maintaining the
14 engine and after treatment control devices according to the manufacturer's
15 emission-related written instructions or develop your own maintenance plan
16 which must provide to the extent practicable for the maintenance and operation
17 of the engine in a manner consistent with good air pollution control practice for
18 minimizing emissions.

19 Required Records: (1) Manufacturer's maintenance or operation manual.

20 (2) Developed maintenance plan, if applicable.

21 (3) Documentation of maintenance performed.

22 (4) Hours of operation.

23 State-Only: No.

24 Calculation Model: Not applicable.

1 **1.4.51 Discharge Point: 2721E**

2 2721E

3 Requirement Citation: NESHAP Subpart ZZZZ

4 **Condition Approval**

5 Condition: (1) Operate and maintain the engine in accordance with Manufacturer's
6 recommendations or instructions.

7 (2) Change oil and filter every 500 hours of operation or annually, whichever
8 comes first.

9 (3) Inspect spark plugs every 1,000 hours of operation or annually, whichever
10 comes first.

11 (4) Inspect all hoses and belts every 500 hours of operation or annually,
12 whichever comes first, and replace as necessary.

13 Compliance Requirement: Compliance will be demonstrated by operating and maintaining the
14 engine and after treatment control devices according to the manufacturer's
15 emission-related written instructions or develop your own maintenance plan
16 which must provide to the extent practicable for the maintenance and operation
17 of the engine in a manner consistent with good air pollution control practice for
18 minimizing emissions.

19 Required Records: (1) Manufacturer's maintenance or operation manual.

20 (2) Developed maintenance plan, if applicable.

21 (3) Documentation of maintenance performed.

22 (4) Hours of operation.

23 State-Only: No.

24 Calculation Model: Not applicable.

1 **1.4.52 Discharge Point: Yakima Barricade**

2 Yakima Barricade

3 Requirement Citation: NESHAP Subpart ZZZZ

4 **Condition Approval**

5 Condition: (1) Operate and maintain the engine in accordance with Manufacturer's
6 recommendations or instructions.

7 (2) Change oil and filter every 500 hours of operation or annually, whichever
8 comes first.

9 (3) Inspect spark plugs every 1,000 hours of operation or annually, whichever
10 comes first.

11 (4) Inspect all hoses and belts every 500 hours of operation or annually,
12 whichever comes first, and replace as necessary.

13 Compliance Requirement: Compliance will be demonstrated by operating and maintaining the
14 engine and after treatment control devices according to the manufacturer's
15 emission-related written instructions or develop your own maintenance plan
16 which must provide to the extent practicable for the maintenance and operation
17 of the engine in a manner consistent with good air pollution control practice for
18 minimizing emissions.

19 Required Records: (1) Manufacturer's maintenance or operation manual.

20 (2) Developed maintenance plan, if applicable.

21 (3) Documentation of maintenance performed.

22 (4) Hours of operation.

23 State-Only: No.

24 Calculation Model: Not applicable.

1 **1.4.53 Discharge Point: 282-B**

2 282-B

3 Requirement Citation: NESHAP Subpart ZZZZ

4 **Condition Approval**

5 Condition: (1) Operate and maintain the engine in accordance with Manufacturer's
6 recommendations or instructions.

7 (2) Change oil and filter every 500 hours of operation or annually, whichever
8 comes first.

9 (3) Inspect air cleaner every 1,000 hours of operation or annually, whichever
10 comes first.

11 (4) Inspect all hoses and belts every 500 hours of operation or annually,
12 whichever comes first, and replace as necessary.

13 Compliance Requirement: Compliance will be demonstrated by operating and maintaining the
14 engine and after treatment control devices according to the manufacturer's
15 emission-related written instructions or develop your own maintenance plan
16 which must provide to the extent practicable for the maintenance and operation
17 of the engine in a manner consistent with good air pollution control practice for
18 minimizing emissions.

19 Required Records: (1) Manufacturer's maintenance or operation manual.

20 (2) Developed maintenance plan, if applicable.

21 (3) Documentation of maintenance performed.

22 (4) Hours of operation.

23 State-Only: No.

24 Calculation Model: Not applicable.

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1 **1.4.54 Reserved**

2

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1 **1.4.55 Reserved**

2

1 **1.4.56 Discharge Point: TEDF Pump Station 2 (225E)**

2 TEDF Pump Station 2 (225E)

3 Requirement Citation: NESHAP Subpart ZZZZ

4 **Condition Approval**

5 Condition: (1) Operate and maintain the engine in accordance with Manufacturer's
6 recommendations or instructions.

7 (2) Change oil and filter every 500 hours of operation or annually, whichever
8 comes first.

9 (3) Inspect spark plugs every 1,000 hours of operation or annually, whichever
10 comes first.

11 (4) Inspect all hoses and belts every 500 hours of operation or annually,
12 whichever comes first, and replace as necessary.

13 Compliance Requirement: Compliance will be demonstrated by operating and maintaining the
14 engine and after treatment control devices according to the manufacturer's
15 emission-related written instructions or develop your own maintenance plan
16 which must provide to the extent practicable for the maintenance and operation
17 of the engine in a manner consistent with good air pollution control practice for
18 minimizing emissions.

19 Required Records: (1) Manufacturer's maintenance or operation manual.

20 (2) Developed maintenance plan, if applicable.

21 (3) Documentation of maintenance performed.

22 (4) Hours of operation.

23 State-Only: No.

24 Calculation Model: Not applicable.

25

1 **1.4.57 Discharge Point: WTP MHF South-40 Laydown Entry Gate (Light Tower)**

2 WTP MHF South-40 Laydown Entry Gate

3 Requirement Citation: NESHAP Subpart ZZZZ

4 **Condition Approval**

5 Condition: (1) Operate and maintain the engine in accordance with Manufacturer's
6 recommendations or instructions.

7 (2) Change oil and filter every 1,000 hours of operation or annually, whichever
8 comes first.

9 (3) Inspect air cleaner every 1,000 hours of operation or annually, whichever
10 comes first.

11 (4) Inspect all hoses and belts every 500 hours of operation or annually,
12 whichever comes first, and replace as necessary.

13 Compliance Requirement: Compliance will be demonstrated by operating and maintaining the
14 engine and after treatment control devices according to the manufacturer's
15 emission-related written instructions or develop your own maintenance plan
16 which must provide to the extent practicable for the maintenance and operation
17 of the engine in a manner consistent with good air pollution control practice for
18 minimizing emissions.

19 Required Records: (1) Manufacturer's maintenance or operation manual.

20 (2) Developed maintenance plan, if applicable.

21 (3) Documentation of maintenance performed.

22 (4) Hours of operation.

23 State-Only: No.

24 Calculation Model: Not applicable.

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Renewal 3

- 1 **1.4.58 Reserved**
- 2

Effective Date: 08/01/2019
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Hanford Air Operating Permit
Permit No. 00-05-006
Renewal 3

1 **1.4.59 Reserved**

2

1 **1.4.60 Discharge Point: WTP MHF South-40 Laydown Yard East X-Ray Tent**

2 WTP MHF South-40 Laydown Yard East X-Ray Tent

3 Requirement Citation: NESHAP Subpart ZZZZ

4 **Condition Approval**

5 Condition: (1) Operate and maintain the engine in accordance with Manufacturer's
6 recommendations or instructions.

7 (2) Change oil and filter every 1,000 hours of operation or annually, whichever
8 comes first.

9 (3) Inspect air cleaner every 1,000 hours of operation or annually, whichever
10 comes first.

11 (4) Inspect all hoses and belts every 500 hours of operation or annually,
12 whichever comes first, and replace as necessary.

13 Compliance Requirement: Compliance will be demonstrated by operating and maintaining the
14 engine and after treatment control devices according to the manufacturer's
15 emission-related written instructions or develop your own maintenance plan
16 which must provide to the extent practicable for the maintenance and operation
17 of the engine in a manner consistent with good air pollution control practice for
18 minimizing emissions.

19 Required Records: (1) Manufacturer's maintenance or operation manual.

20 (2) Developed maintenance plan, if applicable.

21 (3) Documentation of maintenance performed.

22 (4) Hours of operation.

23 State-Only: No.

24 Calculation Model: Not applicable.

1 **1.4.61 Discharge Point: WTP Construction Site Pretreatment Tower Crane**

2 WTP Construction Site Pretreatment Tower Crane

3 Requirement Citation: NESHAP Subpart ZZZZ

4 **Condition Approval**

5 Condition: (1) Operate and maintain the engine in accordance with Manufacturer's
6 recommendations or instructions.

7 (2) Change oil and filter every 500 hours of operation or annually, whichever
8 comes first.

9 (3) Inspect air cleaner every 1,000 hours of operation or annually, whichever
10 comes first.

11 (4) Inspect all hoses and belts every 500 hours of operation or annually,
12 whichever comes first, and replace as necessary.

13 Compliance Requirement: Compliance will be demonstrated by operating and maintaining the
14 engine and after treatment control devices according to the manufacturer's
15 emission-related written instructions or develop your own maintenance plan
16 which must provide to the extent practicable for the maintenance and operation
17 of the engine in a manner consistent with good air pollution control practice for
18 minimizing emissions.

19 Required Records: (1) Manufacturer's maintenance or operation manual.

20 (2) Developed maintenance plan, if applicable.

21 (3) Documentation of maintenance performed.

22 (4) Hours of operation.

23 State-Only: No.

24 Calculation Model: Not applicable.

1 **1.4.62 Discharge Point: WTP Construction Site High-Level Waste Tower Crane**

2 WTP Construction Site High-Level Waste Tower Crane

3 Requirement Citation: NESHAP Subpart ZZZZ

4 **Condition Approval**

5 Condition: (1) Operate and maintain the engine in accordance with Manufacturer's
6 recommendations or instructions.

7 (2) Change oil and filter every 500 hours of operation or annually, whichever
8 comes first.

9 (3) Inspect air cleaner every 1,000 hours of operation or annually, whichever
10 comes first.

11 (4) Inspect all hoses and belts every 500 hours of operation or annually,
12 whichever comes first, and replace as necessary.

13 Compliance Requirement: Compliance will be demonstrated by operating and maintaining the
14 engine and after treatment control devices according to the manufacturer's
15 emission-related written instructions or develop your own maintenance plan
16 which must provide to the extent practicable for the maintenance and operation
17 of the engine in a manner consistent with good air pollution control practice for
18 minimizing emissions.

19 Required Records: (1) Manufacturer's maintenance or operation manual.

20 (2) Developed maintenance plan, if applicable.

21 (3) Documentation of maintenance performed.

22 (4) Hours of operation.

23 State-Only: No.

24 Calculation Model: Not applicable.

1 **1.4.63 Discharge Point: WTP Construction Site Building T-14**

2 WTP Construction Site Building T-14

3 Requirement Citation: NESHAP Subpart ZZZZ

4 **Condition Approval**

- 5 Condition: (1) Operate and maintain the engine in accordance with Manufacturer's
6 recommendations or instructions
7 (2) Change oil and filter every 1,000 hours of operation or annually, whichever
8 comes first.
9 (3) Inspect air cleaner every 1,000 hours of operation or annually, whichever
10 comes first.
11 (4) Inspect all hoses and belts every 500 hours of operation or annually,
12 whichever comes first, and replace as necessary.

13 Compliance Requirement: Compliance will be demonstrated by operating and maintaining the
14 engine and after treatment control devices according to the manufacturer's
15 emission-related written instructions or develop your own maintenance plan
16 which must provide to the extent practicable for the maintenance and operation
17 of the engine in a manner consistent with good air pollution control practice for
18 minimizing emissions.

- 19 Required Records: (1) Manufacturer's maintenance or operation manual.
20 (2) Developed maintenance plan, if applicable.
21 (3) Documentation of maintenance performed.
22 (4) Hours of operation.

23 State-Only: No.

24 Calculation Model: Not applicable.

1 **1.4.64 Discharge Point: Light Towers Waste Transfer Corridor East**

2 200 East Area, Tank Farm Waste Transfer Corridor East

3 Up to 8 diesel engines used to power light plants at the Waste Transfer Corridor East are allowed.

4 Requirement Citation: NSPS Subpart IIII

5 **Condition Approval**

6 Condition: (1) Non-methane hydrocarbons (NMHC) and nitrogen oxides (NO_x) emission
7 limit of 7.5 g/KW-hr.

8 (2) Carbon monoxide (CO) emission limit of 6.6 g/KW-hr.

9 (3) Particulate matter emission limit of 0.40 g/KW-hr.

10 Compliance Requirement: (1) Compliance will be demonstrated by (A) operating and maintaining
11 the engine and control devices according to the manufacturer's emission-related
12 written instructions (B) change only those emission-related settings that are
13 permitted by the manufacturer.

14 (2) If you do not install, configure, operate or maintain your engine and control
15 device according to manufacturer's emission related written instructions, or you
16 change emission-related settings in a way that is not permitted by the
17 manufacturer, you must demonstrate compliance by keeping a maintenance plan
18 and records of conducted maintenance to demonstrate compliance and must, to
19 the extent practicable, maintain and operate the engine in a manner consistent
20 with good air pollution control practice for minimizing emissions. In addition if
21 you do not install and configure the engine and control device according to
22 manufacturer's emission-related written instructions, or you change the emission
23 related settings in a way that is not permitted by the manufacturer, you must
24 conduct an initial performance test to demonstrate compliance with the
25 applicable emission standards within 1 year of such action.

26 Required Records: (1) Manufacturer's maintenance or operation manual.

27 (2) Developed maintenance plan, if applicable.

28 (3) Performance test, if applicable.

29 (4) Documentation of maintenance performed.

30 (5) Hours of operation.

31 State-Only: No.

32 Calculation Model: Not applicable.

33 **Condition Approval**

34 Condition: Use of fuel per 40 CFR 60.4207 (b).

35 Periodic Monitoring: Compliance will be demonstrated by use of fuel containing no greater
36 than 0.0015 weight percent sulfur (15 parts per million by weight).

37 Test Method: Not applicable.

38 Test Frequency: Not applicable.

39 Required Records: Vendor certification for diesel fuel sulfur content for all purchases.

40 State-Only: No.

41 Calculation Model: Not applicable.

1 **Condition Approval**

- 2 Condition: Maintain no more than eight Waste Transfer Corridor East engines.
- 3 Periodic Monitoring: Inventory of engines used to power the Waste Transfer Corridor East
4 light plants. At a minimum; record the current and past engines in the
5 Corridor with the date the engine was located in the Corridor and the date
6 it was removed from the Corridor.
- 7 Test Method: Not applicable.
- 8 Test Frequency: Not applicable.
- 9 Required Records: Engine inventory.
- 10 State-Only: No.
- 11 Calculation Model: Not applicable.

1 **1.4.65 Discharge Point: Light Towers Waste Transfer Corridor West**

2 200 East Area, Tank Farm Waste Transfer Corridor East

3 Up to 8 diesel engines used to power light plants at the Waste Transfer Corridor East are allowed.

4 Requirement Citation: NSPS Subpart IIII

5 **Condition Approval**

6 Condition: (1) Non-methane hydrocarbons (NMHC) and nitrogen oxides (NO_x) emission
7 limit of 7.5 g/KW-hr.

8 (2) Carbon monoxide (CO) emission limit of 6.6 g/KW-hr.

9 (3) Particulate matter emission limit of 0.40 g/KW-hr.

10 Compliance Requirement: (1) Compliance will be demonstrated by (A) operating and maintaining
11 the engine and control devices according to the manufacturer's emission-related
12 written instructions (B) change only those emission-related settings that are
13 permitted by the manufacturer.

14 (2) If you do not install, configure, operate or maintain your engine and control
15 device according to manufacturer's emission related written instructions, or you
16 change emission-related settings in a way that is not permitted by the
17 manufacturer, you must demonstrate compliance by keeping a maintenance plan
18 and records of conducted maintenance to demonstrate compliance and must, to
19 the extent practicable, maintain and operate the engine in a manner consistent
20 with good air pollution control practice for minimizing emissions. In addition if
21 you do not install and configure the engine and control device according to
22 manufacturer's emission-related written instructions, or you change the emission
23 related settings in a way that is not permitted by the manufacturer, you must
24 conduct an initial performance test to demonstrate compliance with the
25 applicable emission standards within 1 year of such action.

26 Required Records: (1) Manufacturer's maintenance or operation manual.

27 (2) Developed maintenance plan, if applicable.

28 (3) Performance test, if applicable.

29 (4) Documentation of maintenance performed.

30 (5) Hours of operation.

31 State-Only: No.

32 Calculation Model: Not applicable.

33 **Condition Approval**

34 Condition: Use of fuel per 40 CFR 60.4207 (b).

35 Periodic Monitoring: Compliance will be demonstrated by use of fuel containing no greater
36 than 0.0015 weight percent sulfur (15 parts per million by weight).

37 Test Method: Not applicable.

38 Test Frequency: Not applicable.

39 Required Records: Vendor certification for diesel fuel sulfur content for all purchases.

40 State-Only: No.

41 Calculation Model: Not applicable.

1 **Condition Approval**

- 2 Condition: Maintain no more than eight Waste Transfer Corridor East engines.
- 3 Periodic Monitoring: Inventory of engines used to power the Waste Transfer Corridor East
4 light plants. At a minimum; record the current and past engines in the
5 Corridor with the date the engine was located in the Corridor and the date
6 it was removed from the Corridor.
- 7 Test Method: Not applicable.
- 8 Test Frequency: Not applicable.
- 9 Required Records: Engine inventory.
- 10 State-Only: No.
- 11 Calculation Model: Not applicable.

1 **1.4.66 Discharge Point: Light Towers C Farm Trailer Area**

2 200 East Area, C Tank Farm Trailer Area

3 Up to 8 diesel engines used to power light plants at the C Farm Trailer Area are allowed.

4 Requirement Citation: NSPS Subpart IIII

5 **Condition Approval**

6 Condition: (1) Non-methane hydrocarbons (NMHC) and nitrogen oxides (NO_x) emission
7 limit of 7.5 g/KW-hr.

8 (2) Carbon monoxide (CO) emission limit of 6.6 g/KW-hr.

9 (3) Particulate matter emission limit of 0.40 g/KW-hr.

10 Compliance Requirement: (1) Compliance will be demonstrated by (A) operating and maintaining
11 the engine and control devices according to the manufacturer's emission-related
12 written instructions (B) change only those emission-related settings that are
13 permitted by the manufacturer.

14 (2) If you do not install, configure, operate or maintain your engine and control
15 device according to manufacturer's emission related written instructions, or you
16 change emission-related settings in a way that is not permitted by the
17 manufacturer, you must demonstrate compliance by keeping a maintenance plan
18 and records of conducted maintenance to demonstrate compliance and must, to
19 the extent practicable, maintain and operate the engine in a manner consistent
20 with good air pollution control practice for minimizing emissions. In addition if
21 you do not install and configure the engine and control device according to
22 manufacturer's emission-related written instructions, or you change the emission
23 related settings in a way that is not permitted by the manufacturer, you must
24 conduct an initial performance test to demonstrate compliance with the
25 applicable emission standards within 1 year of such action.

26 Required Records: (1) Manufacturer's maintenance or operation manual.

27 (2) Developed maintenance plan, if applicable.

28 (3) performance test, if applicable.

29 (4) Documentation of maintenance performed.

30 (5) Hours of operation.

31 State-Only: No.

32 Calculation Model: Not applicable.

33 **Condition Approval**

34 Condition: Use of fuel per 40 CFR 60.4207 (b).

35 Periodic Monitoring: Compliance will be demonstrated by use of fuel containing no greater
36 than 0.0015 weight percent sulfur (15 parts per million by weight).

37 Test Method: Not applicable.

38 Test Frequency: Not applicable.

39 Required Records: Vendor certification for diesel fuel sulfur content for all purchases.

40 State-Only: No.

41 Calculation Model: Not applicable.

1 **Condition Approval**

- 2 Condition: Maintain no more than eight C Farm Trailer Area engines.
- 3 Periodic Monitoring: Inventory of engines used to power the C Farm Trailer Area light plants.
4 At a minimum; record the current and past engines in the trailer area with
5 the date the engine was located in the trailer area and the date it was
6 removed from the trailer area.
- 7 Test Method: Not applicable.
- 8 Test Frequency: Not applicable.
- 9 Required Records: Engine inventory.
- 10 State-Only: No.
- 11 Calculation Model: Not applicable.

1 **1.4.67 Discharge Point: Light Towers C Farm**

2 200 East Area, C Tank Farm

3 Up to 8 diesel engines used to power light plants at the C Farm are allowed.

4 Requirement Citation: NSPS Subpart IIII

5 **Condition Approval**

6 Condition: (1) Non-methane hydrocarbons (NMHC) and nitrogen oxides (NO_x) emission
7 limit of 7.5 g/KW-hr.

8 (2) Carbon monoxide (CO) emission limit of 6.6 g/KW-hr.

9 (3) Particulate matter emission limit of 0.40 g/KW-hr.

10 Compliance Requirement: (1) Compliance will be demonstrated by (A) operating and maintaining
11 the engine and control devices according to the manufacturer's emission-related
12 written instructions (B) change only those emission-related settings that are
13 permitted by the manufacturer.

14 (2) If you do not install, configure, operate or maintain your engine and control
15 device according to manufacturer's emission related written instructions, or you
16 change emission-related settings in a way that is not permitted by the
17 manufacturer, you must demonstrate compliance by keeping a maintenance plan
18 and records of conducted maintenance to demonstrate compliance and must, to
19 the extent practicable, maintain and operate the engine in a manner consistent
20 with good air pollution control practice for minimizing emissions. In addition if
21 you do not install and configure the engine and control device according to
22 manufacturer's emission-related written instructions, or you change the emission
23 related settings in a way that is not permitted by the manufacturer, you must
24 conduct an initial performance test to demonstrate compliance with the
25 applicable emission standards within 1 year of such action.

26 Required Records: (1) Manufacturer's maintenance or operation manual.

27 (2) Developed maintenance plan, if applicable.

28 (3) Performance test, if applicable.

29 (4) Documentation of maintenance performed.

30 (5) Hours of operation.

31 State-Only: No.

32 Calculation Model: Not applicable.

33 **Condition Approval**

34 Condition: Use of fuel per 40 CFR 60.4207 (b).

35 Periodic Monitoring: Compliance will be demonstrated by use of fuel containing no greater
36 than 0.0015 weight percent sulfur (15 parts per million by weight).

37 Test Method: Not applicable.

38 Test Frequency: Not applicable.

39 Required Records: Vendor certification for diesel fuel sulfur content for all purchases.

40 State-Only: No.

41 Calculation Model: Not applicable.

1 **Condition Approval**

- 2 Condition: Maintain no more than eight C Farm engines.
- 3 Periodic Monitoring: Inventory of engines used to power the C Farm light plants. At a
4 minimum; record the current and past engines in the C Farm with the
5 date the engine was located in the C Farm and the date it was removed
6 from the C Farm.
- 7 Test Method: Not applicable.
- 8 Test Frequency: Not applicable.
- 9 Required Records: Engine inventory.
- 10 State-Only: No.
- 11 Calculation Model: Not applicable.

1 **1.4.68 Discharge Point: AY/AZ Farm DMI-LT Light Tower**

2 200 East Area, AY/AZ Farm

3 Requirement Citation: NSPS Subpart IIII

4 **Condition Approval**

5 Condition: (1) Non-methane hydrocarbons (NMHC) and nitrogen oxides (NO_x) emission
6 limit of 4.7 g/KW-hr.

7 (2) Carbon monoxide (CO) emission limit of 5.0 g/KW-hr.

8 (3) Particulate matter emission limit of 0.30 g/KW-hr.

9 Compliance Requirement: (1) Compliance will be demonstrated by (A) operating and maintaining
10 the engine and control devices according to the manufacturer's emission-related
11 written instructions (B) change only those emission-related settings that are
12 permitted by the manufacturer.

13 (2) If you do not install, configure, operate or maintain your engine and control
14 device according to manufacturer's emission related written instructions, or you
15 change emission-related settings in a way that is not permitted by the
16 manufacturer, you must demonstrate compliance by keeping a maintenance plan
17 and records of conducted maintenance to demonstrate compliance and must, to
18 the extent practicable, maintain and operate the engine in a manner consistent
19 with good air pollution control practice for minimizing emissions. In addition, if
20 you do not install and configure the engine and control device according to
21 manufacturer's emission-related written instructions, or you change the emission
22 related settings in a way that is not permitted by the manufacturer, you must
23 conduct an initial performance test to demonstrate compliance with the
24 applicable emission standards within 1 year of such action.

25 Required Records: (1) Manufacturer's maintenance or operation manual.

26 (2) Developed maintenance plan, if applicable.

27 (3) Performance test, if applicable.

28 (4) Documentation of maintenance performed.

29 (5) Hours of operation.

30 State-Only: No.

31 Calculation Model: Not applicable.

32 **Condition Approval**

33 Condition: Use of fuel per 40 CFR 60.4207 (b).

34 Periodic Monitoring: Compliance will be demonstrated by use of fuel containing no greater
35 than 0.0015 weight percent sulfur (15 parts per million by weight).

36 Test Method: Not applicable.

37 Test Frequency: Not applicable.

38 Required Records: Vendor certification for diesel fuel sulfur content for all purchases.

39 State-Only: No.

40 Calculation Model: Not applicable.

Effective Date: 08/01/2019
Expiration Date: 08/01/2024

Hanford Air Operating Permit
Permit No. 00-05-006
Renewal 3

1 **1.4.69 Reserved**

2

3

1 **1.4.70 Discharge Point: Light Towers AN Farm**

2 200 East Area, AN Tank Farm

3 Up to 8 diesel engines used to power light plants at the AN Farm are allowed.

4 Requirement Citation: NSPS Subpart IIII

5 **Condition Approval**

6 Condition: (1) Non-methane hydrocarbons (NMHC) and nitrogen oxides (NO_x) emission
7 limit of 7.5 g/KW-hr.

8 (2) Carbon monoxide (CO) emission limit of 6.6 g/KW-hr.

9 (3) Particulate matter emission limit of 0.40 g/KW-hr.

10 Compliance Requirement: (1) Compliance will be demonstrated by (A) operating and maintaining
11 the engine and control devices according to the manufacturer's emission-related
12 written instructions (B) change only those emission-related settings that are
13 permitted by the manufacturer.

14 (2) If you do not install, configure, operate or maintain your engine and control
15 device according to manufacturer's emission related written instructions, or you
16 change emission-related settings in a way that is not permitted by the
17 manufacturer, you must demonstrate compliance by keeping a maintenance plan
18 and records of conducted maintenance to demonstrate compliance and must, to
19 the extent practicable, maintain and operate the engine in a manner consistent
20 with good air pollution control practice for minimizing emissions. In addition if
21 you do not install and configure the engine and control device according to
22 manufacturer's emission-related written instructions, or you change the emission
23 related settings in a way that is not permitted by the manufacturer, you must
24 conduct an initial performance test to demonstrate compliance with the
25 applicable emission standards within 1 year of such action.

26 Required Records: (1) Manufacturer's maintenance or operation manual.

27 (2) Developed maintenance plan, if applicable.

28 (3) Performance test, if applicable.

29 (4) Documentation of maintenance performed.

30 (5) Hours of operation.

31 State-Only: No.

32 Calculation Model: Not applicable.

33 **Condition Approval**

34 Condition: Use of fuel per 40 CFR 60.4207 (b)

35 Periodic Monitoring: Compliance will be demonstrated by use of fuel containing no greater
36 than 0.0015 weight percent sulfur (15 parts per million by weight).

37 Test Method: Not applicable.

38 Test Frequency: Not applicable.

39 Required Records: Vendor certification for diesel fuel sulfur content for all purchases.

40 State-Only: No.

41 Calculation Model: Not applicable.

1 **Condition Approval**

- 2 Condition: Maintain no more than eight AN Farm engines.
- 3 Periodic Monitoring: Inventory of engines used to power the AN Farm light plants. At a
4 minimum; record the current and past engines in the AN Farm with the
5 date the engine was located in the AN Farm and the date it was removed
6 from the AN Farm.
- 7 Test Method: Not applicable.
- 8 Test Frequency: Not applicable.
- 9 Required Records: Engine inventory.
- 10 State-Only: No.
- 11 Calculation Model: Not applicable.

1 **1.4.71 Discharge Point: 200E Effluent Treatment Facility Engine**

2 200 East Area,

3 Requirement Citation: NSPS Subpart IIII (Non-emergency diesel, Cylinder Displacement – 3.3 L, 74
4 horsepower (55 kW))

5 **Condition Approval**

6 Condition: (1) Non-methane hydrocarbons (NMHC) and nitrogen oxides (NO_x) emission
7 limit of 4.7 g/KW-hr.

8 (2) Carbon monoxide (CO) emission limit of 5.0 g/KW-hr.

9 (3) Particulate matter emission limit of 0.30 g/KW-hr.

10 Compliance Requirement: (1) Compliance will be demonstrated by (A) operating and maintaining
11 the engine and control devices according to the manufacturer's emission-related
12 written instructions, and (B) change only those emission-related settings that are
13 permitted by the manufacturer.

14 (2) If you do not install, configure, operate or maintain your engine and control
15 device according to manufacturer's emission related written instructions, or you
16 change emission-related settings in a way that is not permitted by the
17 manufacturer, you must demonstrate compliance by keeping a maintenance plan
18 and records of conducted maintenance to demonstrate compliance and must, to
19 the extent practicable, maintain and operate the engine in a manner consistent
20 with good air pollution control practice for minimizing emissions. In addition if
21 you do not install and configure the engine and control device according to
22 manufacturer's emission-related written instructions, or you change the emission
23 related settings in a way that is not permitted by the manufacturer, you must
24 conduct an initial performance test to demonstrate compliance with the
25 applicable emission standards within 1 year of such action.

26 Required Records: (1) Manufacturer's maintenance or operation manual.

27 (2) Developed maintenance plan, if applicable.

28 (3) Performance test, if applicable.

29 (4) Documentation of maintenance performed.

30 (5) Hours of operation.

31 State-Only: No.

32 Calculation Model: Not applicable.

33 **Condition Approval**

34 Condition: Use of fuel per 40 CFR 60.4207 (a) and (b)

35 Periodic Monitoring: Compliance will be demonstrated by use of fuel containing no greater
36 than 0.0015 weight percent sulfur (15 parts per million by weight).

37 Test Method: Not applicable.

38 Test Frequency: Not applicable.

39 Required Records: Vendor certification for diesel fuel sulfur content for all purchases.

40 State-Only: No.

41 Calculation Model: Not applicable.

1 **1.4.72 Discharge Point: 251W Substation Emergency Backup Engine**

2 Requirement Citation: NSPS Subpart JJJJ, 40 CFR 60.4231(c), Cummins GGHE-6194537, 6.8 L
3 Cylinder Displacement, Engine Power 97.7 HP

4 **Condition Approval**

5 Condition: (1) Hydrocarbons (HC) and nitrogen oxides (NO_x) emission limit of 13.4 g/kW-
6 hr.
7 (2) Carbon monoxide (CO) emission limit of 519 g/kW-hr.

8 Compliance Requirement: (1) Compliance will be demonstrated by operating and maintaining the
9 engine and control devices according to the manufacturer's emission-related
10 written instructions and keep records of conducted maintenance.

11 (2) If you do not install, configure, operate or maintain the engine and control
12 device according to manufacturer's emission-related written instructions, you
13 must demonstrate compliance by keeping a maintenance plan and keep records of
14 conducted maintenance, and must, to the extent practicable, maintain and operate
15 the engine in a manner consistent with good air pollution control practice for
16 minimizing emissions.

17 Required Records: (1) Manufacturer's maintenance or operation manual.
18 (2) Developed maintenance plan, if applicable.
19 (3) Documentation of maintenance performed.
20 (4) Hours of operation.

21 State-Only: No.

22 Calculation Model: Not applicable.

1 **1.4.73 WTP MHF South-40 Laydown Yard Laborers Tent**

2 Requirement Citation: NESHAP Subpart ZZZZ, 40 CFR 63.6590(a)(1)(ii), Engine Year 2002, Engine
3 Power 15.5 HP

4 **Condition Approval**

- 5 Condition: (1) Operate and maintain the engine in accordance with Manufacturer's
6 recommendations or instructions
7 (2) Change oil and filter every 1,000 hours of operation or annually, whichever
8 comes first.
9 (3) Inspect air cleaner every 1,000 hours of operation or annually, whichever
10 comes first.
11 (4) Inspect all hoses and belts every 500 hours of operation or annually,
12 whichever comes first, and replace as necessary.

13 Compliance Requirement: Compliance will be demonstrated by operating and maintaining the
14 engine and after treatment control devices according to the manufacturer's
15 emission-related written instructions or develop your own maintenance plan
16 which must provide to the extent practicable for the maintenance and operation
17 of the engine in a manner consistent with good air pollution control practice for
18 minimizing emissions.

- 19 Required Records: (1) Manufacturer's maintenance or operation manual.
20 (2) Developed maintenance plan, if applicable.
21 (3) Documentation of maintenance performed.
22 (4) Hours of operation.

23 State-Only: No.

24 Calculation Model: Not applicable.

1 **1.4.74 WTP MHF South-40 Laydown Yard Warm-up/Cool-down Tent**

2 Requirement Citation: NESHAP Subpart ZZZZ, 40 CFR 63.6590(a)(1)(ii), Engine Year 2004, Engine
3 Power 12 HP

4 **Condition Approval**

- 5 Condition: (1) Operate and maintain the engine in accordance with Manufacturer's
6 recommendations or instructions
7 (2) Change oil and filter every 1,000 hours of operation or annually, whichever
8 comes first.
9 (3) Inspect air cleaner every 1,000 hours of operation or annually, whichever
10 comes first.
11 (4) Inspect all hoses and belts every 500 hours of operation or annually,
12 whichever comes first, and replace as necessary.

13 Compliance Requirement: Compliance will be demonstrated by operating and maintaining the
14 engine and after treatment control devices according to the manufacturer's
15 emission-related written instructions or develop your own maintenance plan
16 which must provide to the extent practicable for the maintenance and operation
17 of the engine in a manner consistent with good air pollution control practice for
18 minimizing emissions

- 19 Required Records: (1) Manufacturer's maintenance or operation manual.
20 (2) Developed maintenance plan, if applicable.
21 (3) Documentation of maintenance performed.
22 (4) Hours of operation.

23 State-Only: No.

24 Calculation Model: Not applicable.

1 **1.4.75 400 Area Water Treatment System Engines**

2 Requirement Citation: NSPS Subpart IIII, 40 CFR 60, Engine Year 2008 or later, Compression Ignition –
3 Diesel, Displacement < 10 L, non-emergency seasonal use

4 No more than 8 engines (Model Year 2008 or later) with power ratings between $8 \leq kW \leq 19$ ($11 \leq HP \leq$
5 25 HP) or $19 \leq kW \leq 37$ ($25 \leq HP \leq 50$), not to exceed an aggregate power rating of 142.7 HP, may be
6 used. Engines will be used to power light plants and/or generators at the 400 Area Water Treatment
7 System under seasonal use.

8 **Condition Approval**

9 Condition: (1) Non-methane hydrocarbons (NMHC) and nitrogen oxides (NO_x) emission
10 limit of 9.5 g/KW-hr.

11 (2) Carbon monoxide (CO) emission limit of 6.6 g/KW-hr.

12 (3) Particulate matter emission limit of 0.80 g/KW-hr.

13 Compliance Requirement: (1) Compliance will be demonstrated by (A) operating and maintaining
14 the engine and control devices according to the manufacturer's emission-related
15 written instructions, and (B) change only those emission-related settings that are
16 permitted by the manufacturer.

17 (2) If you do not install, configure, operate or maintain your engine and control
18 device according to manufacturer's emission related written instructions, or you
19 change emission-related settings in a way that is not permitted by the
20 manufacturer, you must demonstrate compliance by keeping a maintenance plan
21 and records of conducted maintenance to demonstrate compliance and must, to
22 the extent practicable, maintain and operate the engine in a manner consistent
23 with good air pollution control practice for minimizing emissions. In addition if
24 you do not install and configure the engine and control device according to
25 manufacturer's emission-related written instructions, or you change the emission
26 related settings in a way that is not permitted by the manufacturer, you must
27 conduct an initial performance test to demonstrate compliance with the
28 applicable emission standards within 1 year of such action.

29 Required Records: (1) Manufacturer's maintenance or operation manual.

30 (2) Developed maintenance plan, if applicable.

31 (3) Performance test, if applicable.

32 (4) Documentation of maintenance performed

33 (5) Hour meter readings

34 State-Only: No.

35 Calculation Model: Not applicable.

1 **Condition Approval**

- 2 Condition: Use of fuel per 40 CFR 60.4207 (b).
3 Periodic Monitoring: Compliance will be demonstrated by use of fuel containing no greater
4 than 0.0015 weight percent sulfur (15 parts per million by weight).
5 Test Method: Not applicable.
6 Test Frequency: Not applicable.
7 Required Records: Vendor certification for diesel fuel sulfur content for all purchases.
8 State-Only: No.
9 Calculation Model: Not applicable.

10 **Condition Approval**

- 11 Condition: Maintain an engine inventory of 8 engines or less with any engine not to exceed
12 50 HP with a combined aggregate horsepower not to exceed 142.7 horsepower.
13 Periodic Monitoring: Inventory of engines used seasonally to support the 400 Area WS
14 operations. At a minimum; record the current and past engines used with
15 the date and hour readings the engine was located in the 400 Area and the
16 date it was removed from the 400 Area.
17 Test Method: Not applicable.
18 Test Frequency: Not applicable.
19 Required Records: Engine inventory.
20 State-Only: No.
21 Calculation Model: Not applicable.

1 **1.4.76 CWC Facility Existing Light Plant Engines**

2 Requirement Citation: NESHAP Subpart ZZZZ 40 CFR 63, Engine Year – Prior to 7/11/2005, Non-
3 emergency Compression Ignition, Displacement <10 L, limited to two engines
4 not to exceed an aggregate total of 20 horsepower

5 **Condition Approval**

6 Condition: (1) Operate and maintain the engine in accordance with Manufacturer’s
7 recommendations or instructions
8 (2) Change oil and filter every 500 hours of operation or annually, whichever
9 comes first.
10 (3) Inspect air cleaner every 1,000 hours of operation or annually, whichever
11 comes first.
12 (4) Inspect all hoses and belts every 500 hours of operation or annually,
13 whichever comes first, and replace as necessary.

14 Compliance Requirement: Compliance will be demonstrated by operating and maintaining the
15 engine and after treatment control devices according to the manufacturer's
16 emission-related written instructions or develop your own maintenance plan
17 which must provide to the extent practicable for the maintenance and operation
18 of the engine in a manner consistent with good air pollution control practice for
19 minimizing emissions.

20 Required Records: (1) Manufacturer’s maintenance or operation manual.
21 (2) Developed maintenance, if applicable.
22 (3) Documentation of maintenance performed.
23 (4) Hours of operation.

24 State-Only: No.

25 Calculation Model: Not applicable.

26 **Condition Approval**

27 Condition: Use of fuel per 40 CFR 60.4207 (b).

28 Periodic Monitoring: Compliance will be demonstrated by use of fuel containing no greater
29 than 0.0015 weight percent sulfur (15 parts per million by weight).

30 Test Method: Not applicable.

31 Test Frequency: Not applicable.

32 Required Records: Vendor certification for diesel fuel sulfur content for all purchases.

33 State-Only: No.

34 Calculation Model: Not applicable.

1 **Condition Approval**

2 Condition: Maintain an engine inventory of no more than two engines not to exceed an
3 aggregate total of 20 horsepower.

4 Periodic Monitoring: Inventory of engines used seasonally to support the CWC operations. At
5 a minimum; record the current and past engines used with the date and
6 hour readings the engine was located in the CWC Area and the date it
7 was removed from the CWC Area.

8 Test Method: Not applicable.

9 Test Frequency: Not applicable.

10 Required Records: Engine inventory.

11 State-Only: No.

12 Calculation Model: Not applicable.

1 **1.4.77 CWC Facility New Light Plant Engines**

2 Requirement Citation: NSPS Subpart IIII, 40 CFR 60, Engine Year 2005 or later, Displacement < 10 L,
3 non-emergency compression ignition, Max Power output < 25 HP

4 No more than an aggregate of 122.7 horsepower, with a max power output of a single engine not to
5 exceed 25 HP, may be used

6 **Condition Approval**

7 Condition: (1) Non-methane hydrocarbons (NMHC) and nitrogen oxides (NO_x) emission
8 limit of 9.5 g/KW-hr.

9 (2) Carbon monoxide (CO) emission limit of 6.6 g/KW-hr.

10 (3) Particulate matter emission limit of 0.80 g/KW-hr.

11 Compliance Requirement: (1) Compliance will be demonstrated by (A) operating and maintaining
12 the engine and control devices according to the manufacturer's emission-related
13 written instructions, and (B) change only those emission-related settings that are
14 permitted by the manufacturer.

15 (2) If you do not install, configure, operate or maintain your engine and control
16 device according to manufacturer's emission related written instructions, or you
17 change emission-related settings in a way that is not permitted by the
18 manufacturer, you must demonstrate compliance by keeping a maintenance plan
19 and records of conducted maintenance to demonstrate compliance and must, to
20 the extent practicable, maintain and operate the engine in a manner consistent
21 with good air pollution control practice for minimizing emissions. In addition if
22 you do not install and configure the engine and control device according to
23 manufacturer's emission-related written instructions, or you change the emission
24 related settings in a way that is not permitted by the manufacturer, you must
25 conduct an initial performance test to demonstrate compliance with the
26 applicable emission standards within 1 year of such action.

27 Required Records: (1) Manufacturer's maintenance or operation manual.

28 (2) Developed maintenance plan, if applicable.

29 (3) Performance test, if applicable.

30 (4) Documentation of maintenance performed

31 (5) Hour meter readings

32 State-Only: No.

33 Calculation Model: Not applicable.

34 **Condition Approval**

35 Condition: Use of fuel per 40 CFR 60.4207 (b).

36 Periodic Monitoring: Compliance will be demonstrated by use of fuel containing no greater
37 than 0.0015 weight percent sulfur (15 parts per million by weight).

38 Test Method: Not applicable.

39 Test Frequency: Not applicable.

40 Required Records: Vendor certification for diesel fuel sulfur content for all purchases.

41 State-Only: No.

42 Calculation Model: Not applicable.

1 **Condition Approval**

- 2 Condition: Maintain an engine inventory of 8 engines or less with any engine not to exceed
3 25 HP with a combined aggregate horsepower not to exceed 122.7 horsepower.
- 4 Periodic Monitoring: Inventory of engines used seasonally to support the CWC operations. At
5 a minimum; record the current and past engines used with the date and
6 hour readings the engine was located in the CWC Area and the date it
7 was removed from the CWC Area.
- 8 Test Method: Not applicable.
- 9 Test Frequency: Not applicable.
- 10 Required Records: Engine inventory.
- 11 State-Only: No.
- 12 Calculation Model: Not applicable.

1 **1.4.78 200 W SWOC Administrative Offices Engines**

2 Requirement Citation: NSPS Subpart IIII, 40 CFR 60, Engine Year 2005 or later, Displacement
3 < 10 L, non-emergency compression ignition, Max Power output < 25 HP

4 No more than an aggregate of 142.7 horsepower, with a max power output of a single engine not to
5 exceed 25 HP, may be used.

6 **Condition Approval**

7 Condition: (1) Non-methane hydrocarbons (NMHC) and nitrogen oxides (NO_x) emission
8 limit of 9.5 g/KW-hr.

9 (2) Carbon monoxide (CO) emission limit of 6.6 g/KW-hr.

10 (3) Particulate matter emission limit of 0.80 g/KW-hr.

11 Compliance Requirement: (1) Compliance will be demonstrated by (A) operating and maintaining
12 the engine and control devices according to the manufacturer's emission-related
13 written instructions, and (B) change only those emission-related settings that are
14 permitted by the manufacturer.

15 (2) If you do not install, configure, operate or maintain your engine and control
16 device according to manufacturer's emission related written instructions, or you
17 change emission-related settings in a way that is not permitted by the
18 manufacturer, you must demonstrate compliance by keeping a maintenance plan
19 and records of conducted maintenance to demonstrate compliance and must, to
20 the extent practicable, maintain and operate the engine in a manner consistent
21 with good air pollution control practice for minimizing emissions. In addition if
22 you do not install and configure the engine and control device according to
23 manufacturer's emission-related written instructions, or you change the emission
24 related settings in a way that is not permitted by the manufacturer, you must
25 conduct an initial performance test to demonstrate compliance with the
26 applicable emission standards within 1 year of such action.

27 Required Records: (1) Manufacturer's maintenance or operation manual.

28 (2) Developed maintenance plan, if applicable.

29 (3) Performance test, if applicable.

30 (4) Documentation of maintenance performed

31 (5) Hour meter readings

32 State-Only: No.

33 Calculation Model: Not applicable.

34 **Condition Approval**

35 Condition: Use of fuel per 40 CFR 60.4207 (b).

36 Periodic Monitoring: Compliance will be demonstrated by use of fuel containing no greater
37 than 0.0015 weight percent sulfur (15 parts per million by weight).

38 Test Method: Not applicable.

39 Test Frequency: Not applicable.

40 Required Records: Vendor certification for diesel fuel sulfur content for all purchases.

41 State-Only: No.

42 Calculation Model: Not applicable.

43 **Condition Approval**

- 1 Condition: Maintain an inventory with no more than an aggregate of 142.7 horsepower, with
- 2 a single engine not to exceed 25 horsepower may be used.
- 3 Periodic Monitoring: Inventory of engines used seasonally to support the 200W SWOC
- 4 Administrative office operations. At a minimum; record the current and
- 5 past engines used with the date and hour readings the engine was located
- 6 in the 200W SWOC Administrative office area and the date it was
- 7 removed from the 200W SWOC Administrative office area.
- 8 Test Method: Not applicable.
- 9 Test Frequency: Not applicable.
- 10 Required Records: (1) Engine inventory.
- 11 (2) Hour meter readings
- 12 State-Only: No.
- 13 Calculation Model: Not applicable.

1 **1.4.79 222S Engine for Direct Drive Ventilation**

2 200 West Area Engine directly powering the 222S Facility exhaust

3 Requirement Citation: DE15NWP-001, Rev. 1 (9/08/2017)

4 **Condition Approval 9/08/2017**

5 Condition: Total Emission Limits

6 A. Emissions of nitrogen oxides (NO_x) will not exceed 18.1 tons per year

7 B. Emissions of carbon monoxide (CO) will not exceed 1.16 tons per year

8 C. Emissions of particulate matter (PM) will not exceed 0.193 tons per year.

9 D. Emissions of total unburned hydrocarbons (HC/VOC) will not exceed 0.257
10 tons per year

11 E. Emissions of nitrogen oxide (NO₂) will not exceed ASIL limit of 470 µg/m³

12 F. Emissions of diesel engine particulate matter (DEP) will not exceed ASIL
13 limit of 0.00333 µg/m³.

14 Periodic Monitoring: A. Install engine to meet emission limitations of 40 CFR Part 89 [40 CFR
15 §60.4211(c)]

16 B. Maintain in a current conditions all recommended operation and equipment
17 maintenance provisions supplied by the manufacturer of the engine [40 CFR
18 §60.4211(a)].

19 C. Operation of a non-resettable hour meter

20 D. Operating and maintaining the stationary compression ignition internal
21 combustion engines and control devices according to the manufacturer's
22 emission-related written instructions or procedures developed by the owner or
23 operator that are approved by the engine manufacturer [40 CFR §60.4211(a)]

24 E. Installing and configuring the engine according to manufacturer specifications
25 [40 CFR §60.4211(c)]

26 Test Method: Not specified.

27 Test Frequency: Not applicable.

28 Required Records: A. Manufacturer's engine certifications retained from initial use through the ten-
29 year life of the engine

30 B. Maintenance records for maintenance conducted

31 C. Records of cumulative operating hours for each engine, calculated semi-
32 annually, will be retained for a minimum of 60 months

33 State-Only: NSR thresholds – No.

34 ASILs - Yes.

35 Calculation Model: Not applicable.

- 1 **Condition Approval 9/08/2017**
- 2 Condition: Emissions Limit
- 3 Emissions of sulfur dioxide (SO₂) will not exceed 0.386 tons per year.
- 4 Periodic Monitoring: Recordkeeping.
- 5 Test Method: ASTM D2622 or any test method approved under 40 CFR 80.585, if performing
- 6 a fuel analysis.
- 7 Test Frequency: Annually, if performing a fuel analysis.
- 8 Required Records: Vendor documentation or fuel analysis showing sulfur content < 0.015%.
- 9 State-Only: No.
- 10 Calculation Model: Not applicable.

1 **1.4.80 Effluent Management Facility**

2 200 East Area Facility associated with the Waste Treatment Plant

3 Requirement Citation: DE16NWP-003 (2/17/2017)

4 **Condition Approval 2/17/2017**

5 Condition: Visible emissions will not exceed five (5) % opacity. [WAC 173-400-040(2)]

6 Periodic Monitoring: Compliance and monitoring shall be met by Tier 3 visible Emission Survey
7 requirements of the Hanford AOP, Section 2. Should visible emissions be
8 observed which are not solely attributable to water condensation, compliance
9 shall be met by performing an opacity determination utilizing 40 CFR 60,
10 Appendix A, Method 9, providing that such determination shall not place the
11 visible emission observer in hazard greater than that identified for the general
12 worker.

13 Test Method: 40 CFR 60, Appendix A, Method 9

14 Test Frequency: Not specified except when visible emissions are observed.

15 Required Records: Visible emission survey records in which a visible emission was observed and is
16 not solely attributable to water condensation. 40 CFR 60, Appendix A, Method 9
17 results if conducted. Visible emission survey records shall be submitted to
18 Ecology within thirty (30) days of completion of the survey with an assessment
19 of the cause of visible emissions and a report of the maintenance conducted to
20 maintain the subject system's tBACT operations.

21 State-Only: No.

22 Calculation Model: Not applicable.

1 **Condition Approval 2/17/2017**

- 2 Condition: All TAPs, as submitted in the Permittee's NOC Application as Table 1 and
3 subsequent follow-on informational email, shall be below their respective ASIL
4 or approved through a Second Tier review.
- 5 Periodic Monitoring: Emission unit sampling as described in below. Apply readings to determine the
6 mass release rate of these TAPs in pounds and their respective release rate
7 averaging times in WAC 173-460-150.
- 8 Test Method: Analytical methods for the analyses shall be the EPA, Occupational Safety and
9 Health Administration (OSHA), or National Institute for Occupational Safety and
10 Health (NIOSH) approved, or by approved equivalent method.
- 11 Test Frequency: A. Baseline assessments for mercury and dimethyl mercury within ninety (90)
12 days after commencement of operations with actual tank waste.
13 B. Annual
- 14 Required Records: A. Permittee will develop and implement an annual sampling and analysis plan
15 (SAP). The SAP shall address a minimum of the three analytes with the highest
16 potential ambient concentration relative to their ASILs of WAC 173-460-150 in
17 addition to dimethyl mercury and elemental mercury. The SAP will need to be
18 submitted and approved by Ecology before sampling occurs.
19 B. Supporting data and calculations to demonstrate compliance
20 C. Laboratory analysis result summaries taken in accordance with this approval
21 condition.
22 D. Emission monitoring results required in Section 3.0.
- 23 State-Only: Yes
- 24 Calculation Model: Not applicable.

25 **Condition Approval 2/17/2017**

- 26 Condition: Total mercury emissions shall not exceed 5.30E-07 pounds per 24 hour period.
- 27 Periodic Monitoring: Permittee will install a mercury monitor to measure emission unit emission
28 values of total mercury. All measurements of mercury on the mercury monitor
29 will be considered to be dimethyl mercury. This is to account for the fact that
30 dimethyl mercury currently does not have a real-time monitoring device.
- 31 Test Method: Mercury sampling and analysis will be in accord with the EPA approved
32 procedures.
- 33 Test Frequency: Minimum frequency of once every minute.
- 34 Required Records: A. Supporting data and calculations to demonstrate compliance
35 B. Emission monitoring results
- 36 State-Only: Yes
- 37 Calculation Model: Not applicable.

1 **2.0 COMPLIANCE AND PERIODIC MONITORING PROVISIONS**

2 Compliance and periodic monitoring provisions are provided in the following sections.

3 **2.1 Visible Emission Surveys**

4 Visible emission surveys must be conducted during daylight hours and during periods when the emission
5 unit is operating. When any visible emission surveys are performed, a record will be established
6 indicating if visible emissions were or were not observed.

7 Tier 1

8 This method applies primarily to fossil-fuel combustion units and other emission units that might be a
9 source of visible emissions. It is broken into two parts, Part A and Part B, which are described below.
10 Visible emission surveys are to be conducted during daylight hours, after the unit has reached normal
11 operating temperature and revolutions per minute, or 15 minutes after startup.

12 Part A – If the combustion unit is certified to meet EPA emission standards contained in
13 40 CFR Part 89.112, Table 1, then limited visible emission surveys may be performed if operation and
14 maintenance in accordance with manufacturer directions are followed. It is important to note that the
15 Tier reference in 40 CFR Part 89.112, Table 1 is not the Tier reference used in this section. A visible
16 emission survey will be performed upon initial installation as described in Part B to document no
17 visible emissions are observed during normal operations. If visible emissions are observed during
18 normal operations, then a visible emission survey will be performed as described in Part B.

19 Part B – This method consists of operating personnel observing visible emissions from the emission
20 unit according to the frequency identified in the specific discharge unit listed in Section 1.4. If the
21 operator observes visible emissions for more than 10 consecutive minutes during the observation
22 period, the cause(s) of the visible emissions will be determined and corrective actions taken as
23 necessary, or a visible determination of opacity will be performed using EPA Method 9 of 40 CFR 60,
24 Appendix A. Records of corrective actions taken to reduce opacity shall be maintained and available
25 for Ecology inspection. Where no frequency is specified, visible emission surveys will be performed
26 a minimum of once per quarter.

27 Provided the emissions observed during the EPA Method 9 of 40 CFR 60 tests are representative of
28 normal operations and the Method 9 test shows the emission unit is compliant, no further observations are
29 required until the next required periodic monitoring. Records of corrective actions taken to reduce
30 opacity shall be maintained and available for Ecology inspection.

31 If after corrective actions have been taken and results from the EPA Method 9 of 40 CFR 60 tests indicate
32 visible emissions in excess of the limit, a deviation report will be filed with Ecology as required by
33 Section 5.16 of the Standards Terms and General Condition part of the Hanford AOP.

34 Tier 2

35 Some emission units are unlikely sources of visible emissions and are not expected to exceed applicable
36 opacity limits based on past operating experience and/or expected process behavior. These can include
37 research and development laboratories, analytical laboratories, gas-fired boilers and engines, and some
38 fossil-fueled combustion units. For these emission units, a visible emission survey will be conducted and
39 the results recorded. If visible emissions from one of these emission units are observed for more than 10
40 consecutive minutes, an attempt to identify the cause(s) of the visible emissions will be made and those
41 results recorded. The recorded entry also will identify any corrective actions taken and the likely
42 frequency of a future recurrence. If the event is likely to recur, and cannot be demonstrated to consist of
43 water vapor, a determination of opacity will be made using EPA Method 9. The frequency of the visible
44 emission surveys shall be as required in the specific discharge unit listed in Section 1.4 unless the

1 following procedure has been completed satisfactorily. Where no frequency is specified, visible emission
2 surveys will be performed a minimum of once per year.

3 The procedure for reducing visible emission survey frequencies is as follows:

4 If ten consecutive cold starts are negative, visible emission surveys will be performed only when visible
5 emissions are observed, but must be conducted at least once per year. Visible emission surveys during
6 these periods will be conducted for non-radionuclides-emitting stacks according to the process described
7 in Tier 2.

8 If visible emissions from one of these emission units are observed for more than 10 consecutive minutes,
9 the event is likely to recur, and cannot be demonstrated to consist of water vapor, the required frequency
10 for visible emission surveys will revert back to original requirements.

11 Tier 3

12 Maintain abatement control technology as required in Attachment 2 of the Hanford AOP for that
13 particular emission unit, unless specific requirements in Section 1.4 are listed.

14 **2.2 General Standards Complaint Investigations**

15 Complaints forwarded by Ecology shall be addressed promptly and assessed for corrective action. An
16 initial informal response shall be made to Ecology within 30 working days of the Permittee receiving the
17 complaint. This initial response shall document preliminary investigation results and any planned or
18 completed corrective actions. Follow-up report(s) shall be provided as directed by Ecology. The
19 Permittee shall maintain records of complaints forwarded by Ecology.

20 **2.3 Measures to Control Fugitive Emissions and Fugitive Dust**

21 Construction projects with a potential to generate particulates will address fugitive emissions and fugitive
22 dust control during pre-job planning and job safety analysis. Measures to control fugitive emissions and
23 fugitive dust may include but are not limited to:

- 24 1. Watering.
- 25 2. Use of chemical stabilizers.
- 26 3. Use of physical barriers and/or physical stabilization.
- 27 4. Use of vegetative stabilization.
- 28 5. Clearing only limited areas to reduce dust generation.
- 29 6. Covering haul vehicles.
- 30 7. Minimizing track-out.
- 31 8. Controlling site traffic to decrease disturbance of soil and vegetation to decrease dust generated
32 from unnecessary vehicular travel.

33 **2.4 Reserved**

34 **2.5 Recordkeeping for Boilers**

35 DOE and the contractor shall maintain appropriate monthly records of the fuel use on each individual
36 boiler. This data, along with the emission factors presented in Ecology Regulatory Order 97NM-138, will
37 be used to determine monthly emission levels for individual boilers, and collectively for the 200 East, 200
38 West, and 300 Area. If Ecology or the Permittee determines that emission factors different than the
39 factors specified in Regulatory Order 97NM-138 are appropriate, the public will be provided with an
40 opportunity for review. WAC 173-400-115 compliance with the standard may be determined based on a
41 certification from the fuel supplier containing the name of the oil supplier and a statement from the oil
42 supplier that the oil complies with the specifications under the definition of distillate oil in 40 CFR
43 60.41b. An annual report including records of fuel supplier certifications and a certification by the owner

1 or operator that the records of fuel supplier certifications submitted represent all of the fuel combusted
 2 during the year. Logs of boiler tune-ups and significant boiler maintenance activities will be kept.

3 **2.6 Steam Generating Units Source Tests**

4 All source tests for the boilers regulated by Notice of Construction 97NM-138 have been conducted using
 5 EPA and Ecology approved procedures with the test boilers operating at full capacity. Tests were
 6 conducted on a maximum of five boilers selected on the basis of boiler capacity and fuel type. The
 7 procedure for selecting the test boilers were agreed to by Ecology and DOE before conducting the tests.
 8 A procedure for selecting a representative subset of boilers for testing once every 5 years was developed
 9 before the initial 5 year follow-up test. The public was provided an opportunity for review of the
 10 procedure as part of an AOP modification.

11 The following list is an inventory of the larger boilers that were subject to testing (maximum of 5 boilers):
 12

Distillate Oil-Fired Boilers	Number of Units
200 BHP	5
350 BHP	3
700 BHP	2

Natural Gas-Fired Boilers	Number of Units
200 BHP	2
300 BHP	4

14
 15 In 2005, the U.S. Department of Energy Richland Office (DOE-RL) requested the removal of Air
 16 Operating Permit compliance testing for the energy-saving fossil fuel fired boilers operated by Johnson
 17 Controls, Inc (JCI) since 1998 at the Hanford Site. JCI conducted the initial air compliance test in 1998
 18 and the first 5-year follow-up test in 2003. Both tests demonstrated that the emissions were within the
 19 limits stated in the Notice of Construction (NOC) and Air Operating Permit (AOP). It is obvious that the
 20 same compliance can be maintained by continuously using low sulfur fuel and implementing good
 21 combustion practices. Ecology approved the request of eliminating future 5-year compliance tests on
 22 June 15, 2005. The emissions will be within the NOC and AOP limits as long as JCI continues to use low
 23 sulfur fuel and maintain good combustion practice and maximum achievable control technology (MACT)
 24 standards.

25 **2.7 SO₂ Emissions Compliance**

26 Tier 1: Fuel-Oil Fired Combustion Units:

Required records	Calculation Model (Statement of Basis Section 3.1.1)
1. Amount and type of fuel burned 2. Vendor documentation or fuel analysis once per year.	Model 1

1 Tier 2: Other Significant Emission Units:

2 Ecology has determined, based on process knowledge, that these emission units do not emit significant
3 levels of SO₂. The Permittee annually shall certify that the processes have not been modified to increase
4 SO₂ emissions and no SO₂ monitoring is required.

5 **2.8 Visible Emissions Enforceability**

6 WAC 173-400-040(2)(a) and (2)(b) are federally enforceable sections. Soot blowing and grate cleaning
7 are allowed if the operator can demonstrate that the emissions will not exceed 20% opacity for more than
8 15 minutes in any 8 consecutive hours.

9 **2.9 SO₂ Enforceability**

10 WAC 173-400-040(7) is federally enforceable.

11 **3.0 RECORDKEEPING**

12 The Permittee shall maintain records of all required monitoring data and support information. These
13 records shall be maintained for 5 years from the date of the monitoring sample, measurement, report, or
14 application. Support information includes all calibration and maintenance records, all original continuous
15 monitoring records (such as strip charts or equivalent), and required reports. Most of these records are
16 retained on-site in electronic format. Regulatory agencies accept electronic records as supporting
17 information.

18 [WAC 173-401-615(2)(a), WAC 173-401-615(2)(c)]

19 **3.1 Emission Calculations**

20 Emission calculations for SO₂, nitrogen oxides, volatile organic compounds, ammonia, gas cylinders,
21 chemical inventory, air concentrations, and TAPs can be found in Section 3.1 of the Statement of Basis
22 for Attachment 1.

Effective Date: 08/01/2019
Expiration Date: 08/01/2024

Hanford Air Operating Permit
Permit No. 00-05-006
Renewal 3

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