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**DRAFT HANFORD AIR OPERATING PERMIT
PERMIT NUMBER 00-05-006
RENEWAL 2, REVISION A
ATTACHMENT 1**

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

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**DRAFT HANFORD AIR OPERATING PERMIT
PERMIT NUMBER 00-05-006
RENEWAL 2, REVISION A
ATTACHMENT 1**

Number: 00-05-006 (Hanford AOP Renewal2, Rev. A)

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.

Dated at Richland, Washington, Month XX, 2013

Reviewed by:

Philip Gent, P.E.
Professional Engineer Reviewer
State of Washington Department of Ecology

Date

Approved by:

Jane Hedges
Program Manager, Nuclear Waste Program
State of Washington Department of Ecology

Date

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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
3 following sections.

4 **1.1 Insignificant Emission Units**

5 Insignificant emission units (IEUs) are listed in the Statement of Basis for this attachment. All
6 IEUs shall maintain compliance with the general requirements in Table 1.2. Compliance with
7 General Standards for Maximum Emissions (Section 1.3) is required. However, the periodic
8 monitoring, testing, recordkeeping, or reporting requirements listed in Table 1.2 are not required.
9 Also the compliance certification is not required for IEUs.

10 All emission units not identified in Table 1.1 (List of Significant Emission Units) that are subject
11 to 40 CFR 61, Subpart H in Attachment 2, Health License, have been determined to represent
12 insignificant sources of non-radioactive regulated air pollutants. For these emission units no
13 additional monitoring, reporting, or recordkeeping is necessary to determine compliance with the
14 requirements in Table 1.2. All requirements identified in Attachment 2, Health License, for this
15 category of emission unit continue to apply, as well as the requirement to annually certify
16 compliance to any applicable requirements identified in Attachment 2, Health License.

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

21 [WAC 173-401-530(2)(b) and (2)(c)]
22

23 **1.2 Emission Units and Activities subject to Monitoring, Reporting, 24 Recordkeeping, and Compliance Certification**

25 Table 1.1 identifies those emission units on the Hanford Site subject to the requirement to
26 annually certify compliance with the terms and conditions of this Permit. The emission units
27 listed in Table 1.1 are subject to the generally applicable requirements in Table 1.2, General
28 Standards for Maximum Emissions unless replaced by another requirement in Tables 1.3, 1.4,
29 1.5, 1.6 or 1.7. Emission unit-specific requirements for these emission units are found in Tables
30 1.3, Emission Limits and Periodic Monitoring Requirements for Steam Generating Units; Table
31 1.4, Internal Combustion Engines: 500 Horsepower and Greater; Table 1.5, Internal Combustion
32 Engines: less than 500 Horsepower; Table 1.6, Emission Limits and Periodic Monitoring
33 Requirements for Emission Units with NOC Approval Conditions or an engine listed in Table
34 1.5; or Table 1.7, Miscellaneous Emission Units.

35 **1.3 General Standards for Maximum Emissions**

36 Table 1.2 covers general regulatory requirements, emission limits, or work practice standards
37 applying to all emission units [refer to definition of emission units in WAC 173-401-200(12)] on
38 the Hanford Site. The general standards in Table 1.2 are the applicable requirement, emission
39 limit, or work practice standard unless replaced by another requirement in Tables 1.3, 1.4, 1.5,
40 1.6 or 1.7.

1 **1.4 Emission Unit Specific Applicable Requirements**

2 Emission unit specific requirements for steam generating units are located in Table 1.3, internal
3 combustion units greater than 500 horsepower are in Table 1.4, internal combustion units less
4 than 500 horsepower are in Table 1.5, specific discharge points are in Table 1.6, and
5 miscellaneous emission units are in Table 1.7.

6 **1.5 Engines Regulated Under 40 CFR 60, subpart IIII and JJJJ, and 40 CFR 63,**
7 **subpart ZZZZ**

8 Table 1.5 is for engines regulated under 40 CFR 60, subpart IIII and JJJJ, and 40 CFR 63,
9 subpart ZZZZ.

10 **1.6 Specific Discharge Points**

11 Table 1.6 is for emission units that have received an Ecology approval order to operate under
12 WAC 173-400-110 New Source Review or an engine identified in Table 1.5.

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1 **Table 1.1 List of Significant Emission Units**

Emission unit	Requirements	Description
234-5Z, Boilers 1, 2, & 3	Table 1.3	350 HP fuel oil boilers, subject to 40 CFR 60 Subpart Dc (WAC 173-400-115).
242-A, Boiler 1	Table 1.3	200 HP fuel oil boiler, not subject to 40 CFR 60 Subpart Dc (WAC 173-400-115).
242-A, Boilers 2 & 3	Table 1.3	700 HP fuel oil boilers, subject to 40 CFR 60 Subpart Dc (WAC 173-400-115).
Portable Boiler 1	Table 1.3	200 HP dual-fuel portable boiler relocated from 200 Area to 300 Area (per DOE 10/20/2009 letter 10-EMD-0006 & NOC 97NM-138 Mod 1, 11/18/2009).
318, Boiler 1	Table 1.3	30 HP natural gas boiler, not subject to 40 CFR 60 Subpart Dc (WAC 173-400-115).
323, Boiler 1	Table 1.3	50 HP natural gas boiler, not subject to 40 CFR 60 Subpart Dc (WAC 173-400-115).
324, Boilers 1 & 2	Table 1.3	300 HP natural gas boilers, subject to 40 CFR 60 Subpart Dc (WAC 173-400-115).
325, Boilers 1 & 2	Table 1.3	125 HP natural gas boilers, not subject to 40 CFR 60 Subpart Dc (WAC 173-400-115).
331, Boilers 1 & 2	Table 1.3	300 HP natural gas boilers, subject to 40 CFR 60 Subpart Dc (WAC 173-400-115).
3709A, Boiler 1	Table 1.3	15 HP natural gas boiler, not subject to 40 CFR 60 Subpart Dc (WAC 173-400-115).
200E E-225BC 001	Table 1.4	500 HP or greater internal combustion engine.
200E E-225BG 001	Table 1.4	500 HP or greater internal combustion engine.
400 E-4250 001, G-3	Table 1.4	500 HP or greater internal combustion engine.
600 E WSCF 001	Table 1.4	500 HP or greater internal combustion engine.
100K Water Treatment	Table 1.5/1.6	Less than 500 HP internal combustion engine regulated by 40 CFR 60, Subpart III
222-SE	Table 1.5/1.6	Less than 500 HP internal combustion engine regulated by 40 CFR 63, Subpart ZZZZ
234-5Z	Table 1.5/1.6	Less than 500 HP internal combustion engine regulated by 40 CFR 63, Subpart ZZZZ
242-A Evaporator	Table 1.5/1.6	Less than 500 HP internal combustion engine regulated by 40 CFR 63, Subpart ZZZZ
385 Building	Table 1.5/1.6	Less than 500 HP internal combustion engine regulated by 40 CFR 60, Subpart III

Emission unit	Requirements	Description
400 Area	Table 1.5/1.6	Less than 500 HP internal combustion engine regulated by 40 CFR 63, Subpart ZZZZ
600 Area Fire Station (Building 609A)	Table 1.5/1.6	Less than 500 HP internal combustion engine regulated by 40 CFR 63, Subpart ZZZZ
2720EA	Table 1.5/1.6	Less than 500 HP internal combustion engine regulated by 40 CFR 60, Subpart JJJJ
2721E	Table 1.5/1.6	Less than 500 HP internal combustion engine regulated by 40 CFR 63, Subpart ZZZZ
Rattle Snake Barricade	Table 1.5/1.6	Less than 500 HP internal combustion engine regulated by 40 CFR 60, Subpart JJJJ
TEDF Pump Station 2 (225E)	Table 1.5/1.6	Less than 500 HP internal combustion engine regulated by 40 CFR 63, Subpart ZZZZ
Yakima Barricade	Table 1.5/1.6	Less than 500 HP internal combustion engine regulated by 40 CFR 60, Subpart ZZZZ
282-B	Table 1.5/1.6	Less than 500 HP internal combustion engine regulated by 40 CFR 63, Subpart ZZZZ
282-BA	Table 1.5/1.6	Less than 500 HP internal combustion engine regulated by 40 CFR 63, Subpart ZZZZ
225BC	Table 1.5/1.6	Less than 500 HP internal combustion engine regulated by 40 CFR 63, Subpart ZZZZ
6120 tent (200 East)	Table 1.5/1.6	Less than 500 HP internal combustion engine regulated by 40 CFR 60, Subpart IIII
219H tent and MO-414 (200 East)	Table 1.5/1.6	Less than 500 HP internal combustion engine regulated by 40 CFR 60, Subpart IIII
North of MO-414 (200 East) 1 of 2	Table 1.5/1.6	Less than 500 HP internal combustion engine regulated by 40 CFR 60, Subpart IIII
North of MO-414 (200 East) 2 of 2	Table 1.5/1.6	Less than 500 HP internal combustion engine regulated by 40 CFR 60, Subpart IIII
WTP MHF South-40 Laydown Critical Equipment Storage	Table 1.5/1.6	Less than 500 HP internal combustion engine regulated by 40 CFR 60, Subpart IIII
WTP MHF South-40 Laydown Entry Gate (light tower)	Table 1.5/1.6	Less than 500 HP internal combustion engine regulated by 40 CFR 63, Subpart ZZZZ
WTP MHF North-10 Laydown Area (light tower) 1 of 2	Table 1.5/1.6	Less than 500 HP internal combustion engine regulated by 40 CFR 63, Subpart ZZZZ

Emission unit	Requirements	Description
WTP MHF North-10 Laydown Area (light tower) 2 of 2	Table 1.5/1.6	Less than 500 HP internal combustion engine regulated by 40 CFR 63, Subpart ZZZZ
WTP MHF South-40 Laydown Yard East X-Ray Tent	Table 1.5/1.6	Less than 500 HP internal combustion engine regulated by 40 CFR 63, Subpart ZZZZ
WTP Construction Site Pretreatment Tower Crane	Table 1.5/1.6	Less than 500 HP internal combustion engine regulated by 40 CFR 63, Subpart ZZZZ
WTP Construction Site High-Level Waste Tower Crane	Table 1.5/1.6	Less than 500 HP internal combustion engine regulated by 40 CFR 63, Subpart ZZZZ
WTP Construction Site Building T-14	Table 1.5/1.6	Less than 500 HP internal combustion engine regulated by 40 CFR 63, Subpart ZZZZ
200E E-282ED 001, Engine E	Table 1.6	500 HP or greater internal combustion engine. NOC: NWP-96-1
200W E-282WD 001, Engine W	Table 1.6	500 HP or greater internal combustion engine. NOC: NWP-96-1
300 Emergency Diesel Generators, 325, 3709A, and 331	Table 1.6	325 and 331 are greater than 500 HP internal combustion engines. NOC: DE02NWP-001
200W P-296SY 001 (Exhauster)	Table 1.6	241-AP, 241-SY, and 241-AY/AZ Ventilation. NOC: DE11NWP-001
200E P-296AN 001 (Tank Exhauster)	Table 1.6	NOC approval for Ventilation Systems for 241-AN and 241-AW Tank Farms. NOC: DE05NWP-001
200E P-296AP 001 (Tank Exhauster)	Table 1.6	241-AP, 241-SY, and 241-AY/AZ Ventilation. NOC: DE11NWP-001
200E P-296AW 001 (Tank Exhauster)	Table 1.6	NOC approval for Ventilation Systems for 241-AN and 241-AW Tank Farms. NOC: DE05NWP-001
200E P-296A042 001 (Tank Exhauster)	Table 1.6	NOC approval for 241-AZ-101 Tank Waste Retrieval and 241-AY/241-AZ Tank Farms ventilation upgrades, Project W-151 and project W-030. NOC: 94-07
Integrated Disposal Facility (200E)	Table 1.6	NOC approval for 200E Integrated Disposal Facility (IDF). NOC: DE05NWP-004
Ventilation Systems for 241-AN and 241-AW Tank Farms (200E)	Table 1.6	NOC approval for 200E Ventilation Systems for 241-AN and 241-AW Tank Farms. NOC: DE05NWP-001

Emission unit	Requirements	Description
200 Area SST Categorical Waste Retrieval	Table 1.6	NOC approval for 200 Area SST Categorical Waste Retrieval. NOC: DE05NWP-002
200E P-2025E ETF	Table 1.6	NOC approval for 200 Area Effluent Treatment Facility (ETF). NOC: DE07NWP-003
200E P-WTP-001	Table 1.6	NOC approval for Waste Treatment and Immobilization Plant. NOC: DE02NWP-002 and PSD-02-01
200E Concrete Batch Plant	Table 1.6	NOC approval for Waste Treatment and Immobilization Plant concrete and aggregate production. NOC: DE01NWP-003
200W P-2706T-001	Table 1.6	NOC approval for T Plant Complex. NOC: DE01NWP-002
200W J-CWC 001 (CWC)	Table 1.6	NOC approval for storage of vented waste containers at Central Waste Complex. NOC: DE00NWP-002
200W P-296W 004	Table 1.6	NOC approval for Waste Receiving and Processing Facility (WRAP1). NOC: DE03NWP-002
200E E-85 Fuel Station	Table 1.6	200 E Area E-85 Automotive Fuel Tank and Dispensing Facility. NOC: DE06NWP-001
100B-181B/182B Diesel Engines	Table 1.6	100 Area Emergency Diesel Engines. NOC: DE07NWP-002
HAMMER Facility	Table 1.6	Volpentest Hazardous Materials Management and Emergency Response (HAMMER) Training and Education Facility. NOC: DE07NWP-001
339A Emergency Diesel Engine	Table 1.6	300 Area Building 339A Emergency Diesel Engine < 350 horsepower (HP). NOC: DE08NWP-001
200E WTP Heaters and Dehumidifiers	Table 1.6	NOC approval for Waste Treatment and Immobilization Plant heaters and dehumidifiers. NOC: DE07NWP-004
241-AP, 241-SY, and 241-AZ Tank Farm Ventilation System	Table 1.6	NOC approval for 241-AP, 241-SY, and 241-AZ Tank Farm Ventilation System. NOC: DE11NWP-001
200 West Sewage Lagoon	Table 1.6	NOC approval for 200 West Sewage Lagoon. NOC: DE12NWP-001
211ED/212ED Diesel Generator	Table 1.6	NOC approval for diesel generator to power 211ED/212ED facility. NOC: DE12NWP-002.
SST Retrieval Direct Fired Water Heaters	Table 1.6	NOC approval for SST retrieval direct fired water heater combustion units. NOC: DE13NWP-003.

Emission unit	Requirements	Description
600 Hanford Site Asbestos Landfill	Table 1.7	Miscellaneous emission unit.
600 G-6290 (600 Area Gasoline Distribution)	Table 1.7	Miscellaneous emission unit.

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Table 1.2 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 method ¹
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	Recordkeeping of complaint investigation.	2.2	

Table 1.2 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 method ¹
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	Recordkeeping of complaint investigations.	2.2	

Table 1.2 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 method ¹
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	Recordkeeping of complaint investigation.	2.2	
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: recordkeeping or certification.	2.7	EPA Method 6 or 6C of 40 CFR 60, App. A.

Table 1.2 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 method ¹
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	Recordkeeping 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.

Table 1.3 Emission Limits and Periodic Monitoring Requirements for Steam Generating Units

Boiler Annex	Unit	>5mmBTU/hr input	Fuel
234-5Z	Boiler 1	Yes	fuel oil
	Boiler 2	Yes	fuel oil
	Boiler 3	Yes	fuel oil
242-A	Boiler 1	Yes	fuel oil
	Boiler 2	Yes	fuel oil
	Boiler 3	Yes	fuel oil
Portable	Boiler 1	Yes	fuel oil/natural gas
318	Boiler 1	No	natural gas
323	Boiler 1	No	natural gas
324	Boiler 1	Yes	natural gas
	Boiler 2	Yes	natural gas
325	Boiler 1	Yes	natural gas
	Boiler 2	Yes	natural gas
331	Boiler 1	Yes	natural gas
	Boiler 2	Yes	natural gas
3709A	Boiler 1	No	natural gas

Table 1.3. Emission Limits and Periodic Monitoring Requirements for Steam Generating Units (cont)

	Requirement citation (WAC or Order Citation)	Regulatory requirement, emission limit or work practice standard	State-Only enforceable	Periodic monitoring	Test method¹
Steam generating units <5mmBTU/hr listed previously	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)	Fuel-oil fired boilers Method: Visible emission surveys, Section 2.1, Tier 1 Frequency: At least once per calendar year quarter Natural gas-fired boilers Method: Visible emission surveys, Section 2.1, Tier 2 Frequency: At least once per quarter	EPA Method 9 of 40 CFR 60, Appendix A
Fossil-fuel fired steam generating units less than 5 mmBTU/hr	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 1000 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)	Fuel-oil fired units: Method: Section 2.7, Tier 1. Frequency: At least annually.	EPA Method 6 or 6C of 40 CFR 60, App. A.

Table 1.3. Emission Limits and Periodic Monitoring Requirements for Steam Generating Units (cont)

	Requirement citation (WAC or Order Citation)	Regulatory requirement, emission limit or work practice standard	State-Only enforceable	Periodic monitoring	Test method¹
	WAC 173-400-050(1) & (3)	Particulate matter 0.23 gram per dry cubic meter at standard conditions (0.1 grain/dscf) adjusted for volumes, corrected to 7% O ₂	N	Recordkeeping. Section 2.5	EPA Method 5 of 40 CFR 60, Appendix A or approved procedure in "Source Test Manual - Procedures for Compliance Testing," 7/12/90.
Standards of performance for new sources. Small industrial-commercial- institutional steam generating units 234-5Z Boiler 1 234-5Z Boiler 2 234-5Z Boiler 3 242-A Boiler 2 242-A Boiler 3	40 CFR 60 Subpart Dc WAC 173-400-115	0.5 weight percent sulfur fuel (NOC 97NM-138 condition listed below).	N	Fuel supplier certifications and monthly records reported annually. Refer to Recordkeeping. Section 2.5	
No. 2 Distillate fuel-oil fired steam generating units greater than or equal to 5 mmBTU/hr.	97NM-138	0.05% sulfur distillate fuel oil will be used in the 200 Areas; natural gas will be used in the 300 Area. <i>200 HP Portable boiler uses 0.0015% sulfur distillate fuel oil.</i>	N	Recordkeeping. Section 2.5	

Table 1.3. Emission Limits and Periodic Monitoring Requirements for Steam Generating Units (cont)

	Requirement citation (WAC or Order Citation)	Regulatory requirement, emission limit or work practice standard	State-Only enforceable	Periodic monitoring	Test method¹
		NO _x shall not exceed 0.150 lb/mmBTU and 115 ppm @ 3% O ₂ .	N	Recordkeeping. Section 2.5	
			N	See Section 2.6	EPA Method 7E of 40 CFR 60, App. A.
		SO ₂ shall not exceed 0.051 lb/mmBTU.	N	Recordkeeping. Section 2.5	
			N	See Section 2.6	EPA Method 6 or 6C of 40 CFR 60, App. A.

Table 1.3. Emission Limits and Periodic Monitoring Requirements for Steam Generating Units (cont)

	Requirement citation (WAC or Order Citation)	Regulatory requirement, emission limit or work practice standard	State-Only enforceable	Periodic monitoring	Test method¹
No. 2 Distillate fuel-oil fired steam generating units greater than or equal to 5 mmBTU/hr. (cont.)	97NM-138 (cont.)	CO shall not exceed 0.071 lb/mm BTU and 90 ppm @ 3% O ₂ .	N	Recordkeeping. Section 2.5	
			N	See Section 2.6	EPA Method 10 of 40 CFR 60, App. A.
		Particulate matter (PM ₁₀) shall not exceed 0.011 lb/mm BTU.	N	Recordkeeping. Section 2.5	
			N	See Section 2.6	EPA Method 5 of 40 CFR 60, App. A.
		VOC shall not exceed 0.013 lb/mm BTU and 30 ppm @ 3% O ₂ .	N	Recordkeeping. Section 2.5	
			N	See Section 2.6	EPA Method 25 or 25A of 40 CFR 60, App. A.
Natural gas-fired greater than or equal to 5 mmBTU/hr	97NM-138	NO _x shall not exceed 0.037 lb/mm BTU and 30 ppm @ 3% O ₂ .	N	Recordkeeping. Section 2.5	
			N	See Section 2.6	EPA Method 7E of 40 CFR 60, App. A.
		CO shall not exceed 0.225 lb/mmBTU and 300 ppm @ 3% O ₂ .	N	Recordkeeping. Section 2.5	
			N	See Section 2.6	EPA Method 10 of 40 CFR 60, App. A.

Table 1.3. Emission Limits and Periodic Monitoring Requirements for Steam Generating Units (cont)

	Requirement citation (WAC or Order Citation)	Regulatory requirement, emission limit or work practice standard	State-Only enforceable	Periodic monitoring	Test method¹
		Particulate matter (PM ₁₀) shall not exceed 0.012 lb/mmBTU.	N	Recordkeeping. Section 2.5	
			N	See Section 2.6	EPA Method 5 of 40 CFR 60, App. A.
Natural gas-fired greater than or equal to 5 mmBTU/hr (cont.)	97NM-138 (cont.)	VOC shall not exceed 0.013 lb/mmBTU and 30 ppm @ 3% O ₂ .	N	Recordkeeping. Section 2.5	
			N	See Section 2.6	EPA Method 25 or 25A of 40 CFR 60, App. A.
		SO ₂ shall not exceed 0.0006 lb/mmBTU	N	Recordkeeping. Section 2.5	
			N	See Section 2.6	EPA Method 6 or 6C of 40 CFR 60, App. A.

General Conditions:				
<ul style="list-style-type: none"> • Operation and maintenance manuals will be obtained from the manufacturer(s) and made available for review by Ecology on request. • ‘Good combustion practices’ will be applied to all boilers. Good combustion practices include but are not limited to the following: 				
Daily	Monthly	Semi-annually	Annually	Every two years
Visually check combustion.	Inspect burner.	Visually inspect air supply system, and clean and repair if necessary.	Conduct boiler tuneups on large boilers (>5mmBTU/hr heat input) by manufacturer trained technicians or other qualified personnel. Section 2.5 Recordkeeping.	Conduct boiler tuneups on smaller boilers (<5 mmBTU/hr heat input) by manufacturer trained technicians or other qualified personnel. Section 2.5 Recordkeeping.
Record available operating data.	Inspect boiler exteriors	Clean and check fuel supply system (visually inspect and replace filters if necessary).	Clean fireside surfaces and breaching for power boilers.	Inspect refractory for low pressure boilers.
	Check combustion controls.			
	Check for leaks.	Inspect refractory for power boilers.	Clean fireside surfaces and breaching for low pressure boilers.	
	Check for unusual noise, vibrations, etc.			

Table 1.4 Internal Combustion Engines: 500 Horsepower and Greater

Discharge point number	Requirement citation (WAC or Order Citation)	Regulatory requirement, emission limit or work practice standard	State-Only enforceable	Periodic monitoring	Test method ¹
200E E-225BC 001 200E E-225BG 001 400 E-4250 001, G-3 600 E WSCF 001	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)	Method: Section 2.1, Tier 1. Frequency: At least once per calendar quarter if operated at full load or for more than 30 minutes at less than full load.	EPA Method 9 of 40 CFR 60, Appendix A
	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)	Section 2.7, Tier 1.	EPA Method 6 or 6C of 40 CFR 60, App. A.

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

Table 1.5 Internal Combustion Engines: Less than 500 Horsepower

Stationary Engine Location	Horsepower	Usage	Regulation²
100K Water Treatment	181	Emergency Backup, Fire Pump	40 CFR 60, Subpart IIII
222-SE	280	Emergency Backup	40 CFR 63, Subpart ZZZZ
234-5Z	300	Emergency Backup	40 CFR 63, Subpart ZZZZ
242-A Evaporator	268	Emergency Backup	40 CFR 63, Subpart ZZZZ
385 Building	123	Emergency Backup, Fire Pump	40 CFR 60, Subpart IIII
400 Area	175	Emergency Backup, Fire Pump	40 CFR 63, Subpart ZZZZ
600 Area Fire Station (Building 609A)	162	Emergency Backup	40 CFR 63, Subpart ZZZZ
2720EA	40	Emergency Backup	40 CFR 60, Subpart JJJJ
2721E	210	Emergency Backup	40 CFR 63, Subpart ZZZZ
Rattle Snake Barricade	18	Emergency Backup	40 CFR 60, Subpart JJJJ
TEDF Pump Station 2 (225E)	107	Emergency Backup	40 CFR 63, Subpart ZZZZ
Yakima Barricade	30	Emergency Backup	40 CFR 60, Subpart ZZZZ
282-B	97	Emergency Backup	40 CFR 63, Subpart ZZZZ
282-BA	190	Emergency Backup	40 CFR 63, Subpart ZZZZ

² Engines in Table 1.5 are exempt from new source review requirements in WAC 173-400-110. However, sources subject to a federally enforceable rule cannot be classified as an IEU. [WAC 173-401-530(2)(a)]

Stationary Engine Location	Horsepower	Usage	Regulation²
225BC	170	Emergency Backup	40 CFR 63, Subpart ZZZZ
6120 tent (200 East)	13.9	Non-Emergency	40 CFR 60, Subpart IIII
219H tent and MO-414 (200 East)	13.9	Non-Emergency	40 CFR 60, Subpart IIII
North of MO-414 (200 East) 1 of 2	34.3	Non-Emergency	40 CFR 60, Subpart IIII
MO-414 (200 East) 2 of 2	34.3	Non-Emergency	40 CFR 60, Subpart IIII
WTP MHF South-40 Laydown Critical Equipment Storage	97.9	Non-Emergency	40 CFR 60, Subpart IIII
WTP MHF South-40 Laydown Entry Gate (light tower)	12	Non-Emergency	40 CFR 63, Subpart ZZZZ
WTP MHF North-10 Laydown Area (light tower) 1 of 2	12	Non-Emergency	40 CFR 63, Subpart ZZZZ
WTP MHF North-10 Laydown Area (light tower) 2 of 2	12	Non-Emergency	40 CFR 63, Subpart ZZZZ
WTP MHF South-40 Laydown Yard East X-Ray Tent	12	Non-Emergency	40 CFR 63, Subpart ZZZZ
WTP Construction Site Pretreatment Tower Crane	170	Emergency Backup	40 CFR 63, Subpart ZZZZ
WTP Construction Site High-Level Waste Tower Crane	170	Emergency Backup	40 CFR 63, Subpart ZZZZ
WTP Construction Site Building T-14	74	Emergency Backup	40 CFR 63, Subpart ZZZZ

1 **Table 1.6 Discharge Points**

2 All emission units identified in Table 1.6 have the following general requirements where more
3 stringent conditions do not exist and as applicable to the individual emission units.

4 **Discharge Point: General Requirements**

5 Requirement Citation (WAC or Order Citation): WAC 173-400-040(2)

6 **Condition Approval**

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

11 Periodic Monitoring: Section 2.1, unless an alternative visible emissions, opacity, or particulate
12 matter emission limit is identified in Table 1.6.

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

14 Test Frequency: Not applicable.

15 Required Records: As specified in Section 2.1.

16 State-Only: No.

17 Calculation Model: Not applicable.

18

19 Requirement Citation (WAC or Order Citation): WAC 173-400-040(7)

20 **Condition Approval**

21 Condition: 1000 ppm SO₂ @ 7% O₂ on a dry basis. Prohibits emission of a gas
22 containing sulfur dioxide from any emissions unit in excess of 1000 ppm
23 of a dry basis, corrected to 7% oxygen for combustion sources, and based
24 on the average of any period of 60 consecutive minutes.

25 Periodic Monitoring: Section 2.7, Tier 2, unless an alternative SO₂ emission limit is identified in
26 Table 1.6.

27 Test Method: EPA Method 6 or 6C of 40 CFR 60, App. A.

28 Test Frequency: Not applicable.

29 Required Records: As specified in Section 2.7.

30 State-Only: No.

31 Calculation Model: Not applicable.

32

1 **Discharge Point Concrete Batch Plant**

2 200E Area, Vitrification

3 Requirement Citation (WAC or Order Citation): DE01NWP-003 (8/21/2001), 9/24/2002
4 Revision, and 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
8 exceed 0.01 grains per dry standard cubic foot, with no visible
9 emissions. Engineering calculations or vendor information that the
10 bag-house, when properly operated and maintained, will control
11 emissions to less than 0.01 grains per dry standard cubic foot will be
12 available at the facility. Periodic measurements shall consist of visible
13 emission inspections per EPA Reference Method 22, 40 CFR 60,
14 Appendix A, July 1, 2000.

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

18 Periodic Monitoring: A. Recordkeeping

19 Test Method: B. EPA Method 22, Title 40 Part 60, App.A, July 1, 2000.

20 Test Frequency: Not applicable.

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

23 B. Visible emission survey results.

24 State-Only: No.

25 Calculation Model: Not applicable.
26

1 Condition Approval 8/21/2001**2 Condition:** Fugitive Dust

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

9 Vehicle speed limit signs will be posted to control speeds. Paved roads
10 between the quarry and CBP will be kept clear of heavy accumulations of
11 dust and debris. Front-end loaders will be used to pick up any significant
12 spill of sand or aggregate material on the paved roads between the quarry
13 and CBP. The sand and aggregate stockpiles will be kept sprinkled with
14 water to prevent the movement of materials that may migrate because of
15 wind erosion. Transfer points at conveyors, crushers, and screens will also
16 be sprayed with water.

17 Periodic Monitoring: Recordkeeping**18 Test Method:** Not specified.**19 Test Frequency:** Not applicable.**20 Required Records:** Surveillance checklists.**21 State-Only:** No.**22 Calculation Model:** Not applicable.

23

24 Condition Approval 8/21/2001**25 Condition:** Emission Control Monitors

26 Emission equipment control monitors shall include but not be limited to
27 the following:

28 A. Bag house - None required if there are no visible emissions per section
29 1.A. of the APPROVAL CONDITIONS, and maintenance records
30 indicate proper maintenance practices and schedules.

31 Periodic Monitoring: Recordkeeping**32 Test Method:** Not specified.**33 Test Frequency:** Not applicable.**34 Required Records:** Surveillance checklists and bag house maintenance logs.**35 State-Only:** No.**36 Calculation Model:** Not applicable.

37

1 **Condition Approval 8/21/2001**

2 Condition: General Conditions

3 A. Visible Emissions: No visible emissions shall be allowed beyond 100 yards of source.
4 During periods of high winds, an assessment shall be made to suspend
5 operations or initiate a more comprehensive plant watering scheme.

6 Periodic Monitoring: Visible Emission Surveys.

7 Test Method: Not specified.

8 Test Frequency: Not applicable.

9 Required Records: Results of visible emission surveys.

10 State-Only: No.

11 Calculation Model: Not applicable.

12 **Condition Approval 3/12/2003**

13 Condition: Diesel Fuel Oil Boiler

14 1. A 4.4 MMBtu diesel fuel oil boiler will be operated.

15 2. The diesel fuel sulfur content will be less than or equal to 0.05% S, by
16 weight.

17 3. Operation of the boiler is limited to 2000 hours per year.

18 4. Good combustion engineering practices shall be followed, including
19 adherence to the boiler manufacturer's specification for operation,
20 maintenance, and combustion control.

21 5. Specific combustion feed gas ratios, including the fuel-air ratio,
22 monitoring, startup and shutdown procedures shall be followed to
23 maximize combustion efficiency and minimize discharge of pollutants
24 into the atmosphere.

25 Periodic Monitoring: Recordkeeping

26 Test Method: Not specified.

27 Test Frequency: Not applicable.

28 Required Records: 1. Manufacturer's specifications for operation, maintenance, and
29 combustion control.

30 2. Records of operating hours.

31 3. Records of fuel specification (sulfur content).

32 4. Records of good combustion engineering practices and operating
33 procedures.

34 State-Only: No.

35 Calculation Model: Not applicable.

36

- 1 **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-
- 6 040(2).
- 7 Periodic Monitoring: Tier 3 survey/observation.
- 8 Frequency: Not applicable (assessment of cause of visible emissions).
- 9 Test Method: EPA Method 9 of 40 CFR 60, Appendix A or Tier 3 Visible Emissions
- 10 Survey of this AOP.
- 11 Test Frequency: Routine observation.
- 12 Required Records: Log book.
- 13 State-Only No.
- 14 Calculation Model Not applicable.
- 15 **Condition Approval 6/29/2006**
- 16 Condition: VOC emissions shall not exceed 3.5 tons per year.
- 17 Periodic Monitoring: Emission estimation (Condition 3.0 of the NOC).
- 18 Frequency: Annually.
- 19 Test Method: Material assessment, inventory, and calculation as identified in the NOC
- 20 Approval Condition 3.0.
- 21 Test Frequency: Annually.
- 22 Required Records: Results of analyses.
- 23 State-Only No.
- 24 Calculation Model Not applicable.
- 25 **Condition Approval 6/29/2006**
- 26 Condition: All TAPs, as submitted in the Permittee's Notice of Construction
- 27 Application, shall be below their respective ASIL.
- 28 Periodic Monitoring: Emission estimation (Condition 3.0 of this NOC).
- 29 Frequency: Annually.
- 30 Test Method: Material assessment, inventory, and calculation as identified in the NOC
- 31 Approval Condition 3.0.
- 32 Test Frequency: Annually.
- 33 Required Records: Results of analyses.
- 34 State-Only No.
- 35 Calculation Model Not applicable.
- 36

1 **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, App. A.

17 Test Frequency: Not applicable.

18 Required Records: 1. Monthly fuel burned (this calculation is based on fuel added to supply
19 tank).

20 2. Hours of operation logged.

21 State-Only No.

22 Calculation Model 2B.

23 **Condition Approval 4/30/1996**

24 Condition: Engine E shall burn only No. 2 fuel oil with sulfur content no more than
25 0.05 weight percent.

26 Periodic Monitoring: Recordkeeping for compliance with condition.

27 Test Method: Not specified.

28 Test Frequency: Not applicable.

29 Required Records: Vendor documentation of fuel purchase from retail outlet (i.e., for use in
30 motor vehicles, see 40 CFR 80), or fuel analysis once per year showing
31 $\leq 0.05\text{wt}\%$ sulfur.

32 State-Only No.

33 Calculation Model Not applicable.

34

- 1 **Condition Approval 4/30/1996**
- 2 Condition: Opacity 10 %.
- 3 Periodic Monitoring: See Section 2.1, Tier 1.
- 4 Frequency: At least once per quarter, if operates.
- 5 Test Method: EPA Method 9 of 40 CFR 60, App. A.
- 6 Test Frequency: Not applicable.
- 7 Required Records: Results of visible emissions survey or records of visual determination of
- 8 the opacity.
- 9 State-Only No.
- 10 Calculation Model Not applicable.
- 11

- 1 **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: See Section 2.1, Tier 1
- 7 Frequency: At least once per quarter, if operates.
- 8 Test Method: EPA Method 9 of 40 CFR 60, App. A.
- 9 Test Frequency: Not applicable.
- 10 Required Records: Results of visible emissions survey or records of visual determination of
- 11 the 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, App. A.
- 19 Test Frequency: Not applicable.
- 20 Required Records: 1. Monthly fuel burned (this calculation is based on fuel added to supply
- 21 tank).
- 22 2. Hours of operation logged.
- 23 State-Only No.
- 24 Calculation Model 2B.
- 25 **Condition Approval 4/30/1996**
- 26 Condition: Engine W shall burn only No. 2 fuel oil with sulfur content no more
- 27 than 0.05 weight percent.
- 28 Periodic Monitoring: Recordkeeping for compliance with condition.
- 29 Test Method: Not specified.
- 30 Test Frequency: Not applicable.
- 31 Required Records: Vendor documentation of fuel purchase from retail outlet (i.e., for use in
- 32 motor vehicles, see 40 CFR 80), or fuel analysis once per year showing
- 33 ≤ 0.05 wt% sulfur.
- 34 State-Only No.
- 35 Calculation Model Not applicable.
- 36

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.

9

1 **Discharge Point Emergency Diesel Generators**

2 300 Area, Generators

3 Requirement Citation (WAC or Order Citation): DE02NWP-001

4 **Condition Approval 1/15/2002**

5 Condition: Total Emission Limits

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

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

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

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

20 Test Method: Not specified.

21 Test Frequency: Not applicable.

22 Required Records: Results of analyses.

23 State-Only NSR thresholds – No.
24 ASILs - Yes.

25 Calculation Model Not applicable.

26 **Condition Approval 1/15/2002**

27 Condition: Emissions Control

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

30 Periodic Monitoring: Recordkeeping.

31 Test Method: Not specified.

32 Test Frequency: Per fuel shipment.

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

34 State-Only No.

35 Calculation Model Not applicable.

36

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
4 for inspection by Ecology upon request. The records shall be organized in
5 a readily accessible manner and cover a minimum of the most recent sixty
6 (60) month 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.

15

- 1 **Discharge Point P-2025E ETF**
2 200E Area, Effluent Treatment
3 Requirement Citation (WAC or Order Citation): WAC 173-460-070, DE07NWP-003
4 (6/6/2007), Amendment 1 (8/7/2007) and Amendment 2 (9/27/2007),
5 Revision 1 (8/10/2010)
- 6 **Condition Approval 6/6/2007 (DE07NWP-003)**
7 Condition: Visible emissions from the ETF stack (Figure 1 of Order DE07NWP-003,
8 Rev. 1) shall not exceed five percent (5%).
9 Periodic Monitoring: Tier 3 Visible Emission Survey, Section 2.1 of AOP ATT 1.
10 Test Method: Not specified.
11 Test Frequency: Not applicable.
12 Required Records: As required in AOP Attachment 2 for maintaining abatement control
13 technology.
14 State-Only No.
15 Calculation Model Not applicable.
- 16 **Condition Approval 6/6/2007 (DE07NWP-003)**
17 Condition: Volatile Organic Compound (VOC) emissions from the ETF (Figure 1 of
18 Order DE07NWP-003) shall not exceed 0.55 gram per cubic meter (g/m^3)
19 at standard conditions or 0.50 gram per minute (g/min).
20 Periodic Monitoring: Initial compliance verified by EPA Method 18 of 40 CFR 60, Appendix A
21 in 1996 (NOC-93-3).
22 Test Method: EPA Method 18 or 25A of 40 CFR 60, Appendix A.
23 Test Frequency: Not applicable (initial test condition for construction).
24 Required Records: Testing Results of 1996 EPA Method.
25 State-Only No.
26 Calculation Model Not applicable.
- 27 **Condition Approval 6/6/2007 (DE07NWP-003)**
28 Condition: Volatile Organic Compound (VOC) emissions from ETF operations shall
29 not exceed 4,000 lb/yr. [WAC 173-400-110(5)(b)]
30 Periodic Monitoring: Material emission estimates.
31 Test Method: Calculations and record-keeping.
32 Test Frequency: Annual.
33 Required Records: Records of data and calculations for the VOC emissions from ETF
34 operations.
35 State-Only No.
36 Calculation Model Not applicable.
37

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
12 DE07NWP-003 Amendment 2 (9/27/2007) and Revision 1 (8/10/2010),
13 shall not exceed ASILs. [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),
19 and
20 (2) Waste stream influent volumetric records.
- 21 State-Only Yes.
- 22 Calculation Model Not applicable.

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

- 24 Condition: All newly identified TAPs shall not exceed ASILs (with assessment of
25 ASIL compliance). [WAC 173-460-070]
- 26 Periodic Monitoring: Assessment of ASIL compliance (see Required Records).
- 27 Test Method: Not specified.
- 28 Test Frequency: Not applicable.
- 29 Required Records: (1) Report laboratory or waste analysis result of newly identified TAPs
30 within 90 days of completion of analysis, and
31 (2) Waste stream influent volumetric records.
- 32 State-Only Yes.
- 33 Calculation Model Not applicable.

34

- 1 **Discharge Point P-2706T 001**
- 2 200W Area, T Plant Complex
- 3 Requirement Citation (WAC or Order 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
- 7 limits specified in WAC 173-400-040(2).
- 8 Periodic Monitoring: Section 2, Tier 3.
- 9 Test Method: 40CFR60, Appendix A, Method 9
- 10 Test Frequency: Not applicable (when visible emissions are observed).
- 11 Required Records: Maintenance records.
- 12 State-Only No.
- 13 Calculation Model Not applicable.
- 14 **Condition Approval 6/29/2006**
- 15 Condition: Emission Limits
- 16 A. VOC emission will not exceed 3.5 tons per year.
- 17 B. All TAPs, as submitted in the Permittee's Notice of Construction
- 18 Application, will be below their respective ASIL.
- 19 Periodic Monitoring: Analyze each proposed changed to determine if emissions would exceed
- 20 Emission limits.
- 21 Test Method: Section 3.0 of the Approval Order DE01NWP-002 Revision 1
- 22 Test Frequency: Section 3.0 of the Approval Order DE01NWP-002 Revision 1
- 23 Required Records: Results of analyses.
- 24 State-Only No.
- 25 Calculation Model Not applicable.
- 26

1 **Discharge Point P-296A042-001³**

2 200E Area, 241-AY and 241-AZ Tank Farms - Ventilation Upgrades

3 Requirement Citation (WAC or Order Citation): NOC 94-07 (8/29/1994), Rev 1 (12/22/1997),
4 Rev 2 (10/25/1999), Rev 3 (5/7/2008), and Amd A (3/26/2013)

5 **Condition Approval 5/7/2008 (Rev 3)**

6 Condition: Visible emissions at the stack shall not exceed 5%. Should visible
7 emissions be observed, the excess emissions shall be discontinued
8 by removing the emission unit from service and Health notified
9 immediately.

10 Periodic Monitoring: Tier 3 requirements (Condition 2.1, Visible Emission Surveys).

11 Test Method: Maintain abatement control technology (AOP Attachment 2).

12 Test Frequency: Not applicable.

13 Required Records: Operation logs or records.

14 State-Only Yes.

15 Calculation Model Not specified.

16 **Condition Approval 5/7/2008 (Rev 3)**

17 Condition: The primary tank ventilation exhauster system for the 241-AY and
18 241-AZ double-shell tank farms shall not exceed daily average
19 flow rates of 1,000 ft³/min (standard temperature and pressure).

20 Periodic Monitoring: Flow calculations based on stack gas flow and temperature
21 measurement.

22 Test Method: Flow calculations.

23 Test Frequency: Semi-annually.

24 Required Records: Calibrations and calculations of exhauster system stack gas flow
25 and temperature measurement devices.

26 State-Only Yes.

27 Calculation Model None specified.

28

³ Per Approval Order DE11NWP-001, NOC Approval Order 94-07 will become obsolete and void when the new 241-AY/AZ ventilation system covered by the new Approval Order DE11NWP-001 becomes fully operational.

1 **Condition Approval 5/7/2008 (Rev 3) and 3/26/2013 (Amd A)**

- 2 Condition: All toxic air pollutants (TAPs) shall be below their respective ASIL or
3 Screening Level of Table 1 of the most updated NOC approval order.
4 Periodic Monitoring: T-BACT compliance (HEME, HEPA, exhauster flow rate, etc.).
5 Test Method: T-BACT compliance.
6 Test Frequency: Not applicable.
7 Required Records: All monitoring and operations records required for T-BACT compliance.
8 State-Only Yes.
9 Calculation Model Method 7B (Statement of Basis 3.1.7) or other approved methods.

10 **Condition Approval 3/26/2013 (Amd A)**

- 11 Condition: Emissions of ammonia shall not exceed 2.5 lbs/hr from the primary tank
12 ventilation exhauster system.
13 Periodic Monitoring: Calculations based on ammonia concentration readings and stack flow
14 rates.
15 Test Method: Field instruments, which may include Draeger Tubes.
16 Test Frequency: Semi-annually.
17 Required Records: Supporting data and calculations.
18 State-Only No.
19 Calculation Model Method 5 (Statement of Basis 3.1.4) or other approved methods.

20 **Condition Approval 5/7/2008 (Rev 3)**

- 21 Condition: Emissions of VOCs shall not exceed 0.175 lb/hr from the primary tank
22 ventilation exhauster system.
23 Periodic Monitoring: Calculations based on VOC concentration readings and stack flow rate.
24 Test Method: Field instruments, which may include Draeger Tubes.
25 Test Frequency: Semi-annually.
26 Required Records: Supporting data and calculations.
27 State-Only No.
28 Calculation Model Method 4 (Statement of Basis 3.1.3) or other approved methods.

29

1 Discharge Point P-296W004 001

2 200W Area, Waste Receiving and Processing

3 Requirement Citation (WAC or Order Citation): DE03NWP-002

4 Condition Approval 5/21/2003

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

24 Periodic Monitoring: IH Program measurements as specified in NOC, including alternative
25 methods.

26 Test Method: Not specified.

27 Test Frequency: Once every two years.

28 Required Records: Test plan.
29 Measurement results.

30 State-Only Yes.

31 Calculation Model Not applicable.

32

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
4 (SQER). A modification submittal of a Notice of Construction (NOC)
5 application will be required if the SQER limit would be exceeded for
6 compounds not addressed under the T-BACT assessment. The
7 calculation/measurement methods described in section 4 of the NOC
8 Approval Order DE03NWP-002, or other method as approved by
9 Ecology, may be used to document compliance with the SQER 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,
19 such as SWITS of the data management system (DMS), shall be
20 conducted by the facility to document/verify de minimus emissions from
21 the source. This assessment will be maintained on file, made available for
22 Ecology inspector requests, and compiled into emission estimates that will
23 be reported annually beginning as part of the Calendar Year 2003
24 nonradioactive inventory of airborne emissions.
- 25 Periodic Monitoring: Recordkeeping; Comparison to threshold.
- 26 Test Method: Not specified.
- 27 Test Frequency: Annually.
- 28 Required Records: 1. Throughput records, SWITs query evaluation if > 1,000 drums.
29 2. Nonradioactive air emissions inventory report required by WAC 173-
30 400-105.
- 31 State-Only Yes.
- 32 Calculation Model Not applicable.
- 33

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

- 2 Condition: Total Emission Limits: The processing and repackaging activities
3 described in the Notice of Construction application will be permitted
4 without requiring additional emission controls, provided that the emissions
5 from the stack, venting the 100 and 300 Series Waste Process Lines, the
6 200 and 400 Restricted Waste process Lines, the process area, and the
7 storage areas are maintained below the level described in and meeting T-
8 BACT (according to WRAP Module 1 Best Available Control Technology
9 Assessment, WHC-SD-W026-TI-005, January 1993, Westinghouse
10 Hanford Company, Richland, Washington).
- 11 Periodic Monitoring: Recordkeeping.
- 12 Test Method: Not specified.
- 13 Test Frequency: Not applicable.
- 14 Required Records: Documentation implementing T-BACT.
- 15 State-Only Yes.
- 16 Calculation Model Not applicable.
- 17

1 Discharge Point P-WTP-001

2 200E Area, Vitrification

3 Requirement Citation (WAC or Order Citation): WAC 173-400-040(9)(a); DE02NWP-002,
4 Revision 2; and PSD-02-01, Amendment 2.**5 Condition Approval: 11/13/2006**

6 Condition: FUGITIVE DUST CONTROL

7 8.1 Construction Phase Fugitive Dust Control Plan(s), prepared using EPA
8 and Ecology guidelines, shall be developed and implemented. The plan(s)
9 shall address fugitive dust control at the WTP construction site adjacent to
10 the Hanford 200 Area and the Marshaling Yard established upon property
11 leased from the Port of Benton. A copy of this plan(s) shall be maintained
12 on-site at all times in a place known to facility employees that are responsible
13 for complying with the requirements contained therein and shall be
14 retrievable by those employees at all times when activities regulated by the
15 documents are occurring. These documents shall be made available to
16 Ecology upon request17 Periodic Monitoring: Not applicable. The owner or operator shall take reasonable precautions
18 (such as pre-job planning) to prevent fugitive dust from becoming
19 airborne.

20 Test Method: Construction Phase Fugitive Dust Control Plan

21 Test Frequency: During construction or routine/*ad hoc* dust suppression22 Required Records: Fugitive Dust Control Plan and records of actions taken to minimize
23 fugitive dust

24 State-Only: No.

25 Calculation Model: Not applicable.

26 Condition Approval 11/24/200327 Condition: 1.3 Opacity from each exhaust stack from process facilities (Pretreatment,
28 HLW, and LAW) shall not exceed 5%, other facility stacks shall not
29 exceed 10 percent, over a 6 minute average as measured by EPA
30 Reference Method 9 of 40 CFR 60, Appendix A, or an equivalent method
31 approved in advance by Ecology. A certified opacity reader shall read and
32 record the opacity concurrent with any source testing.

33 Periodic Monitoring: For Pretreatment, HLW, and LAW, See Section 2.1, Tier 3.

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

35 Test Frequency: Initial test.

36 Required Records: Test Records.

37 State-Only: No.

38 Calculation Model: Not applicable.

39

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

2 Condition: 1.3 Opacity from each exhaust stack from process facilities (Pretreatment,
3 HLW, and LAW) shall not exceed 5%, other facility stacks shall not
4 exceed 10 percent, over a 6 minute average as measured by EPA
5 Reference Method 9 of 40 CFR 60, Appendix A, or an equivalent method
6 approved in advance by Ecology. A certified opacity reader shall read and
7 record the opacity concurrent with any source testing.

8 Periodic Monitoring: For boilers, generators, and fire pumps, See Section 2.1, Tier 1.

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

10 Test Frequency: At least once per calendar quarter.

11 Required Records: Test records.

12 State-Only No.

13 Calculation Model Not applicable.

1 Condition Approval 11/24/2003

2 Condition: 1.3 Opacity from each exhaust stack from process facilities (Pretreatment,
3 HLW, and LAW) shall not exceed 5%, other facility stacks shall not
4 exceed 10 percent, over a 6 minute average as measured by EPA
5 Reference Method 9 of 40 CFR 60, Appendix A, or an equivalent method
6 approved in advance by Ecology. A certified opacity reader shall read and
7 record the opacity concurrent with any source testing.

8 Periodic Monitoring: For other facility stacks, See Section 2.1, Tier 3.

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

10 Test Frequency: Initial test.

11 Required Records: Test records.

12 State-Only No.

13 Calculation Model Not applicable.

14 Condition Approval 11/24/2003

15 Condition: 1.4; PSD-02-01, Cond. 2 All boilers, generators and the diesel fire pump
16 shall be fired on Ultra-Low Sulfur Fuel (ULSF). ULSF means natural gas,
17 propane, or fuel oil with a sulfur content of 0.0030% or less. Compliance
18 shall be monitored by maintaining and submitting reports of fuel
19 purchases.

20 Periodic Monitoring: Recordkeeping and Semiannual report.

21 Test Method: Not Specified.

22 Test Frequency: Not Applicable.

23 Required Records: Records of monthly fuel purchases and use and an annual certification,
24 from the fuel distributor, stating the sulfur content of the fuel that was
25 supplied. (PSD-02-01 Cond 17.3)

26 State-Only No.

27 Calculation Model Not applicable.

28 Condition Approval 11/10/2005

29 Condition: 1.5; PSD-02-01 Cond. 8 The operation of the six steam generating boilers
30 shall not exceed an annual aggregated fuel consumption limit of
31 13,400,000 gallons per year summed daily for the previous 365 days.

32 Periodic Monitoring: Recordkeeping and Semiannual report of consumption over 12 months.

33 Test Method: Not Specified.

34 Test Frequency: Daily.

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

36 State-Only No.

37 Calculation Model Not applicable.

38

1 **Condition Approval 4/4/2013**

2 Condition: 2.4; PSD-02-01 Cond. 11, Cond.13 The emergency generator shall not
3 operate for more than 164 hours per year on a 12 month rolling summation
4 calculated once per month. Compliance shall be monitored by installing
5 and operating non-resettable totalizers on each generator.

6 Periodic Monitoring: Recordkeeping.

7 Test Method: Not Specified.

8 Test Frequency: Monthly.

9 Required Records: Records showing all hours of operation.

10 State-Only No.

11 Calculation Model Not applicable.

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

13 Condition: 2.4; PSD-02-01 Cond. 13. The emergency turbine generators shall not
14 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
16 and operating non-resettable totalizers on each generator.

17 Periodic Monitoring: Recordkeeping.

18 Test Method: Not Specified.

19 Test Frequency: Monthly.

20 Required Records: Records showing all hours of operation.

21 State-Only No.

22 Calculation Model Not applicable.

23 **Condition Approval 4/4/2013**

24 Condition: 2.5; PSD-02-01 Cond. 15 Each of the diesel fire pumps shall not operate
25 for more than 230 hours per year on a 12 month rolling summation
26 calculated once per month. Compliance shall be monitored by installing
27 and operating a non-resettable totalizer on the fire pump.

28 Periodic Monitoring: Recordkeeping.

29 Test Method: Not Specified.

30 Test Frequency: Not Applicable.

31 Required Records: Monthly.

32 State-Only No.

33 Calculation Model Not applicable.

34

1 Condition Approval 11/24/2003

2 Condition: 2.2 A new NOC will be required, if total emissions of toxic air pollutants
3 exceed the values specified in the tables in Attachment 1. These values
4 shall be confirmed by emission calculations, for indicator constituents,
5 derived from waste characterization data obtained through implementation
6 of the Ecology approved Regulatory Data Objectives Supporting Tank
7 Waste Remediation System Privatization Project (PNNL-12040). The
8 mass feed rates for the indicator constituents will be verified to be less
9 than or equal to the mass feed rates used in the Integrated Emissions
10 Baseline Report for the Hanford Tank Waste Treatment and
11 Immobilization Plant (24590-WTP-RPT-PO-03-008, Rev. 0). Results of
12 any such calculations will be maintained on file and made available upon
13 inspection/request.

14 Periodic Monitoring: Recordkeeping

15 Test Method: Not Specified.

16 Test Frequency: At least once per calendar year.

17 Required Records: 1. Calculations of TAPs emissions derived from waste feed
18 characterization.

19 2. Calculations of ammonia emissions from LAW and HLW.

20 State-Only Yes.

21 Calculation Model Not applicable.

22 Condition Approval 7/8/2002

23 Condition: 2.3 A new NOC also is required if total emissions of any criteria
24 pollutants, derived from calculations/monitoring, would exceed the
25 estimates listed under the Emissions section of this order.

26 Periodic Monitoring: Recordkeeping

27 Test Method: Not Specified.

28 Test Frequency: At least once per calendar year.

29 Required Records: Calculations of criteria pollutants.

30 State-Only Yes.

31 Calculation Model Not applicable.

32

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

2 Condition: 3.1; PSD-02-01 Conditions 3.2, 4.2, 5.2, 6.2, and 7.2 Within 180-days of
3 achieving the optimized feed rate of simulant at which the facilities will be
4 operated, the permittee shall demonstrate initial compliance through a
5 performance demonstration conducted per an Ecology approved
6 Performance Demonstration Plan. The permittee shall utilize the
7 Performance Demonstration Plan requirements identified in the Dangerous
8 Waste Portion of the Resource Conservation and Recovery Act Permit for
9 the Treatment, Storage, and Disposal of Dangerous Waste Hanford Tank
10 Waste Treatment and Immobilization Plant (DWP), condition III.10.H.5.f
11 (LAW) and III.10.J.5.f (HLW). Ecology shall be notified at least 30 days
12 prior to the test and invited to participate in the test activities at least one
13 week prior to testing.

14 Periodic Monitoring: Recordkeeping.

15 Test Method: Not specified.

16 Test Frequency: Not applicable.

17 Required Records: 1. Notification Documentation.
18 2. Performance Demonstration Plan.

19 State-Only Yes.

20 Calculation Model Not applicable.

21 **Condition Approval 11/24/2003**

22 Condition: 3.2 Testing per the initial compliance testing identified in 3.1 shall be
23 conducted in accordance with the frequency identified in the DWP,
24 condition III.10.I.1.h (LAW) and II.10.K.1.h (HLW).

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

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

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

28 Required Records: Test records.

29 State-Only Yes.

30 Calculation Model Not applicable.

31

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

2 Condition: 3.5; PSD-02-01 Conditions 3-7, 9-10, 12, 14 Within 180 days of initial
 3 startup, boiler, emergency generator, and process facility 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
 6 Ecology 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

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

2 Condition: 3.6 During the boiler source testing, a direct-reading measurement device
3 for carbon monoxide with a minimum measurement accuracy of five
4 percent or less shall take readings according to methods proposed by the
5 permittee and approved by Ecology in writing in advance of the testing.
6 The direct-reading instrument shall be calibrated for future use, using the
7 results of the source testing.

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

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

10 Test Frequency: Initial startup.

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

13 State-Only Yes.

14 Calculation Model Not applicable.

15 **Condition Approval 11/24/2003**

16 Condition: 4. Emissions from boilers and generators shall be monitored for CO, and
17 Oxygen by means of a portable emissions analyzer (direct-reading
18 measurement device) at initial startup and after routinely scheduled
19 maintenance activities and burner/control adjustments such as fuel/air
20 metering ratio control and oxygen trim control.

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

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

23 Test Frequency: Initial startup and after routinely scheduled maintenance activities and
24 burner/control adjustments such as fuel/air metering ratio control and
25 oxygen trim control.

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

28 State-Only Yes.

29 Calculation Model Not applicable

30

Discharge Point P-WTP-001				
200E Area, Vitrification				
Requirement Citation (WAC or Order Citation): PSD-02-01, Amendment 2				
Condition Approval 10/10/2005				
Emission Unit	Approval Condition # Pollutant Condition	Compliance Determination	Compliance Frequency	Required Records
Steam Generating Boilers, Diesel Fire Pumps, Backup Emergency Generators	Approval Condition 2 Fuel Ultra-low sulfur fuel ≤ 0.003% by wt.	Recordkeeping	Semiannual	Fuel purchase records and a written statement in each semiannual report of the type of fuel used .
Pretreatment Plant	Approval Condition 3 PM10 ≤ 0.02 g/dscf 24- hour avg or 0.456 lb/hr 24-hour avg	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.	5 years	Calculations based on testing results and hours of operation.
LAW Vitrification Plant	Approval Condition 5 PM10 ≤ 0.36 lb/hr at 21% O2, 24-hr avg.	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	5 years	Calculations based on testing results and hours of operation.

Discharge Point P-WTP-001				
200E Area, Vitrification				
Requirement Citation (WAC or Order Citation): PSD-02-01, Amendment 2				
Condition Approval 10/10/2005				
Emission Unit	Approval Condition # Pollutant Condition	Compliance Determination	Compliance Frequency	Required Records
	Approval Condition 4 NOX ≤ 477 ppm dry per volume at 21% O ₂ , 24 hr avg. or 200.1 lb/day averaged over 30 consecutive days	40 CFR 60 Appendix A, Method 7E	Continuous; using a Continuous Emission Monitor (CEM) for NO _x and a flow meter.	Testing results CEM for NO _x and flow meter, and CEM performance evaluation.
HLW Vitrification Plant	Approval Condition 7 PM10 ≤ 0.135 lb/hr at 21% O ₂ , when averaged over 24 consecutive hours.	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	5 years	Calculations based on testing results and hours of operation.
	Approval Condition 6 NOX 352 ppmdv at 21% O ₂ , over a 24 hr averaging period or 23.3 lb/day averaged over 30 consecutive days.	40 CFR 60 Appendix A, Method 7E, CEM	CEM Continuous	Testing results, CEM for NO _x and flow meter, and CEM performance evaluation.
Steam Boilers	Approval Condition 8 Max. aggregated fuel consumption for steam boilers 1, 2, 3, 4, 5, and 6	Verification of fuel purchases	Semiannual	Fuel purchase records and a written statement in each semiannual report of the total fuel consumption over the

Discharge Point P-WTP-001				
200E Area, Vitrification				
Requirement Citation (WAC or Order Citation): PSD-02-01, Amendment 2				
Condition Approval 10/10/2005				
Emission Unit	Approval Condition # Pollutant Condition	Compliance Determination	Compliance Frequency	Required Records
	shall not exceed 13,400,000 gallons per year			previous 12 months. .
	Approval Condition 10 PM or PM10 <u>from each steam boiler</u> ≤ 0.02 lb/MMBtu or 1.0 lb/hr averaged over 24 consecutive hours.	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	5 years	Testing results and hours of operation.
	Approval Condition 9 NOX ≤ 0.09 lb/MMBtu 3% O2, or 4.52 lb/hr averaged over 24 consecutive hours	40 CFR 60 Appendix A, Method 7E	5 years	Calculations based on testing results and hours of operation.
	Approval Condition 2 Fuel Ultra-low sulfur fuel ≤ 0.003% by wt.	Record keeping	Semiannual	Fuel purchase records.
Emergency Generators	Approval Condition 2 Fuel Ultra-low sulfur fuel ≤ 0.003% by wt.	Record keeping	Semiannual	Fuel purchase records.

Discharge Point P-WTP-001				
200E Area, Vitrification				
Requirement Citation (WAC or Order Citation): PSD-02-01, Amendment 2				
Condition Approval 10/10/2005				
Emission Unit	Approval Condition # Pollutant Condition	Compliance Determination	Compliance Frequency	Required Records
	Approval Conditions 11 and 13 Each Type I or Type II emergency generator shall not exceed 164 hours per year when averaged over 12 consecutive months, calculated once per month	Installing and operating a non-resettable totalizer on each generator.	Semiannual	Hours of operation reported in the semiannual report for the previous 6 months and the summation of hours operated over the previous 12 months.
	Approval Condition 12 NOX Type I Generator ≤ 391.1 lb/day averaged over 24 consecutive hours.	40 CFR 60 Appendix A, Method 7E	5 years	Calculations based on testing results and hours of operation.
	Approval Condition 14 Emissions of NOX from the Type II Generators shall not exceed 547.5 lb/day (each), when averaged over 24 consecutive hours	40 CFR 60 Appendix A, Method 7E	5 years	Calculations based on testing results and hours of operation.

Discharge Point P-WTP-001 200E Area, Vitrification Requirement Citation (WAC or Order Citation): PSD-02-01, Amendment 2 Condition Approval 10/10/2005				
Emission Unit	Approval Condition # Pollutant Condition	Compliance Determination	Compliance Frequency	Required Records
Diesel Fire Water Pumps	Approval Condition 2 Fuel Ultra-low sulfur fuel ≤ 0.003% by wt.	Record keeping	Semiannual	Fuel purchase records.
	Approval Condition 15 Hours of operation for each pump ≤ 110 hours per year averaged over 12 consecutive months	Installing and operating a non- resettable totalizer on each generator.	Written statement in each semiannual report	Hours of operation.

1 **Discharge Point: Integrated Disposal Facility (IDF)**

2 200E, General Standards

3 Requirement Citation

4 (WAC or Order Citation): WAC 173-400-040(9)(a), DE05NWP-004

5 **Condition Approval:05/31/2005**

6 Condition: FUGITIVE DUST

7 Requires reasonable precautions be taken to prevent fugitive dust from
8 becoming airborne and to minimize dust generation.

9 Periodic Monitoring: Pre-job planning to determine reasonable control measures.

10 Test Method: Not specified.

11 Test Frequency: Not applicable.

12 Required Records: None listed.

13 State-Only: No.

14 Calculation Model: Not applicable.

15 **Condition Approval:05/31/2005**

16 Condition: FUGITIVE EMISSIONS

17 The permittee shall take reasonable precautions to prevent the release of
18 air contaminants from any emissions unit engaging in materials handling,
19 construction, demolition, or any other operation that is a source of fugitive
20 emissions.

21 Periodic Monitoring: Pre-job planning to determine reasonable control measures.

22 Test Method: Not specified.

23 Test Frequency: Not applicable.

24 Required Records: None listed.

25 State-Only: No.

26 Calculation Model: Not applicable.

27

- 1 **Condition Approval: 05/31/2005**
- 2 Condition: EMISSION LIMITS FOR WASTE COVERING OPERATIONS
- 3 During waste covering operations, aggregate, a mixture of minerals, sand
- 4 and soil, will be used to cover the waste package at the IDF. Dust control
- 5 for covering the waste package will consist of watering and/or chemical
- 6 wetting agents. Waste covering operations will be curtailed during high
- 7 winds in accordance with abnormal operating procedures for high winds.
- 8 Prior to long periods of inactivity, an assessment shall be made to
- 9 implement more comprehensive dust control methods, such as chemical
- 10 stabilization, on disturbed areas. A reassessment will be made once per
- 11 week.
- 12 Periodic Monitoring: Recordkeeping.
- 13 Test Method: Not specified.
- 14 Test Frequency: Not applicable.
- 15 Required Records: Daily activity reports, logs, pre-job reviews, management assessments,
- 16 surveillances or similar documents.
- 17 State-Only: Yes.
- 18 Calculation Model: Not applicable.
- 19 **Condition Approval: 05/31/2005**
- 20 Condition: EMISSION LIMITS FOR TRAVEL ON UNPAVED ROADS
- 21 Surface treatment for dust control will consist of watering and/or
- 22 chemical stabilization. Minimize vehicle use on unpaved road. Perform
- 23 regular maintenance of road surface. Reduce vehicle speed limit on
- 24 unpaved roads.
- 25 Periodic Monitoring: Recordkeeping
- 26 Test Method: Not specified
- 27 Test Frequency: Not applicable.
- 28 Required Records: Daily activity reports, logs, pre-job reviews, management assessments,
- 29 surveillances or similar documents.
- 30 State-Only: Yes
- 31 Calculation Model: Not applicable
- 32

1 **Condition Approval:05/31/2005**

2 Condition: EMISSION LIMITS FOR AGGREGATE COVER COMPACTING
3 ACTIVITIES

4 A water truck will be provided, and operated as needed to spray water for
5 compaction. Waste covering operations will be curtailed during high winds
6 in accordance with abnormal operating procedures for high winds. Prior to
7 long periods of inactivity an assessment shall be made to implement more
8 comprehensive dust control methods, such as chemical stabilization, on
9 disturbed areas. A reassessment will be made once per week.

10 Periodic Monitoring: Recordkeeping.

11 Test Method: Not specified.

12 Test Frequency: Not applicable.

13 Required Records: Daily activity reports, logs, pre-job reviews, management assessments,
14 surveillances or similar documents.

15 State-Only: Yes.

16 Calculation Model: Not applicable.

17 **Condition Approval:05/31/2005**

18 Condition: EMISSION LIMITS FOR AGGREGATE STORAGE PILE

19 Watering will be utilized to minimize wind erosion during storage pile
20 operation. Storage pile work will be curtailed during high winds in
21 accordance with abnormal operating procedures for high winds. Prior to
22 long periods of inactivity, an assessment shall be made to implement more
23 comprehensive dust control methods, such as chemical stabilization, on
24 disturbed areas. A reassessment will be made once per week. Minimize
25 vehicle traffic. Minimize areas of disturbance.

26 Periodic Monitoring: Recordkeeping.

27 Test Method: Not specified.

28 Test Frequency: Not applicable.

29 Required Records: Daily activity reports, logs, pre-job reviews, management assessments,
30 surveillances or similar documents.

31 State-Only: Yes

32 Calculation Model: Not applicable.

33

1 **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
4 (2/18/2005), Rev 1 (7/31/2007), and Amendment 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 Tier 3 Visible Emissions
9 Survey requirements of the Hanford AOP, Section 2.1. Should visible
10 emissions be observed which are not solely attributable to water
11 condensation, compliance shall be met by performing an opacity
12 determination utilizing 40 CFR 60, Appendix A, Method 9, providing that
13 such determination shall not place the visible emission observer in hazard
14 greater than that identified for the general worker.

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

16 Test Frequency: None Specified (as needed for monitoring and compliance)

17 Required Records: Visible emission surveys records in which a visible emission was
18 observed, which are not solely attributable to water condensation; and
19 Method 9 results, if conducted.

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
25 (at standard temperature and pressure).

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

28 Test Method: Not specified.

29 Test Frequency: None Specified (as needed for monitoring and compliance).

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
32 measurement devices.

33 State-Only: No.

34 Calculation Model: Not applicable.

35

- 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
- 4 and Amd A, shall be below their respective ASIL or Screening Level of
- 5 Table 1 of Approval Order DE05NWP-001 Rev 1.
- 6 Periodic Monitoring: Compliance and monitoring shall be met by operating the exhauster
- 7 systems only when in accord with T-BACT emission controls for the
- 8 project. T-BACT for this project has been determined to be operation of
- 9 the primary tank ventilation exhauster systems not exceeding 4,000 cubic
- 10 feet per minute with moisture de-entrainment, pre-heater, and HEPA
- 11 filtration in service in the treatment train.
- 12 Test Method: Not specified.
- 13 Test Frequency: None Specified (as needed for monitoring and compliance).
- 14 Required Records: Documentation and record-keeping of T-BACT compliance of emission
- 15 control found for this project (operation of the primary tank ventilation
- 16 exhauster system not exceeding 4,000 ft³/min with moisture de-
- 17 entrainment, pre-heater, and HEPA filtration in service in the treatment
- 18 train).
- 19 State-Only: Yes.
- 20 Calculation Model: Not applicable.
- 21

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
5 term 'either exhauster system' shall mean each individual primary tank
6 ventilation exhauster system within the 241-AN and 241-AW Tank Farms,
7 where an exhauster system may be operated in single-train or dual-train
8 modes.

9 Periodic Monitoring: Conduct of ammonia concentration readings as described in Sections 3.1
10 and 3.2 of NOC approval order DE05NWP-001 (2/18/2005), and applying
11 these concentration readings with contemporaneous stack flow rate and
12 temperatures to determine instantaneous mass release rate of ammonia.

13 Test Method: Ammonia sampling and analysis will be in accord with approved
14 alternative sampling procedures including the use of Draeger tubes to
15 measure stack gas concentration of ammonia providing such devices are
16 spanned to appropriately measure the stack gas ammonia concentration.
17 Stack flow rate and temperature will be applied with the ammonia stack
18 gas concentration to report ammonia emission in terms of grams per
19 second.

20 Test Frequency: In order to assess baseline emission concentrations from each exhauster
21 system, emission levels of ammonia will be assessed between 12 and 24
22 hours after initiation of exhauster operation (single train or dual train).
23 Ammonia stack concentrations shall be sampled a minimum of three
24 times.

25 Baseline Assessments Baseline assessments shall be conducted within ninety (90) days of
26 commencement of operations. Should dual exhauster train operation not
27 be required by the Permittee during this ninety (90) day period, assessment
28 of dual train operation emissions shall be conducted on the first occasion
29 of dual train operation which is anticipated to exceed 24 hours duration.

30 Bi-Annual Assessment In order to maintain reasonable assurance of continued compliance with
31 emission limitations from these exhauster systems, bi-annual assessment
32 of ammonia stack emissions will be conducted beginning the second
33 calendar year following completion of single train exhauster operation
34 assessment under Section 3.1 of NOC approval order DE05NWP-001. A
35 minimum of three samples shall be used to assess these emissions.

36 Required Records: Results of emission assessments, baseline and bi-annual emission
37 monitoring results, supporting data and calculations to demonstrate
38 compliance with ammonia limits.

39 State-Only: Yes.

40 Calculation Model: Not applicable.

41

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

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

2 200 Area SST Categorical Waste Retrieval

3 Requirement Citation (WAC or Order Citation): WAC 173-400-040(2), DE05NWP-002
4 (2/18/2005), Rev. 1 (10/12/2005), and 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: Compliance and monitoring shall be met by Tier 3 Visible Emissions
10 Survey requirements of the Hanford AOP, Section 2.1. Should visible
11 emissions be observed which are not solely attributable to water
12 condensation, compliance shall be met by performing an opacity
13 determination utilizing 40 CFR 60, Appendix A, Method 9, providing that
14 such determination shall not place the visible emission observer in hazard
15 greater than that identified for the general worker.

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

17 Test Frequency: None Specified (as needed for monitoring and compliance)

18 Required Records: Visible emission surveys records in which a visible emission was
19 observed, which are not solely attributable to water condensation; and
20 Method 9 results if conducted.

21 State-Only: No.

22 Calculation Model: Not applicable.

23

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

2 Condition: EMISSION LIMITS

3 Tank ventilation exhauster systems for the 241-C SST farm 100 series tank
4 (241-C-101 through 241-C-112) shall not exceed cumulative flow rates of
5 7,000 ft³/min (at standard temperature and pressure) for three exhausters
6 individually limited to 1,000 ft³/min, 3,000 ft³/min, and 3,000 ft³/min,
7 respectively (at standard temperature and pressure).

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

10 Test Method: Not specified.

11 Test Frequency: None Specified (as needed for monitoring and compliance).

12 Required Records: (1) Records of exhauster system stack flow rates and temperature records.
13 (2) Records of calibration of stack gas flow rate and temperature
14 measurement devices.

15 State-Only: No.

16 Calculation Model: Not applicable.

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

18 Condition: EMISSION LIMITS

19 SST ventilation exhauster systems for the retrieval of wastes other than
20 those of the 241-C tank farm 100 series tanks shall not exceed 1,000
21 ft³/min (at standard temperature and pressure).

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

24 Test Method: Not specified.

25 Test Frequency: None Specified (as needed for monitoring and compliance).

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
28 measurement devices.

29 State-Only: No.

30 Calculation Model: Not applicable.

31

- 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
- 4 below their respective ASIL or Screening Level of Table 1 in Approval
- 5 Order DE05NWP-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
- 8 emission controls found for this project (operation of the tank
- 9 ventilation exhauster systems with moisture de-entrainment, pre-heater,
- 10 and HEPA filtration in service in the treatment train).
- 11 (2) Development and implementation of a sampling and analysis plan
- 12 (SAP) for each tank retrieval. For each retrieval, the SAP shall address
- 13 the emission of a minimum of the three TAPs with the higher potential
- 14 ambient concentration relative to their ASILs of WAC 173-460-150
- 15 and WAC-173-460-160 or relative to their Screening Level of Table 1
- 16 of the Approval Order DE05NWP-002, Rev 2. The TAPs addressed in
- 17 the SAP shall be identified from Table 2 of the Approval Order
- 18 DE05NWP-002, Rev 2, and based upon best engineering judgment and
- 19 most current tank content data. Analytical methods for the analysis
- 20 shall be the United States EPA, OSHA, or NIOSH approved, or by
- 21 approved equivalent method.
- 22 Test Method: Not specified.
- 23 Test Frequency: None specified (as needed for monitoring and compliance).
- 24 Required Records: (1) All monitoring and operations records required to operate and
- 25 maintain the emission control equipment which implements T-BACT
- 26 as required in Periodic Monitoring above.
- 27 (2) SAPs developed for compliance demonstration as described in
- 28 Periodic Monitoring above.
- 29 (3) Laboratory analysis result summaries of any samples undertaken after
- 30 the effective date of the Approval Order DE05NWP-002, Rev 2, from
- 31 SST tank farm tank headspaces or SST ventilation system exhaust
- 32 which are examined for organic species or other TAPs.
- 33 State-Only: Yes.
- 34 Calculation Model: Not applicable.
- 35

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

2 Condition: REPORTING
3 Visible emission surveys, conducted pursuant to Compliance
4 Demonstration requirement 1.3.2, per NOC approval DE05NPW-002, and
5 a report of the maintenance conducted to maintain the subject exhaust
6 system's T-BACT operations.

7 Periodic Monitoring: The reporting condition shall be submitted 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: 10/12/2005 (DE05NWP-002, Rev. 1)**

16 Condition: REPORTING
17 Identification of any TAP not previously identified within the Notice of
18 Construction Application or Supplement emissions estimates as defined in
19 Table 2, per NOC approval DE05NWP-002R1, shall be submitted to
20 Ecology within ninety (90) days of completion of laboratory analyses
21 which verify emissions of that toxic air pollutant from the project.

22
23 Periodic Monitoring: The reporting condition shall be submitted to Ecology within ninety (90)
24 days of completion of laboratory analyses which verify emissions of that
25 toxic air pollutant from the project.

26 Test Method: Not specified.

27 Test Frequency: Not applicable.

28 Required Records: Laboratory analysis.

29 State-Only: Yes.

30 Calculation Model: Not applicable.

31

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

2 Condition: REPORTING

3 An annual schedule (Federal fiscal year basis) of anticipated operations
4 and installations of exhauster systems.

5 Periodic Monitoring: The reporting condition shall be submitted by November first of each year.

6 Test Method: Not specified.

7 Test Frequency: Not applicable.

8 Required Records: Annual Schedule

9 State-Only: Yes.

10 Calculation Model: Not applicable.

11

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

13 Condition: OPERATIONAL NOTICE

14 Notification shall be made at least ten (10) days prior to initial operation
15 of any exhauster system covered by this ORDER DE05NWP-002 when
16 installed to ventilate a tank not previously actively ventilated under this
17 ORDER.

18 Periodic Monitoring: Not applicable.

19 Test Method: Not specified.

20 Test Frequency: Not applicable.

21 Required Records: Not applicable.

22 State-Only: Yes.

23 Calculation Model: Not applicable.

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Discharge Point E-85 Fuel Station

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

Requirement Citation (WAC or Order Citation): DE06NWP-001 (4/17/2006)

Condition Approval 4/17/2006

Condition: Emission Limits

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

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

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

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

Test Frequency: Not applicable (maintenance records).

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

State-Only No:

Calculation Model Not applicable.

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

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

4 Requirement Citation (WAC or Order Citation): DE07NWP-001

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

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

8 Periodic Monitoring: Tier 2 Visible Emissions Survey requirements of the Hanford Air
9 Operating Permit if visible emissions from training operations materials,
10 other than those from “fog machines,” are exhibited outside training
11 structures.

12 Test Method: Tier 2 Visible Emissions Survey requirements Section 2.1 of the Hanford
13 AOP, Attachment 1 and/or EPA Method 9 of 40 CFR 60, Appendix A.

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

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

17 State-Only: No.

18 Calculation Model: Not applicable.

19 **Condition Approval: 4/19/2007**

20 Condition: Fugitive emissions from training operations shall be minimized. [WAC
21 173-400-040(4)(a)]

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

25 Test Method: Not specified.

26 Test Frequency: Not applicable.

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

30 State-Only: No

31 Calculation Model: Not applicable.

32

1 **Condition Approval:4/19/2007**

2 Condition: Particulate Matter emissions from training materials shall not exceed
3 1,500 pounds per year (lb/yr). [WAC 173-400-110(5)(b)]

4 Periodic Monitoring: Material record keeping.

5 Test Method: Not applicable.

6 Test Frequency: Not applicable.

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

9 State-Only: No.

10 Calculation Model: Not applicable.

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

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

14 Periodic Monitoring: Materials record keeping.

15 Test Method: Not applicable.

16 Test Frequency: Not applicable.

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

19 State-Only: No.

20 Calculation Model: Not applicable.

21 **Condition Approval:4/19/2007 (DE07NWP-001) and 7/31/2007 (Amendment 1)**

22 Condition: Emissions of all TAPs, as identified in Table 1 of NOC Order DE07NWP-
23 001 (4/19/2007) and Amendment 1 (7/31/2007), or newly identified, shall
24 be below their respective SQERs. [WAC 173-460-150)]

25 Periodic Monitoring: Materials record-keeping.

26 Test Method: Not applicable.

27 Test Frequency: Not applicable.

28 Required Records: Material balance records which detail materials receipt and disposal with a
29 summary assessment of losses, calculated each calendar quarter. Emission
30 of any TAP exceeding SQERs detailed in Table 1 of Order DE07NWP-001
31 shall be reported to Ecology in accord with WAC 173-400-107.
32 Identification of any TAP not previously identified within Order
33 DE07NWP-001, shall be submitted to Ecology within 90 days of initiation
34 of use in training with an estimate of annual emissions.

35 State-Only: Yes.

36 Calculation Model: Not applicable.

37

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

2 100 Area, Emergency Diesel Engines

3 Requirement Citation (WAC or Order Citation): DE07NWP-002

4 **Condition Approval 6/27/2007**

5 Condition: (1) Visible emissions will not exceed 20 % during acceleration mode
6 [WAC 173-400-040(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
10 acceleration or lugging mode. [WAC 173-400-040(2)(a), 40 CFR
11 §60.4205(b), and 40 CFR §89.113(a)(3)].

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

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

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

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

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

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

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

28 State-Only No.

29 Calculation Model Not applicable.
30

1 Condition Approval 6/27/2007

2 Condition: Emissions of Polyaromatic Hydrocarbons (PAHs) will not result in
3 ambient 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
6 42, Table 3.3-2, for engines less than 600 HP, and AP-42, Table 3.4-4, for
7 engines 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
11 with cumulative operating hour calculations, retained for a minimum of 36
12 months. AP 42, fifth edition, shall be used for the calculation.

13 State-Only Yes.

14 Calculation Model Not applicable.

15 Condition Approval 6/27/2007

16 Condition: Emissions of Toxic Air Pollutants (TAPs), as identified in the table below,
17 will 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

18 Periodic Monitoring: Compliance will be demonstrated by calculation of the sum of TAP
19 emissions from all engines employing air pollution emission factors of AP
20 42, Table 3.3-2, for engines less than 600 HP, and AP-42, Table 3.4-3, for
21 engines 600 HP and higher.

22 Test Method: Not applicable.

23 Test Frequency: Not applicable.

24 Required Records: Calculations and dispersion analyses prepared semiannually in concert
25 with cumulative operating hour calculations, retained for a minimum of 36
26 months. AP 42, fifth edition, shall be used for the calculation. Table 3.4-
27 3 of AP-42 does not estimate emissions of 1,3-Butadiene for larger
28 engines. An emission factor of zero shall be applied to 1,3-Butadiene for
29 engines 600 HP or larger.

30 State-Only Yes.

31 Calculation Model Not applicable.

1 **Condition Approval 6/27/2007**

2 Condition: Emissions of sulfur dioxide will not exceed two tons per year
3 [WAC 173-400-110(5)(b)].

4 Periodic Monitoring: Compliance will be demonstrated by use of fuel containing (1) no
5 greater than 0.05 weight percent sulfur (500 parts per million by
6 weight) from installation to May 30, 2010 [40 CFR §60.4207(a),
7 40 CFR §80.510(a)], and (2) no greater than 0.0015 weight percent
8 sulfur (15 parts per million by weight) on and after June 1, 2010
9 [40 CFR §60.4207(b), 40 CFR §80.510(b)].

10 Test Method: Not applicable.

11 Test Frequency: Not applicable.

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

16 State-Only No.

17 Calculation Model Not applicable.

18

- 1 **Condition Approval 6/27/2007**
- 2 **Condition:** Emissions of Nitrogen Oxides (NO_x) and Non-methane Hydrocarbons
- 3 (NMHC) will not exceed 14.2 tons per year. [WAC 173-400-091, AP 42
- 4 emission factors for engines in NOC application operating 500 hours per
- 5 year].
- 6 Emissions of Carbon Monoxide (CO) will not exceed 5 tons per year.
- 7 [WAC 173-400-110(5)(b)].
- 8 Emissions of particulate matter (PM) will not exceed 0.75 tons per year.
- 9 [WAC 173-400-110(5)(b)].
- 10 **Periodic Monitoring:** Compliance will be demonstrated by
- 11 (A) Engine Limitation
- 12 (1) Installation of engines certified to meet emission limitations of 40
- 13 CFR §89 [40 CFR §60.4211(c)], and
- 14 (2) Installation of one engine rated no higher than 450 horsepower
- 15 (HP) and two engines rated no higher than 900 HP each; and
- 16 (B) Operational Limitation
- 17 (1) All recommended operation and equipment maintenance
- 18 provisions supplied by the manufacturer(s) of the engine(s) will be
- 19 current [40 CFR §60.4211(a)],
- 20 (2) Operational monitoring in accord with installed non-resettable hour
- 21 meter on each engine [40 CFR §60.4209(a)],
- 22 (3) Operational hours of use for each engine, for purposes of
- 23 maintenance checks and readiness testing shall not exceed 100 hours
- 24 per year unless approved by the Administrator of the United States
- 25 Environmental Protection Agency [40 CFR §60.4211(e)], and
- 26 (4) Operational hours of use during emergency conditions shall not be
- 27 limited provided maintenance of records of emergency use are
- 28 consistent with Required Records below.
- 29 **Test Method:** Not applicable.
- 30 **Test Frequency:** Not applicable.
- 31 **Required Records:** (1) Manufacturer’s engine certifications,
- 32 (2) Maintenance records, and
- 33 (3) Records of cumulative operating hours for each engine, calculated
- 34 semiannually, retained for a minimum of 36 months
- 35 **State-Only** No.
- 36 **Calculation Model** Not applicable.
- 37

1 **Condition Approval 6/27/2007**

2 Condition: Emission rates of installed engines shall not exceed values identified in the
 3 table 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
- 6 40 CFR §60.4205(b) for the same model year and maximum engine
- 7 rating [40 CFR §60.4211(c)].
- 8 (2) Operating and maintaining the stationary compression ignition internal
- 9 combustion engines and control devices according to the
- 10 manufacturer's written instructions or procedures developed by the
- 11 owner or operator that are approved by the engine manufacturer [40
- 12 CFR §60.4211(a)].
- 13 (3) Installing and configuring the engines according to manufacturer
- 14 specifications [40 CFR §60.4211(c)].
- 15 (4) Maintaining records of engine certification as detailed in the Required
- 16 Records below.

17 Test Method: Not applicable.

18 Test Frequency: Not applicable.

- 19 Required Records:
- 20 (1) Manufacturer's engine certifications.
 - 21 (2) Records of cumulative operating hours for each engine, calculated
 - 22 semi-annually, will be retained for a minimum of 36 months.
 - 23 (3) Records of emergency use operational duration and the basis of the
 - 24 emergency.

25 State-Only No.

26 Calculation Model Not applicable.

1 **Discharge Point WTP Heaters and Dehumidifiers**

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

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

5 **Condition Approval 11/21/2007**

6 Condition: Emission Limits

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

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

11 Periodic Monitoring: Compliance shall be monitored by:

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

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

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

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

38 Test Frequency: Not specified.

39 Required Records: (1) VE Surveys and/or EPA Method 9 of 40 CFR 60, Appendix A, results.

40 (2) Maintenance records for any diesel-fired heater removed from service.

41 State-Only No.

42 Calculation Model Not applicable.

1 **Condition Approval 11/21/2007**

- 2 Condition: Emission Limits
- 3 Sulfur Oxides (SO_x) emission shall not exceed 2.0 tons per year [WAC
- 4 173-400-110(5)(b)].
- 5 Periodic Monitoring: Compliance shall be monitored by:
- 6 (1) Combustion of distillate fuel oil No. 2 with a sulfur content no greater
- 7 than 0.0015 wt percent (15 ppm) for diesel heaters.
- 8 (2) Combustion of no greater than 933,100 gallons of distillate fuel oil per
- 9 year, based upon a daily rolling summation.
- 10 Test Method: Record-keeping.
- 11 Test Frequency: Per daily rolling summation and/or fuel shipment.
- 12 Required Records: Fuel analysis data and consumption rates, including supporting data and
- 13 calculations.
- 14 State-Only No.
- 15 Calculation Model Not specified.

16 **Condition Approval 11/21/2007**

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

39

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

2 300 Area Building 339A, Emergency Diesel Engine

3 Requirement Citation (WAC or Order Citation): DE08NWP-001

4 **Condition Approval 9/24/2008**

5 Condition: Visible emissions will not exceed 20 %. [WAC 173-400-040(2)].

6 Periodic Monitoring: Use Tier 1 Visible Emission Survey (Section 2.1 of AOP Attachment 1),
7 unless otherwise specified.

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

10 Test Frequency: The engine authorized by this order shall be surveyed daily for visible
11 emissions during emergency-use exceeding, or anticipated to exceed, eight
12 hours duration.

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

15 State-Only No.

16 Calculation Model Not applicable.

17

- 1 **Condition Approval 9/24/2008**
- 2 **Conditions:** Emissions of Nitrogen Oxides (NO_x) will not exceed 1.25 tons per year.
3 [WAC 173-400-091 operating 500 hours per year].
- 4 Emissions of Carbon Monoxide (CO) will not exceed 5 tons per year.
5 [WAC 173-400-110(5)(b)].
- 6 Emissions of particulate matter (PM) will not exceed 0.75 tons per year.
7 [WAC 173-400-110(5)(b)].
- 8 Emissions of volatile organic compounds (VOC) will not exceed 2 tons
9 per year. [WAC 173-400-110(5)(b)].
- 10 **Periodic Monitoring:** Compliance will be demonstrated by
- 11 (A) Engine Limitation
- 12 (1) Installation of one engine rated no higher than 350 horsepower
13 (HP).
- 14 (B) Operational Limitation
- 15 (1) Operational monitoring in accord with installed non-resettable hour
16 meter on the approved engine [40 CFR §60.4209(a)],
- 17 (2) Operational hours of use for the engine, for purposes of
18 maintenance checks and readiness testing shall not exceed 100
19 hours per year unless approved by the Administrator of the United
20 States Environmental Protection Agency [40 CFR §60.4211(e)],
- 21 (3) Operation of the engine, for purposes other than emergency use or
22 maintenance checks and readiness testing, is prohibited [40 CFR
23 §60.4211(e)], and
- 24 (4) Operational hours of use during emergency conditions shall not be
25 limited provided records of emergency use are retained as defined
26 in Approval Condition 1.6 of the ORDER DE08NWP-001.
- 27 **Test Method:** Not applicable.
- 28 **Test Frequency:** Not applicable.
- 29 **Required Records:** (1) Manufacturer's engine data,
30 (2) Maintenance records, and
31 (3) Records of cumulative operating hours for the engine (36 months
32 maximum), recorded annually.
- 33 **State-Only** No.
- 34 **Calculation Model** Not applicable.
- 35

1 Condition Approval 9/24/2008

2 Condition: Emissions of Toxic Air Pollutants (TAPs), as identified in the table below,
3 will 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

4 Periodic Monitoring: Compliance will be demonstrated by calculation of the sum of TAP
5 emissions from the engine employing air pollution emission factors of AP
6 42, Table 3.3-2, for engines less than 600 HP.

7 Test Method: Not applicable.

8 Test Frequency: Not applicable.

9 Required Records: Calculations and dispersion analyses calculated annually.

10 State-Only No.

11 Calculation Model Not applicable.

12 Condition Approval 9/24/2008

13 Condition: Emissions of Polyaromatic Hydrocarbons (PAHs) will not result in
14 ambient concentrations exceeding $4.8E-04 \mu\text{g}/\text{m}^3$ [WAC 173-460-080(3)].

15 Periodic Monitoring: Compliance will be demonstrated by calculation of the sum of PAH TAP
16 emissions from the engine employing air pollution emission factors of AP
17 42, Table 3.3-2, for engines less than 600 HP. Dispersion analysis shall
18 demonstrate that calculated emissions comply with the standard of this
19 approval condition.

20 Test Method: Not applicable.

21 Test Frequency: Not applicable.

22 Required Records: Calculations and dispersion analyses calculated annually.

23 State-Only No.

24 Calculation Model Not applicable.

25

1 **Condition Approval 9/24/2008**

2 Condition: Emissions of sulfur dioxide will not exceed two tons per year
3 [WAC 173-400-110(5)(b)].

4 Periodic Monitoring: Compliance will be demonstrated by use of fuel containing (1) no
5 greater than 0.05 weight percent sulfur (500 parts per million by
6 weight) from installation to May 31, 2010 [40 CFR §60.4207(a),
7 40 CFR §80.510(a)], and (2) no greater than 0.0015 weight percent
8 sulfur (15 parts per million by weight) on and after June 1, 2010
9 [40 CFR §60.4207(b), 40 CFR §80.510(b)].

10 Test Method: Not applicable.

11 Test Frequency: Not applicable.

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

16 State-Only No.

17 Calculation Model Not applicable.

18

1 **Condition Approval 9/24/2008**

2 Condition: Emission rates of installed engine shall not exceed values identified in the
 3 table 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
 6 of 40 CFR §60.4205(a) for the same model year and maximum engine
 7 rating [40 CFR §60.4211(b)(3) with emission standards expressed in
 8 Table 1 to NSPS III].
- 9 (2) Operating and maintaining the stationary compression ignition internal
 10 combustion engines and control devices according to the
 11 manufacturer’s written instructions or procedures developed by the
 12 owner or operator that are approved by the engine manufacturer [40
 13 CFR §60.4211(a)].
- 14 (3) Maintaining records of engine manufacturing data as detailed in the
 15 Required 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
 19 engine.
- 20 (2) Maintenance records for Periodic Monitoring (2) above shall be
 21 retained for 60 months minimum.
- 22 (3) Records of cumulative operating hours for the engine, recorded
 23 annually, will be retained for 36 months maximum.
- 24 (4) Records of emergency use operational duration and the basis of the
 25 emergency.

26 State-Only No.

27 Calculation Model Not applicable.

28

1 **Discharge Point 241-AP, 241-SY, and 241-AY/AZ Ventilation**

2 200E Area, Tank Farms - Ventilation

3 Requirement Citation (WAC or Order Citation): NOC Approval Order DE11NWP-001
4 (11/30/2011)

5 **Condition Approval 11/30/2011**

6 Condition: EMISSION LIMITS

7 Visible emissions will not exceed five (5)% opacity. [WAC 173-400-
8 040(2)].

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

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

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

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

25 State-Only No.

26 Calculation Model Not applicable.

27

1 **Condition Approval 11/30/2011**

2 Condition: EMISSION LIMITS
3 VOC emissions shall not exceed 3.1 tons per year for the 241-SY system.
4 Emissions of VOCs are based upon the operation of two tanks being
5 mixed at the tank farm.
6 Periodic Monitoring: Compliance with this condition shall be demonstrated by stack gas flow
7 and temperature measurement.
8 Test Method: VOC stack sampling and calculation as identified in the DE11NWP-001
9 Approval Condition 3.0.
10 Test Frequency: Annually.
11 Required Records: (1) Records of exhauster system stack flow rates and temperature records.
12 (2) Records of calibration of stack flow rate and temperature
13 measurement devices.
14 (3) Laboratory analysis result summaries from tank headspaces or
15 primary tank ventilation system exhaust for VOCs.
16 State-Only No.
17 Calculation Model Not applicable.

18 **Condition Approval 11/30/2011**

19 Condition: EMISSION LIMITS
20 VOC emissions shall not exceed 3.8 tons per year for 241-AP system.
21 Emissions of VOCs are based upon the operation of two tanks being
22 mixed at the tank farm.
23 Periodic Monitoring: Compliance with this condition shall be demonstrated by stack gas flow
24 and temperature measurement.
25 Test Method: VOC stack sampling and calculation as identified in the DE11NWP-001
26 Approval Condition 3.0.
27 Test Frequency: Annually.
28 Required Records: (1) Records of exhauster system stack flow rates and temperature records.
29 (2) Records of calibration of stack flow rate and temperature
30 measurement devices.
31 (3) Laboratory analysis result summaries from tank headspaces or
32 primary tank ventilation system exhaust for VOCs.
33 State-Only No.
34 Calculation Model Not applicable.

35

1	Condition Approval 11/30/2011	
2	Condition:	EMISSION LIMITS
3		VOC emissions shall not exceed 3.2 tons per year for 241-AY/AZ system.
4		Emissions of VOCs are based upon the operation of two tanks being
5		mixed at the tank farm.
6	Periodic Monitoring:	Compliance with this condition shall be demonstrated by stack gas flow
7		and temperature measurement.
8	Test Method:	VOC stack sampling and calculation as identified in the DE11NWP-001
9		Approval Condition 3.0.
10	Test Frequency:	Annually.
11	Required Records:	(1) Records of exhauster system stack flow rates and temperature records.
12		(2) Records of calibration of stack flow rate and temperature
13		measurement devices.
14		(3) Laboratory analysis result summaries from tank headspaces or
15		primary tank ventilation system exhaust for VOCs.
16	State-Only	No.
17	Calculation Model	Not applicable.
18		

1 **Condition Approval 11/30/2011**

2 Condition: EMISSION LIMITS

3 All TAPs, as shown in Table 2 of Approval Order DE11NWP-001, shall
4 be below their respective ASIL or approved through a Second Tier review.

5 Periodic Monitoring: Compliance with this condition shall be met by:

6 (1) Development and implementation of an annual sampling and analysis
7 plan (SAP) for each exhauster system to meet requirements of DE11NWP-
8 001 Section 3.3. Each SAP shall address the emission of a minimum of
9 three TAPs with the highest potential ambient concentration relative to
10 their ASILs of WAC 173-460-150 in addition to dimethyl mercury. The
11 TAPs addressed in the SAP shall be identified from DE11NWP-001 Table
12 2 and based on engineering judgment and most current tank content data.
13 Analytical methods for the analyses shall be the EPA, Occupational Safety
14 and Health Administration (OSHA), or National Institute for Occupational
15 Safety and Health (NIOSH) approved, or by approved equivalent method.

16 (2) Stack sampling for each exhauster system as described in Section 3 of
17 the DE11NWP-001 for TAPs, and applying these concentration readings
18 with contemporaneous stack flow rates and temperatures to determine the
19 mass release rates of these TAPs and their respective release rate
20 averaging times per WAC 173-460-150. Identification of any TAP not
21 previously identified shall be submitted to Ecology within ninety (90) days
22 of laboratory analyses which verify emissions of that TAP. Approved TAP
23 emissions per ventilation system are detailed in DE11NWP-001 Table 3
24 for the 241-SY ventilation system, DE11NWP-001 Table 4 for the 241-AP
25 ventilation system, and DE11NWP-001 Table 5 for the 241-AY/AZ
26 ventilation system.

27 (3) Operating the exhauster systems in accordance with BACT and
28 tBACT emission controls in place. These controls are operation of each
29 primary tank ventilation exhauster system not exceeding the maximum
30 ventilation rates shown in the DE11NWP-001 Table 1 with a moisture de-
31 entrainer, heater, pre-filters, and a two-stage high Efficiency Particulate
32 Air (HEPA) filtration system in service in each treatment train.

33 Test Method: Stack sampling and calculations identified in the DE11NWP-001 Section
34 3.3.

35 Test Frequency: Annually.

36 Required Records: Records shall be organized in a readily accessible manner and cover a
37 minimum of the most recent sixty (60) month period. The records include:

38 (1) Records of exhauster system stack flow rates and temperature records.

39 (2) Records of calibration of stack flow rate and temperature
40 measurement devices.

41 (3) Emission monitoring results required in DE11NWP-001 Section 3.0

42 (4) Supporting data and calculations to demonstrate compliance as
43 detailed in DE11NWP-001 Condition 1.4.4

- 1 (5) Laboratory analysis result summaries from tank headspaces or
- 2 primary tank ventilation system exhaust for TAPs.
- 3 (6) Documentation and record-keeping of BACT and tBACT compliance
- 4 of emission controls
- 5 State-Only No.
- 6 Calculation Model Not applicable.
- 7 **Condition Approval 11/30/2011**
- 8 Condition: EMISSION LIMITS
- 9 Ammonia emissions shall not exceed 58.1pounds per day for 241-SY
- 10 system.
- 11 Periodic Monitoring: Conduct ammonia concentration readings as described in in section 3.1.1
- 12 and 3.4 of NOC Approval Order DE11NWP-001, and applying these
- 13 concentration readings with contemporaneous stack flow rate and
- 14 temperatures to determine mass release rate of ammonia.
- 15 Test Method: Baseline assessment of ammonia stack concentrations shall be sampled a
- 16 minimum of three times within ninety (90) days of commencement of
- 17 operations. Ammonia sampling and analysis will be in accord with
- 18 approved alternative sampling procedures including the use of Draeger
- 19 tubes to measure stack gas concentration of ammonia providing such
- 20 devices are spanned to appropriately measure the stack gas ammonia
- 21 concentration. Stack flow rate and temperature will be applied with the
- 22 ammonia stack gas concentration to report ammonia emission in terms of
- 23 pounds per day.
- 24 Test Frequency: Baseline Assessments Baseline assessments shall be conducted within
- 25 ninety (90) days of commencement of operations. Results of baseline
- 26 emission assessments shall be submitted to Ecology within ninety (90)
- 27 days of completion of such assessment.
- 28 Quarterly Assessment In order to maintain reasonable assurance of
- 29 continued compliance with emission limitations from these exhauster
- 30 systems, quarterly assessment of ammonia stack emissions will be
- 31 conducted according to DE11NWP-001 Section 3.1.1. A minimum of
- 32 three samples shall be used to assess these emissions.
- 33 Required Records: Results of emission assessments, baseline and quarterly emission
- 34 monitoring results, supporting data and calculations to demonstrate
- 35 compliance with ammonia limits.
- 36 State-Only No.
- 37 Calculation Model Not applicable.
- 38

- 1 **Condition Approval 11/30/2011**
- 2 Condition: EMISSION LIMITS
- 3 Ammonia emissions shall not exceed 71.9 pounds per day for 241-AP
- 4 system.
- 5 Periodic Monitoring: Conduct ammonia concentration readings as described in in section 3.1.1
- 6 and 3.4 of NOC Approval Order DE11NWP-001, and applying these
- 7 concentration readings with contemporaneous stack flow rate and
- 8 temperatures to determine mass release rate of ammonia.
- 9 Test Method: Baseline assessment of ammonia stack concentrations shall be performed
- 10 a minimum of three times within ninety (90) days of commencement of
- 11 operations . Ammonia sampling and analysis will be in accord with
- 12 approved alternative sampling procedures including the use of Draeger
- 13 tubes to measure stack gas concentration of ammonia providing such
- 14 devices are spanned to appropriately measure the stack gas ammonia
- 15 concentration. Stack flow rate and temperature will be applied with the
- 16 ammonia stack gas concentration to report ammonia emission in terms of
- 17 pounds per day.
- 18 Test Frequency: Baseline Assessments Baseline assessments shall be conducted within
- 19 ninety (90) days of commencement of operations. Results of baseline
- 20 emission assessments shall be submitted to Ecology within ninety (90)
- 21 days of completion of such assessment.
- 22 Quarterly Assessment In order to maintain reasonable assurance of
- 23 continued compliance with emission limitations from these exhauster
- 24 systems, quarterly assessment of ammonia stack emissions will be
- 25 conducted according to DE11NWP-001 Section 3.1.1. A minimum of
- 26 three samples shall be used to assess these emissions.
- 27 Required Records: Results of emission assessments, baseline and quarterly emission
- 28 monitoring results, supporting data and calculations to demonstrate
- 29 compliance with ammonia limits.
- 30 State-Only No.
- 31 Calculation Model Not applicable.
- 32

1	Condition Approval 11/30/2011	
2	Condition:	EMISSION LIMITS
3		Ammonia emissions shall not exceed 60.8 pounds per day for 241-AY/AZ
4		system.
5	Periodic Monitoring:	Conduct ammonia concentration readings as described in in section 3.1.1
6		and 3.4 of NOC Approval Order DE11NWP-001, and applying these
7		concentration readings with contemporaneous stack flow rate and
8		temperatures to determine instantaneous mass release rate of ammonia.
9	Test Method:	Baseline assessment of ammonia stack concentrations shall be performed
10		a minimum of three times within ninety (90) days of commencement of
11		operations . Ammonia sampling and analysis will be in accord with
12		approved alternative sampling procedures including the use of Draeger
13		tubes to measure stack gas concentration of ammonia providing such
14		devices are spanned to appropriately measure the stack gas ammonia
15		concentration. Stack flow rate and temperature will be applied with the
16		ammonia stack gas concentration to report ammonia emission in terms of
17		pounds per day.
18	Test Frequency:	<u>Baseline Assessments</u> Baseline assessments shall be conducted within
19		ninety (90) days of commencement of operations. Results of baseline
20		emission assessments shall be submitted to Ecology within ninety (90)
21		days of completion of such assessment.
22		<u>Quarterly Assessment</u> In order to maintain reasonable assurance of
23		continued compliance with emission limitations from these exhauster
24		systems, quarterly assessment of ammonia stack emissions will be
25		conducted according to DE11NWP-001 Section 3.1.1 . A minimum of
26		three samples shall be used to assess these emissions.
27	Required Records:	Results of emission assessments, baseline and quarterly emission
28		monitoring results, supporting data and calculations to demonstrate
29		compliance with ammonia limits.
30	State-Only	No.
31	Calculation Model	Not applicable.
32		

1 **Condition Approval 11/30/2011**

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

Project Farm Ventilation Rates

Tank Farm(s)	Normal Operations	Maximum Operations
241-SY	1,360 scfm	2,500 scfm
241-AP	1,500 scfm	3,000 scfm
241-AY/AZ	1,500 scfm	3,000 scfm
scfm = standard cubic foot per minute, 1 atmosphere pressure at 20°C		

8 Periodic Monitoring: Stack gas flow and temperature measurement
 9 Frequency: Annually.
 10 Test Method: None Specified.
 11 Required Records: Records of calibration of stack gas flow rate and temperature measurement
 12 devices.
 13 Records of exhaust system stack flow rate and temperature measurements.
 14 State-Only No.
 15 Calculation Model Not applicable.

16 **Condition Approval 11/30/2011**

17 Condition: OPERATIONAL LIMITS
 18 No more than two of the three tanks in the 241-SY Tank Farm (241-SY-
 19 101 through 241-SY-103) shall be under active mixing and Waste Feed
 20 Delivery operations at any one time. Waste Feed Delivery operations are
 21 defined as those which mix and transfer waste, including transfers to the
 22 Waste Treatment and Immobilization Plant.

23 Periodic Monitoring: Compliance and monitoring of this condition shall be demonstrated by
 24 operational record keeping of Waste Feed Delivery operations recorded
 25 into operational records sufficient to determine onset and cessation of such
 26 operations for each tank.
 27 Test Method: Not specified
 28 Test Frequency: Not applicable.
 29 Required Records: Operational records
 30 State-Only No.
 31 Calculation Model Not applicable.
 32

1 **Condition Approval 11/30/2011**

2 Condition: OPERATIONAL LIMITS

3 No more than two of the eight tanks in the 241-AP Tank Farm (241-AP-
4 101 through 241-AP-108) shall be under active mixing and Waste Feed
5 Delivery operations at any one time. Waste Feed Delivery operations are
6 defined as those which mix and transfer waste, including transfers to the
7 Waste Treatment and immobilization Plant.

8 Periodic Monitoring: Compliance and monitoring of this condition shall be demonstrated by
9 operational record keeping of Waste Feed Delivery operations recorded
10 into operational records sufficient to determine onset and cessation of such
11 operations for each tank.

12 Test Method: Not specified

13 Test Frequency: Not applicable.

14 Required Records: Operational records

15 State-Only No.

16 Calculation Model Not applicable.

17 **Condition Approval 11/30/2011**

18 Condition: OPERATIONAL LIMITS

19 No more than two of the four tanks within the 241-AY and 241-AZ Tank
20 Farm (241-AY-101, 241-AY-102, 241AZ-101, and 241-AZ-102) shall be
21 under active mixing and Waste Feed Delivery operations at any one time.
22 Waste Feed Delivery operations are defined as those which mix and
23 transfer waste, including transfers to the Waste Treatment and
24 immobilization Plant.

25 Periodic Monitoring: Compliance and monitoring of this condition shall be demonstrated by
26 operational record keeping of Waste Feed Delivery operations recorded
27 into operational records sufficient to determine onset and cessation of such
28 operations for each tank.

29 Test Method: Not specified

30 Test Frequency: Not applicable.

31 Required Records: Operational records

32 State-Only No.

33 Calculation Model Not applicable.

34

1 **Discharge Point: Lagoon Treatment System**

2 200W Area

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

5 **Condition Approval 2/6/2012**

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

8 Periodic Monitoring: Emission estimation (Condition 3.2 of the NOC).

9 Test Method: Surrogate wastewater sampling identified in the NOC section 3.0.

10 Test Frequency: Annually.

11 Required Records: Results of analyses.

12 State-Only No.

13 Calculation Model Not applicable.

14

1 **Discharge Point 211ED/212ED Diesel Generator**

2 200E Area

3 Requirement Citation (WAC or Order Citation): NOC Approval Order DE12NWP-002
4 (11/19/2012)

5 **Condition Approval 11/19/2012**

6 Condition: Visible emissions will not exceed 20 %. [WAC 173-400-040(2)].

7 Periodic Monitoring: Use Tier 1 Visible Emission Survey (Section 2.1 of AOP Attachment 1),
8 unless otherwise specified.

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

11 Test Frequency: Visible emission surveys conducted a minimum of once per year

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

14 State-Only No.

15 Calculation Model Not applicable.

16 **Condition Approval 11/19/2012**

17 Conditions: Emissions of Non-methane hydrocarbons (NMHC) and Nitrogen Oxides
18 (NO_x) will not exceed 4.0 g/kW-hr.

19 Emissions of Carbon Monoxide (CO) will not exceed 5.0 g/kW-hr.

20 Emissions of particulate matter (PM) will not exceed 0.3 g/kW-hr.

21 Periodic Monitoring: Compliance will be demonstrated by

22 (A) Purchasing an EPA certified engine certified to meet the emission
23 standards for the same model year (2008) and maximum engine power
24 (129 kW).

25 (B) Installing and configuring the engine according to the manufacturer's
26 specifications.

27 (C) Operating and maintaining the engine in accordance with
28 manufacturer's specifications.

29 Test Method: Not applicable.

30 Test Frequency: Not applicable.

31 Required Records: (1) Manufacturer's engine data,
32 (2) Maintenance records, and
33 (3) Manufacturer's instructions

34 State-Only No.

35 Calculation Model Not applicable.

36

1 **Condition Approval 11/19/2012**

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

12

13

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

2 200 Area

3 Requirement Citation (WAC or Order Citation): NOC Approval Order DE12NWP-003
4 (2/6/2013)

5
6 **Condition Approval 2/6/2013**

7 Condition: OPERATIONAL LIMITS

8 Maximum number of units is 10 and maximum accumulated heating
9 capacity is 25 MBtu/hr

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

13 Test Method: Not applicable

14 Test Frequency: Not applicable

15 Required Records: Manufacturer's data for information required to complete Table 1 of the
16 Approval Order

17 State-Only Yes.

18 Calculation Model Not applicable.

19

20 **Condition Approval 2/6/2013**

21 Condition: EMISSION LIMIT

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

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

26 Test Method: Not applicable.

27 Test Frequency: Not applicable.

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

29 State-Only No.

30 Calculation Model Not applicable.

31

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
11 manufacturer's 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
14 Equation 1 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

24 **Condition Approval 2/6/2013**

- 25 Condition: REPORTING
26 Emissions will be compiled into estimates and reported annually,
27 beginning as part of the calendar year 2013 non-radioactive
28 inventory of airborne emissions, pursuant to WAC 173-400-105.
29 Periodic Monitoring: The estimated emissions shall be reported annually.
30 Test Method: Not specified
31 Test Frequency: Not applicable
32 Required Records: Emissions estimates
33 State-Only No
34 Calculation Model: Not applicable
35

1 **Condition Approval 2/6/2013**

- 2 Condition: REPORTING
- 3 Monthly operating hours per unit and cumulative annual operating
- 4 hours on a month-by-month basis will be reported annually,
- 5 beginning as part of the calendar year 2013 non-radioactive
- 6 inventory of airborne emissions, pursuant to WAC 173-400-105.
- 7 Periodic Monitoring: The monthly operating hours and cumulative annual operating
- 8 hours 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

14

15

1 **Discharge Point: 6120 Tent (200 East) (Table 1.5 Engine)**

2 200 East Area, SE corner near 6120 tent

3 Requirement Citation: NSPS Subpart IIII

4

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

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

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

9 Compliance Requirement: Compliance will be determined by operating and maintaining the
10 engine in accordance with the manufacturer's recommendations or
11 instructions.

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

13 (2) Documentation of maintenance performed

14 State-Only No

15 Calculation Model Not applicable.

16

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

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

21 Test Method: Not applicable.

22 Test Frequency: Not applicable.

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

24 State-Only No.

25 Calculation Model Not applicable.

26

- 1 **Discharge Point: 100K Water Treatment Plant (Table 1.5 Engine)**
- 2 100K Water Treatment Plant
- 3 Requirement Citation: NSPS Subpart III
- 4 Condition: (1) Non-methane hydrocarbons (NMHC) and nitrogen oxides (NO_x)
- 5 emission limit of 4.0 g/KW-hr
- 6 (2) Particulate matter emission limit of 0.20 g/KW-hr
- 7 Compliance Requirement: Compliance will be determined by operating and maintaining the
- 8 engine in accordance with the manufacturer's recommendations or
- 9 instructions.
- 10 Required Records: (1) Manufacturer's maintenance or operation manual
- 11 (2) Documentation of maintenance performed
- 12 State-Only No
- 13 Calculation Model Not applicable.
- 14
- 15 Condition: Use of fuel per 40 CFR 60.4207 (b)
- 16 Periodic Monitoring: Compliance will be demonstrated by use of fuel containing no
- 17 greater than 0.0015 weight percent sulfur (15 parts per million by
- 18 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.
- 24
- 25

- 1 **Discharge Point: 385 Building (Table 1.5 engine)**
- 2 385 Building
- 3 Requirement Citation: NSPS Subpart III
- 4 Condition: (1) Non-methane hydrocarbons (NMHC) and nitrogen oxides (NO_x)
- 5 emission limit of 4.0 g/KW-hr
- 6 (2) Particulate matter emission limit of 0.30 g/KW-hr
- 7 Compliance Requirement: Compliance will be determined by operating and maintaining the
- 8 engine in accordance with the manufacturer's recommendations or
- 9 instructions.
- 10 Required Records: (1) Manufacturer's maintenance or operation manual
- 11 (2) Documentation of maintenance performed
- 12 State-Only No
- 13 Calculation Model Not applicable.
- 14
- 15 Condition: Use of fuel per 40 CFR 60.4207 (b)
- 16 Periodic Monitoring: Compliance will be demonstrated by use of fuel containing no
- 17 greater than 0.0015 weight percent sulfur (15 parts per million by
- 18 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.
- 24

- 1 **Discharge Point: 219H Tent and MO-414 (200 east) (Table 1.5 engine)**
- 2 219H Tent and MO-414 (200 East)
- 3 Requirement Citation: NSPS Subpart IIII
- 4 Condition: (1) Non-methane hydrocarbons (NMHC) and nitrogen oxides (NO_x)
- 5 emission limit of 7.5 g/KW-hr
- 6 (2) Carbon monoxide (CO) emission limit of 6.6 g/KW-hr
- 7 (3) Particulate matter emission limit of 0.40 g/KW-hr
- 8 Compliance Requirement: Compliance will be determined by operating and maintaining the
- 9 engine in accordance with the manufacturer's recommendations or
- 10 instructions.
- 11 Required Records: (1) Manufacturer's maintenance or operation manual
- 12 (2) Documentation of maintenance performed
- 13 State-Only: No
- 14 Calculation Mode: Not applicable.
- 15
- 16 Condition: Use of fuel per 40 CFR 60.4207 (b)
- 17 Periodic Monitoring: Compliance will be demonstrated by use of fuel containing no
- 18 greater than 0.0015 weight percent sulfur (15 parts per million by
- 19 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

1 **Discharge Point: North of MO-414 (200 East) 1 of 2 (Table 1.5 engine)**
2 MO-414
3 Requirement Citation: NSPS Subpart III
4 Condition: (1) Non-methane hydrocarbons (NMHC) and nitrogen oxides (NO_x)
5 emission limit of 7.5 g/KW-hr
6 (2) Carbon monoxide (CO) emission limit of 5.5 g/KW-hr
7 (3) Particulate matter emission limit of 0.30 g/KW-hr
8 Compliance Requirement: Compliance will be determined by operating and maintaining the
9 engine in accordance with the manufacturer's recommendations or
10 instructions.
11 Required Records: (1) Manufacturer's maintenance or operation manual
12 (2) Documentation of maintenance performed
13 State-Only: No
14 Calculation Mode: Not applicable.
15
16 Condition: Use of fuel per 40 CFR 60.4207 (b)
17 Periodic Monitoring: Compliance will be demonstrated by use of fuel containing no
18 greater than 0.0015 weight percent sulfur (15 parts per million by
19 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 Mode: Not applicable.
25

1 **Discharge Point: North of MO-414 (200 East) 2 of 2 (Table 1.5 Engine)**
2 MO-414
3 Requirement Citation: NSPS Subpart III
4 Condition: (1) Non-methane hydrocarbons (NMHC) and nitrogen oxides (NO_x)
5 emission limit of 7.5 g/KW-hr
6 (2) Carbon monoxide (CO) emission limit of 5.5 g/KW-hr
7 (3) Particulate matter emission limit of 0.30 g/KW-hr
8 Compliance Requirement: Compliance will be determined by operating and maintaining the
9 engine in accordance with the manufacturer's recommendations or
10 instructions.
11 Required Records: (1) Manufacturer's maintenance or operation manual
12 (2) Documentation of maintenance performed
13 State-Only: No
14 Calculation Mode: Not applicable.
15
16 Condition: Use of fuel per 40 CFR 60.4207 (b)
17 Periodic Monitoring: Compliance will be demonstrated by use of fuel containing no
18 greater than 0.0015 weight percent sulfur (15 parts per million by
19 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 Mode: Not applicable.
25

1 **Discharge Point: WTP MHF South-40 Laydown Critical Equipment Storage**
2 **(Table 1.5 Engine)**

3 WTP MHF South-40 Laydown Critical Equipment Storage

4 Requirement Citation: NSPS Subpart IIII

5 Condition: (1) Non-methane hydrocarbons (NMHC) and nitrogen oxides (NO_x)
6 emission 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: Compliance will be determined by operating and maintaining the
10 engine in accordance with the manufacturer's recommendations or
11 instructions.

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

13 (2) Documentation of maintenance performed

14 State-Only; No

15 Calculation Model: Not applicable.

16

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

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

21 Test Method: Not applicable.

22 Test Frequency: Not applicable.

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

24 State-Only: No.

25 Calculation Model: Not applicable.

26

- 1 **Discharge Point: 2720EA (Table 1.5 Engine)**
2 2720EA
3 Requirement Citation: NSPS Subpart JJJJ
4 Condition: (1) Hydrocarbons (HC) and nitrogen oxides (NO_x) emission limit of 13.4
5 g/kW-hr
6 (2) Carbon monoxide (CO) emission limit of 519 g/kW-hr
7 Compliance Requirement: Compliance will be determined by operating and maintaining the
8 engine in accordance with the manufacturer's recommendations or
9 instructions.
10 Required Records: (1) Manufacturer's maintenance or operation manual
11 (2) Documentation of maintenance performed
12 State-Only: No
13 Calculation Model: Not applicable.
14

- 1 **Discharge Point: Rattle Snake Barricade (Table 1.5 Engine) ⁴**
- 2 Rattle Snake Barricade
- 3 Requirement Citation: NSPS Subpart JJJJ
- 4 Condition: (1) Hydrocarbons (HC) and nitrogen oxides (NO_x) emission limit of
- 5 8 g/kW-hr
- 6 (2) Carbon monoxide (CO) emission limit of 610 g/kW-hr
- 7 Compliance Requirement: Compliance will be determined by operating and maintaining the
- 8 engine in accordance with the manufacturer's recommendations or
- 9 instructions.
- 10 Required Records: (1) Manufacturer's maintenance or operation manual
- 11 (2) Documentation of maintenance performed
- 12 State-Only: No
- 13 Calculation Model: Not applicable.
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- 15

⁴ The planned replacement engine will be subject to the applicable requirements of 40 CFR 60 Subpart JJJJ upon installation, which is expected to occur before the end of CY2013. An AOP Notification of Change Not Requiring Revision with appropriate engine compliance information for the replacement Rattle Snake Barricade engine was submitted to Ecology on July 16, 2013.

This revision is planned to be issued after the end of the CY2013. As a result, the regulatory requirements for this discharge point are based on 40 CFR 60 Subpart JJJJ for the new engine and not based on the current engine which is regulated on 40 CFR 63 Subpart ZZZZ.

- 1 **Discharge Point: 222-SE (Table 1.5 Engine)**
- 2 222-SE
- 3 Requirement Citation: NESHAP Subpart ZZZZ
- 4 Condition: (1) Operate and Maintain the engine in accordance with Manufacturer's
- 5 recommendations or instructions
- 6 (2) Change oil and filter every 500 hours of operation or annually,
- 7 whichever comes first
- 8 (3) Inspect air cleaner every 1,000 hours of operation or annually,
- 9 whichever comes first
- 10 (4) Inspect all hoses and belts every 500 hours of operation or annually,
- 11 whichever comes first, and replace as necessary
- 12 Compliance Requirement: (1) Compliance will be determined by operating and maintaining
- 13 the engine in accordance with the manufacturer's recommendations or
- 14 instructions.
- 15 (2) Compliance will be demonstrated by installation and operation of
- 16 non-resettable hour meter
- 17 Required Records: (1) Manufacturer's maintenance or operation manual
- 18 (2) Hour meter readings
- 19 (3) Documentation of maintenance performed
- 20 State-Only: No
- 21 **Calculation Mode: Not applicable.**

- 1 **Discharge Point: 242-A (Table 1.5 Engine)**
- 2 242-A Evaporator
- 3 Requirement Citation: NESHAP Subpart ZZZZ
- 4 Condition: (1) Operate and Maintain the engine in accordance with Manufacturer's
- 5 recommendations or instructions
- 6 (2) Change oil and filter every 500 hours of operation or annually,
- 7 whichever comes first
- 8 (3) Inspect air cleaner every 1,000 hours of operation or annually,
- 9 whichever comes first
- 10 (4) Inspect all hoses and belts every 500 hours of operation or annually,
- 11 whichever comes first, and replace as necessary
- 12 Compliance Requirement: (1) Compliance will be determined by operating and maintaining
- 13 the engine in accordance with the manufacturer's recommendations or
- 14 instructions.
- 15 (2) Compliance will be demonstrated by installation and operation of
- 16 non-resettable hour meter
- 17 Required Records: (1) Manufacturer's maintenance or operation manual
- 18 (2) Hour meter readings
- 19 (3) Documentation of maintenance performed
- 20 State-Only: No
- 21 Calculation Model: Not applicable.
- 22

1

2 **Discharge Point: 234-5Z (Table 1.5 engine)**

3 234-5Z

4 Requirement Citation: NESHAP Subpart ZZZZ

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,
8 whichever comes first

9 (3) Inspect air cleaner every 1,000 hours of operation or annually,
10 whichever 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: (1) Compliance will be determined by operating and maintaining
14 the engine in accordance with the manufacturer's recommendations or
15 instructions.

16 (2) Compliance will be demonstrated by installation and operation of
17 non-resettable hour meter

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

19 (2) Hour meter readings

20 (3) Documentation of maintenance performed

21 State-Only: No

22 Calculation Model: Not applicable.

- 1 **Discharge Point: 400 Area (Table 1.5 Engine)**
2 400 Area
3 Requirement Citation: NESHAP Subpart ZZZZ
4 Condition: (1) Operate and Maintain the engine in accordance with Manufacturer's
5 recommendations or instructions
6 (2) Change oil and filter every 500 hours of operation or annually,
7 whichever comes first
8 (3) Inspect air cleaner every 1,000 hours of operation or annually,
9 whichever comes first
10 (4) Inspect all hoses and belts every 500 hours of operation or annually,
11 whichever comes first, and replace as necessary
12 Compliance Requirement: (1) Compliance will be determined by operating and maintaining
13 the engine in accordance with the manufacturer's recommendations or
14 instructions.
15 (2) Compliance will be demonstrated by installation and operation of
16 non-resettable hour meter
17 Required Records: (1) Manufacturer's maintenance or operation manual
18 (2) Hour meter readings
19 (3) Documentation of maintenance performed
20 State-Only: No
21 Calculation Model: Not applicable.

- 1 **Discharge Point: 600 Area Fire Station (Building 609A) (Table 1.5 Engine)**
2 600 Area Fire Station (Building 609A)
3 Requirement Citation: NESHAP Subpart ZZZZ
4 Condition: (1) Operate and Maintain the engine in accordance with Manufacturer's
5 recommendations or instructions
6 (2) Change oil and filter every 500 hours of operation or annually,
7 whichever comes first
8 (3) Inspect air cleaner every 1,000 hours of operation or annually,
9 whichever comes first
10 (4) Inspect all hoses and belts every 500 hours of operation or annually,
11 whichever comes first, and replace as necessary
12 Compliance Requirement: (1) Compliance will be determined by operating and maintaining
13 the engine in accordance with the manufacturer's recommendations or
14 instructions.
15 (2) Compliance will be demonstrated by installation and operation of non-
16 resettable hour meter
17 Required Records: (1) Manufacturer's maintenance or operation manual
18 (2) Hour meter readings
19 (3) Documentation of maintenance performed
20 State-Only; No
21 Calculation Model: Not applicable.

- 1 **Discharge Point: 2721E (Table 1.5 Engine)**
2 2721E
3 Requirement Citation: NESHAP Subpart ZZZZ
4 Condition: (1) Operate and Maintain the engine in accordance with Manufacturer's
5 recommendations or instructions
6 (2) Change oil and filter every 500 hours of operation or annually,
7 whichever comes first
8 (3) Inspect air cleaner every 1,000 hours of operation or annually,
9 whichever comes first
10 (4) Inspect all hoses and belts every 500 hours of operation or annually,
11 whichever comes first, and replace as necessary
12 Compliance Requirement: (1) Compliance will be determined by operating and maintaining
13 the engine in accordance with the manufacturer's recommendations or
14 instructions.
15 (2) Compliance will be demonstrated by installation and operation of
16 non-resettable hour meter
17 Required Records: (1) Manufacturer's maintenance or operation manual
18 (2) Hour meter readings
19 (3) Documentation of maintenance performed
20 State-Only: No
21 Calculation Model: Not applicable.

- 1 **Discharge Point: Yakima Barricade (Table 1.5 Engine)**
- 2 Yakima Barricade
- 3 Requirement Citation: NESHAP Subpart ZZZZ
- 4 Condition: (1) Operate and Maintain the engine in accordance with Manufacturer's
- 5 recommendations or instructions
- 6 (2) Change oil and filter every 500 hours of operation or annually,
- 7 whichever comes first
- 8 (3) Inspect air cleaner every 1,000 hours of operation or annually,
- 9 whichever comes first
- 10 (4) Inspect all hoses and belts every 500 hours of operation or annually,
- 11 whichever comes first, and replace as necessary
- 12 Compliance Requirement: (1) Compliance will be determined by operating and maintaining
- 13 the engine in accordance with the manufacturer's recommendations or
- 14 instructions.
- 15 (2) Compliance will be demonstrated by installation and operation of
- 16 non-resettable hour meter
- 17 Required Records: (1) Manufacturer's maintenance or operation manual
- 18 (2) Hour meter readings
- 19 (3) Documentation of maintenance performed
- 20 State-Only: No
- 21 Calculation Model: Not applicable.

- 1 **Discharge Point: 282-B (Table 1.5 Engine)**
2 282-B
3 Requirement Citation: NESHAP Subpart ZZZZ
4 Condition: (1) Operate and Maintain the engine in accordance with Manufacturer's
5 recommendations or instructions
6 (2) Change oil and filter every 500 hours of operation or annually,
7 whichever comes first
8 (3) Inspect air cleaner every 1,000 hours of operation or annually,
9 whichever comes first
10 (4) Inspect all hoses and belts every 500 hours of operation or annually,
11 whichever comes first, and replace as necessary
12 Compliance Requirement: (1) Compliance will be determined by operating and maintaining
13 the engine in accordance with the manufacturer's recommendations or
14 instructions.
15 (2) Compliance will be demonstrated by installation and operation of
16 non-resettable hour meter
17 Required Records: (1) Manufacturer's maintenance or operation manual
18 (2) Hour meter readings
19 (3) Documentation of maintenance performed
20 State-Only: No
21 Calculation Model: Not applicable.

- 1 **Discharge Point: 282-BA (Table 1.5 Engine)**
2 282-BA
3 Requirement Citation: NESHAP Subpart ZZZZ
4 Condition: (1) Operate and Maintain the engine in accordance with Manufacturer's
5 recommendations or instructions
6 (2) Change oil and filter every 500 hours of operation or annually,
7 whichever comes first
8 (3) Inspect air cleaner every 1,000 hours of operation or annually,
9 whichever comes first
10 (4) Inspect all hoses and belts every 500 hours of operation or annually,
11 whichever comes first, and replace as necessary
12 Compliance Requirement: (1) Compliance will be determined by operating and maintaining
13 the engine in accordance with the manufacturer's recommendations or
14 instructions.
15 (2) Compliance will be demonstrated by installation and operation of
16 non-resettable hour meter
17 Required Records: (1) Manufacturer's maintenance or operation manual
18 (2) Hour meter readings
19 (3) Documentation of maintenance performed
20 State-Only: No
21 Calculation Model: Not applicable.

- 1 **Discharge Point: 225BC (Table 1.5 Engine)**
2 225BC
3 Requirement Citation: NESHAP Subpart ZZZZ
4 Condition: (1) Operate and Maintain the engine in accordance with Manufacturer's
5 recommendations or instructions
6 (2) Change oil and filter every 500 hours of operation or annually,
7 whichever comes first
8 (3) Inspect air cleaner every 1,000 hours of operation or annually,
9 whichever comes first
10 (4) Inspect all hoses and belts every 500 hours of operation or annually,
11 whichever comes first, and replace as necessary
12 Compliance Requirement: (1) Compliance will be determined by operating and maintaining
13 the engine in accordance with the manufacturer's recommendations or
14 instructions.
15 (2) Compliance will be demonstrated by installation and operation of
16 non-resettable hour meter
17 Required Records: (1) Manufacturer's maintenance or operation manual
18 (2) Hour meter readings
19 (3) Documentation of maintenance performed
20 State-Only: No
21 Calculation Model: Not applicable.

1 **Discharge Point: TEDF Pump Station 2 (225E) (Table 1.5 Engine)**

2 TEDF Pump Station 2 (225E)

3 Requirement Citation: NESHAP Subpart ZZZZ

4 Condition: (1) Operate and Maintain the engine in accordance with Manufacturer's
5 recommendations or instructions

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

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

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

12 Compliance Requirement: (1) Compliance will be determined by operating and maintaining
13 the engine in accordance with the manufacturer's recommendations or
14 instructions.

15 (2) Compliance will be demonstrated by installation and operation of
16 non-resettable hour meter

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

18 (2) Hour meter readings

19 (3) Documentation of maintenance performed

20 State-Only: No

21 Calculation Model: Not applicable.

22

1 **Discharge Point: WTP MHF South-40 Laydown Entry Gate (Light Tower)**
2 **(Table 1.5 Engine)**

3 WTP MHF South-40 Laydown Entry Gate

4 Requirement Citation: NESHAP Subpart ZZZZ

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,
8 whichever comes first

9 (3) Inspect air cleaner every 1,000 hours of operation or annually,
10 whichever 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: (1) Compliance will be determined by operating and maintaining
14 the engine in accordance with the manufacturer's recommendations or
15 instructions.

16 (2) Compliance will be demonstrated by installation and operation of
17 non-resettable hour meter

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

19 (2) Hour meter readings

20 (3) Documentation of maintenance performed

21 State-Only: No

22 Calculation Model: Not applicable.

1 **Discharge Point: WTP MHF North-10 Laydown Area (Light Tower) 1 of 2**
2 **(Table 1.5 Engine)**

3 WTP MHF North-10 Laydown Area (light tower) 1 of 2

4 Requirement Citation: NESHAP Subpart ZZZZ

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,
8 whichever comes first

9 (3) Inspect air cleaner every 1,000 hours of operation or annually,
10 whichever 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: (1) Compliance will be determined by operating and maintaining
14 the engine in accordance with the manufacturer's recommendations or
15 instructions.

16 (2) Compliance will be demonstrated by installation and operation of
17 non-resettable hour meter

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

19 (2) Hour meter readings

20 (3) Documentation of maintenance performed

21 State-Only: No

22 Calculation Model: Not applicable.

1 **Discharge Point: WTP MHF North-10 Laydown Area (Light Tower) 2 of 2**
2 **(Table 1.5 Engine)**

3 WTP MHF North-10 Laydown Area (light tower) 2 of 2

4 Requirement Citation: NESHAP Subpart ZZZZ

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,
8 whichever comes first

9 (3) Inspect air cleaner every 1,000 hours of operation or annually,
10 whichever 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: (1) Compliance will be determined by operating and maintaining
14 the engine in accordance with the manufacturer's recommendations or
15 instructions.

16 (2) Compliance will be demonstrated by installation and operation of
17 non-resettable hour meter

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

19 (2) Hour meter readings

20 (3) Documentation of maintenance performed

21 State-Only: No

22 Calculation Model: Not applicable.

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**Discharge Point: WTP MHF South-40 Laydown Yard East X-Ray Tent
(Table 1.5 Engine)**

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

Requirement Citation: NESHAP Subpart ZZZZ

Condition: (1) Operate and Maintain the engine in accordance with Manufacturer’s recommendations or instructions

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

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

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

Compliance Requirement: (1) Compliance will be determined by operating and maintaining the engine in accordance with the manufacturer’s recommendations or instructions.

(2) Compliance will be demonstrated by installation and operation of non-resettable hour meter

Required Records: (1) Manufacturer’s maintenance or operation manual

(2) Hour meter readings

(3) Documentation of maintenance performed

State-Only: No

Calculation Model: Not applicable.

1 **Discharge Point: WTP Construction Site Pretreatment Tower Crane**
2 **(Table 1.5 Engine)**

3 WTP Construction Site Pretreatment Tower Crane

4 Requirement Citation: NESHAP Subpart ZZZZ

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,
8 whichever comes first

9 (3) Inspect air cleaner every 1,000 hours of operation or annually,
10 whichever 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: (1) Compliance will be determined by operating and maintaining
14 the engine in accordance with the manufacturer's recommendations or
15 instructions.

16 (2) Compliance will be demonstrated by installation and operation of
17 non-resettable hour meter

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

19 (2) Hour meter readings

20 (3) Documentation of maintenance performed

21 State-Only: No

22 Calculation Model: Not applicable.

1 **Discharge Point: WTP Construction Site High-Level Waste Tower Crane**
2 **(Table 1.5 Engine)**

3 WTP Construction Site High-Level Waste Tower Crane

4 Requirement Citation: NESHAP Subpart ZZZZ

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,
8 whichever comes first

9 (3) Inspect air cleaner every 1,000 hours of operation or annually,
10 whichever 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: (1) Compliance will be determined by operating and maintaining
14 the engine in accordance with the manufacturer's recommendations or
15 instructions.

16 (2) Compliance will be demonstrated by installation and operation of
17 non-resettable hour meter

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

19 (2) Hour meter readings

20 (3) Documentation of maintenance performed

21 State-Only: No

22 Calculation Model: Not applicable.

1 **Discharge Point: WTP Construction Site Building T-14 (Table 1.5 Engine)**

2 WTP Construction Site Building T-14

3 Requirement Citation: NESHAP Subpart ZZZZ

4 Condition: (1) Operate and Maintain the engine in accordance with Manufacturer's
5 recommendations or instructions

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

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

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

12 Compliance Requirement: (1) Compliance will be determined by operating and maintaining
13 the engine in accordance with the manufacturer's recommendations or
14 instructions.

15 (2) Compliance will be demonstrated by installation and operation of
16 non-resettable hour meter

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

18 (2) Hour meter readings

19 (3) Documentation of maintenance performed

20 State-Only: No

21 Calculation Model: Not applicable.

22

1 **1.7 Miscellaneous Emission Units**2 **Table 1.6 Miscellaneous Emission Units**

Discharge Point Number	Requirement Citation	Regulatory Requirement, Emission Limit, or Work Practice Standard
Hanford Site Asbestos Landfill	40 CFR 61.151(a)	(1) Either discharge no visible emissions to the outside air from an inactive waste disposal site subject to this paragraph; or (2) Cover the asbestos-containing waste material with at least 15 centimeters (6 inches) of compacted nonasbestos-containing material, and grow and maintain a cover of vegetation on the area adequate to prevent exposure of the asbestos-containing waste material. In desert areas where vegetation would be difficult to maintain, at least 8 additional centimeters (3 inches) of well-graded, nonasbestos crushed rock may be placed on top of the final cover instead of vegetation and maintained to prevent emissions; or (3) Cover asbestos-containing waste with at least 60 centimeter of compacted nonasbestos-containing material, and maintain to prevent exposure.
	40 CFR 61.151(d)	Notify in writing at least 45 days prior to excavation. If construction will begin on a date other than the one in the original notice, notice of the new date must be provided at least 10 working days in advance. (1) Notice shall contain starting and completion dates. (2) Notice shall contain reason for disturbing the waste. (3) Notice shall contain procedures to be used to control emissions (4) Notice shall contain a location for any temporary storage site and the final disposal site.
	WAC 173-400-040(2)	Permittee is considered to be in compliance if no complaints are forwarded or generated by Ecology.
	WAC 173-400-040(7)	Monitor per Section 2.7, Tier 2.
600 Area Gas Distribution	WAC 173-491-040(4)(b)	All gasoline storage tanks shall be equipped with submerged or bottom fill lines and fittings to vapor balance gasoline vapors with the delivery transport tank.
	WAC 173-491-040(4)(d)	The owner or operator shall not permit the loading of gasoline into a storage tank equipped with vapor balance fittings from a transport tank equipped with vapor balance fittings unless the vapor balance system is attached to the transport tank and operated satisfactorily.
	WAC 173-491-040(6)(d)	Recordkeeping.
	WAC 173-400-040(2)	Permittee is considered to be in compliance if no complaints are forwarded or generated by Ecology.
	WAC 173-400-040(6)	Monitor per Section 2.7, Tier 2.

3

2.0 COMPLIANCE AND PERIODIC MONITORING PROVISIONS

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

2.1 Visible Emission Surveys

Visible emission surveys must be conducted during daylight hours and during periods when the emission unit is operating.

Tier 1

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

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

Part B – This method consists of operating personnel observing visible emissions from the emission unit according to the frequency identified in Table 1.6 of Attachment 1. If the operator observes visible emissions for more than 10 consecutive minutes during the observation period, the cause(s) of the visible emissions will be determined and corrective actions taken as necessary, or a visible determination of opacity will be performed using EPA Method 9 of 40 CFR 60, Appendix A. Records of corrective actions taken to reduce opacity shall be maintained and available for Ecology inspection. Where no frequency is specified, visible emission surveys will be performed a minimum of once per quarter.

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

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

Tier 2

Some emission units are unlikely sources of visible emissions and are not expected to exceed applicable opacity limit based on past operating experience and/or expected process behavior. These can include research and development laboratories, analytical laboratories, gas-fired boilers and engines, and some fossil-fueled combustion units. For these emission units, a visible emission survey will be conducted and the results recorded. If visible emissions from one of these emission units are observed for more than 10 consecutive minutes, an attempt to identify

1 the cause(s) of the visible emissions will be made and those results recorded. The recorded entry
2 also will identify any corrective actions taken and the likely frequency of a future recurrence. If
3 the event is likely to recur, and cannot be demonstrated to consist of water vapor, a determination
4 of opacity will be made using EPA Method 9. The frequency of the visible emission surveys
5 shall be as required in Table 1.6 of Attachment 1 unless the following procedure has been
6 completed satisfactorily. Where no frequency is specified, visible emission surveys will be
7 performed a minimum of once per year.

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

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

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

16 Tier 3

17 Maintain abatement control technology as required in Attachment 2 for that particular emission
18 unit.

19 **2.2 General Standards Complaint Investigations**

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

26 **2.3 Measures to Control Fugitive Emissions and Fugitive Dust**

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

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

1 **2.4 Reserved**2 **2.5 Recordkeeping for Boilers**

3 DOE and the contractor shall maintain appropriate monthly records of the fuel use on each
4 individual boiler. These data, along with the emission factors presented in Ecology Regulatory
5 Order 97NM-138, will be used to determine monthly emission levels for individual boilers, and
6 collectively for the 200 East, 200 West, and 300 Area. If Ecology or the Permittee determines
7 that emission factors different than the factors specified in Regulatory Order 97NM-138 are
8 appropriate, the public will be provided with an opportunity for review. WAC 173-400-115
9 compliance with the standard may be determined based on a certification from the fuel supplier
10 containing the name of the oil supplier and a statement from the oil supplier that the oil complies
11 with the specifications under the definition of distillate oil in 40 CFR 60.41b. An annual report
12 including records of fuel supplier certifications and a certification by the owner or operator that
13 the records of fuel supplier certifications submitted represent all of the fuel combusted during the
14 year. Logs of boiler tuneups and significant boiler maintenance activities will be kept.

15 **2.6 Steam Generating Units Source Tests**

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

23 The following list is an inventory of the larger boilers that were subject to testing (maximum of
24 5 boilers):

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

25

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

26 In 2005 the U.S. Department of Energy Richland Office (DOE-RL) requested the removal of Air
27 Operating Permit compliance testing for the energy-saving fossil fuel fired boilers operated by
28 Johnson Controls, Inc (JCI) since 1998 at the Hanford Site. JCI conducted the initial air
29 compliance test in 1998, and the first 5-year follow-up test in 2003. Both tests demonstrated that
30 the emissions were within the limits stated in the Notice of Construction (NOC) and Air
31 Operating Permit (AOP). It is obvious that the same compliance can be maintained by
32 continuously using low sulfur fuel and implementing good combustion practices. Ecology
33 approved the request of eliminating future 5-year compliance tests on June 15, 2005. The

1 emissions will be within the NOC and AOP limits as long as JCI continues to use low sulfur fuel
 2 and maintain good combustion practice and maximum achievable control technology (MACT)
 3 standards.

4 **2.7 SO₂ Emissions Compliance**

5 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

6 Tier 2: Other Significant Emission Units:

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

10 **2.8 Visible Emissions Enforceability**

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

14 **2.9 SO₂ Enforceability**

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

16

1 **3.0 RECORDKEEPING**

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

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

9 **3.1 Emission Calculations**

10 Emission calculations for SO₂, nitrogen oxides, volatile organic compounds, ammonia, gas
11 cylinders, chemical inventory, air concentrations, and TAPs can be found in Section 3.1 of the
12 Statement of Basis for Attachment 1.