

Attachment 1

Number: 00-05-006 (Hanford AOP 2013 Renewal)

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, March 27, 2013

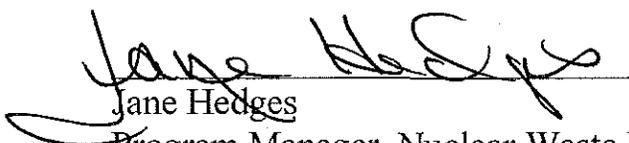
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CONTENTS

1.0	EMISSION STANDARDS AND LIMITATIONS.....	6
1.1	Insignificant Emission Units	6
1.2	Emission Units and Activities subject to Monitoring, Reporting, Recordkeeping, and Compliance Certification	6
1.3	General Standards for Maximum Emissions.....	9
1.4	Emission Unit Specific Applicable Requirements	13
1.4.1	Process: Fossil Fuel Fired Steam Generating Units.....	13
1.4.2	Process: Internal Combustion Engines (without specific permit/approval conditions).	18
1.4.3	Process: NOC Approval Order Conditions.....	21
Discharge Point	All emission units identified in Table 1.6	21
Discharge Point	Concrete Batch Plant	22
Discharge Point	CWC	24
Discharge Point	E-282ED 001.....	25
Discharge Point	E-282WD 001	26
Discharge Point	Emergency Diesel Generators.....	27
Discharge Point	EP-325-01-S Hazardous Waste Treatment Unit.....	28
Discharge Point	P-2025E ETF	30
Discharge Point	P-2706T 001	32
Discharge Point	P-296A042-001	33
Discharge Point	P-296K142 001	35
Discharge Point	P-296W004 001	36
Discharge Point	P-WTP-001	38
Discharge Point:	Integrated Disposal Facility (IDF)	48
Discharge Point:	Ventilation Systems for 241-AN and 241 AW Tank Farms.....	50
Discharge Point:	200 Area SST Categorical Waste Retrieval.....	53
Discharge Point	E-85 Fuel Station	56
Discharge Point:	HAMMER Training and Education Facility	57
Discharge Point	100B-181B/182B.....	59
Discharge Point	WTP Heaters and Dehumidifiers.....	63
Discharge Point	300 Area/339A.....	65
Discharge Point	241-AP, 241-SY, and 241-AY/AZ Ventilation	68
Discharge Point	Lagoon Treatment System	74
1.4.4	Miscellaneous Emission Units	75
2.0	COMPLIANCE AND PERIODIC MONITORING PROVISIONS	76
2.1	Visible Emission Surveys.....	76
2.2	General Standards Complaint Investigations	77

2.3	Measures to Control Fugitive Emissions and Fugitive Dust	77
2.4	Recordkeeping for Boilers.....	78
2.5	Steam Generating Units Source Tests	78
2.6	SO₂ Emissions Compliance	79
2.7	Visible Emissions Enforceability	79
2.8	SO₂ Enforceability	79
3.0	RECORDKEEPING.....	80
3.1	Emission Calculations	80

TABLES

TABLE 1.1	LIST OF SIGNIFICANT EMISSION UNITS	7
TABLE 1.2	GENERAL STANDARDS FOR MAXIMUM EMISSIONS	10
TABLE 1.3	EMISSION LIMITS AND PERIODIC MONITORING REQUIREMENTS FOR STEAM GENERATING UNITS	13
TABLE 1.4	INTERNAL COMBUSTION ENGINES: 500 HORSEPOWER AND GREATER	18
TABLE 1.5	INTERNAL COMBUSTION ENGINES: LESS THAN 500 HORSEPOWER	19
TABLE 1.6	EMISSION LIMITS AND PERIODIC MONITORING REQUIREMENTS FOR EMISSION UNITS WITH NOC APPROVAL CONDITIONS	21
TABLE 1.7	MISCELLANEOUS EMISSION UNITS	75

1.0 EMISSION STANDARDS AND LIMITATIONS

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

1.1 Insignificant Emission Units

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

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

These insignificant emission units need not be listed individually in the annual compliance certification unless there were observed, documented, or known instances of non-compliance during the certification period. Ecology has authority to establish case-by-case monitoring requirements as set forth in WAC 173-400-105 or other provisions of law.
[WAC 173-401-530(2)(b) and (2)(c)]

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

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

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.
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
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.
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-
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-
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: 94-07-01
100K P-296K142 001	Table 1.6	NOC approval for Cold Vacuum Drying - phase II. NOC: 97NM-022
Integrated Disposal Facility (200E)	Table 1.6	NOC approval for 200E Integrated Disposal Facility (IDF). NOC: DE05NWP-004

Emission unit	Requirements	Description
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
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
300 EP-325-01-S	Table 1.6	NOC approval for 325 Building Hazardous Waste Treatment Unit (HWTU). NOC: DE98NWP-004
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
600 Hanford Site Asbestos Landfill	Table 1.7	Miscellaneous emission unit.
600 G-6290 (600 Area Gasoline Distribution)	Table 1.7	Miscellaneous emission unit.
241-AP, 241-SY, and 241-AY/AZ Tank Farm Ventilation System	Table 1.6	NOC approval for 241-AP, 241-SY, and 241-AY/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

1.3 General Standards for Maximum Emissions

The following general regulatory requirements, emission limits, or work practice standards apply to all emission units [refer to definition of emission units in WAC 173-401-200(12)] on the Hanford Site.

The general standards in Table 1.2 are the applicable requirement, emission limit, or work practice standard unless replaced by another requirement in Tables 1.3, 1.4, 1.5, 1.6 or 1.7.

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	
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	

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(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	
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.

1.4 Emission Unit Specific Applicable Requirements

The following sections contain emission unit specific requirements for steam generating units (Table 1.3), internal combustion units greater than 500 horsepower (Table 1.4), internal combustion units less than 500 horsepower (Table 1.5), individual NOC approval orders (Table 1.6), and miscellaneous emission units (Table 1.7).

1.4.1 Process: Fossil Fuel Fired Steam Generating Units

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.
	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 " <i>Source Test Manual - Procedures for Compliance Testing,</i> " 7/12/90.

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
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	
		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/mmBTU 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/mmBTU.	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/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.
Natural gas-fired greater than or equal to 5 mmBTU/hr	97NM-138	NO _x shall not exceed 0.037 lb/mmBTU 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.
		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.

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 method ¹
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. Check for unusual noise, vibrations, etc.	Inspect refractory for power boilers.	Clean fireside surfaces and breaching for low pressure boilers.	

1.4.2 Process: Internal Combustion Engines (without specific permit/approval conditions)

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 Horsepower²

Stationary Engine Location	Horsepower	Usage	Regulation ³
100 Area Fire Station (Building 609) Potable Water Supply	29.5	Emergency Backup	40 CFR 60, Subpart JJJJ
100K Water Treatment	181	Emergency Backup, Fire Pump	40 CFR 60, Subpart IIII
200 West Area (MO646)	31.5	Non-Emergency	40 CFR 63, Subpart ZZZZ
222-SB	450	Emergency Backup	40 CFR 63, Subpart ZZZZ
234-5Z	300	Emergency Backup	40 CFR 63, Subpart ZZZZ
241-AW (Sullair 100)	61	Non-Emergency	40 CFR 63, Subpart ZZZZ
241-AW (Sullair 185)	61	Non-Emergency	40 CFR 60, Subpart IIII
241-BX (MO-297)	31	Non-Emergency	40 CFR 60, Subpart IIII
241-BX (MO-152)	85	Non-Emergency	40 CFR 60, Subpart IIII
241-C (Lower South)	150	Non-Emergency	40 CFR 60, Subpart IIII
241-C (East)	42	Non-Emergency	40 CFR 63, Subpart ZZZZ
241-C (Northwest)	275	Non-Emergency	40 CFR 63, Subpart ZZZZ
241-SY (MO-2173)	152	Non-Emergency	40 CFR 60, Subpart IIII
241-SY (Change Trailer)	31.5	Non-Emergency	40 CFR 60, Subpart IIII
241-TX (241-T106)	34.5	Non-Emergency	40 CFR 60, Subpart IIII

² Table 1.5 is being used as a place holder for engines regulated under 40 CFR 60, subpart IIII and JJJJ, and 40 CFR 63, subpart ZZZZ. As the compliance dates for these regulations have not yet occurred, this AOP will be revised when the regulations become applicable. At that time, the appropriate applicable requirements for each engine will be identified.

³ 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	Regulation³
242-A Evaporator	306	Non-Emergency	40 CFR 63, Subpart ZZZZ
242-S	34.5	Non-Emergency	40 CFR 60, Subpart IIII
271-CR	102	Non-Emergency	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
2701 HV (CSB)	210	Emergency Backup	40 CFR 60, Subpart JJJJ
2720EA	40	Emergency Backup	40 CFR 60, Subpart JJJJ
2721E	210	Emergency Backup	40 CFR 63, Subpart ZZZZ
CVDF	150	Emergency Backup	40 CFR 63, Subpart ZZZZ
Rattle Snake Barricade	25	Emergency Backup	40 CFR 60, Subpart JJJJ
TEDF Pump Station 2 (225E)	107	Emergency Backup	40 CFR 63, Subpart ZZZZ
Wye Barricade	30	Emergency Backup	40 CFR 60, Subpart JJJJ
Yakima Barricade	30	Emergency Backup	40 CFR 60, Subpart JJJJ
282-B	80	Non-Emergency	40 CFR 63, Subpart ZZZZ
282-BA	190	Non-Emergency	40 CFR 63, Subpart ZZZZ
225BC	200	Emergency Backup	40 CFR 63, Subpart ZZZZ

1.4.3 Process: NOC Approval Order Conditions.

Table 1.6 Emission Limits and Periodic Monitoring Requirements for Emission Units with NOC Approval Conditions

The emission units identified in this table are those emission units that have received an Ecology approval order to operate under WAC 173-400-110 New Source Review.

DISCHARGE POINT ALL EMISSION UNITS IDENTIFIED IN TABLE 1.6

General requirements where more stringent conditions do not exist and as applicable to the individual emission units.

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

Condition Approval

Condition: 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.

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

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

Test Frequency: Not applicable.

Required Records: As specified in Section 2.1.

State-Only Enforceable: No.

Calculation Model ID: Not applicable.

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

Condition Approval

Condition: 1000 ppm SO₂ @ 7% O₂ 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.

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

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

Test Frequency: Not applicable.

Required Records: As specified in Section 2.7.

State-Only Enforceable: No.

Calculation Model ID: Not applicable.

Condition Approval	8/21/2001
Condition:	Emission Control Monitors Emission equipment control monitors shall include but not be limited to the following: A. Bag house - None required if there are no visible emissions per section 1.A. of the APPROVAL CONDITIONS, and maintenance records indicate proper maintenance practices and schedules.
Periodic Monitoring:	Recordkeeping
Test Method:	Not specified.
Test Frequency:	Not applicable.
Required Records:	Surveillance checklists and bag house maintenance logs.
State-Only Enforceable:	No.
Calculation Model ID:	Not applicable.
Condition Approval	8/21/2001
Condition:	General Conditions A. Visible Emissions: No visible emissions shall be allowed beyond 100 yards of source. During periods of high winds, an assessment shall be made to suspend operations or initiate a more comprehensive plant watering scheme.
Periodic Monitoring:	Visible Emission Surveys.
Test Method:	Not specified.
Test Frequency:	Not applicable.
Required Records:	Results of visible emission surveys.
State-Only Enforceable:	No.
Calculation Model ID:	Not applicable.
Condition Approval	3/12/2003
Condition:	Diesel Fuel Oil Boiler 1. A 4.4 MMBtu diesel fuel oil boiler will be operated. 2. The diesel fuel sulfur content will be less than or equal to 0.05% S, by weight. 3. Operation of the boiler is limited to 2000 hours per year. 4. Good combustion engineering practices shall be followed, including adherence to the boiler manufacturer's specification for operation, maintenance, and combustion control. 5. Specific combustion feed gas ratios, including the fuel-air ratio, monitoring, startup and shutdown procedures shall be followed to maximize combustion efficiency and minimize discharge of pollutants into the atmosphere.
Periodic Monitoring:	Recordkeeping
Test Method:	Not specified.
Test Frequency:	Not applicable.
Required Records:	1. Manufacturer's specifications for operation, maintenance, and combustion control. 2. Records of operating hours. 3. Records of fuel specification (sulfur content). 4. Records of good combustion engineering practices and operating procedures.
2. Records of operating hours.	
3. Records of fuel specification (sulfur content).	
4. Records of good combustion engineering practices and operating procedures.	
State-Only Enforceable:	No.
Calculation Model ID:	Not applicable.

DISCHARGE POINT E-282ED 001

200E Area, Emergency Fire Pump Generators
Requirement Citation (WAC or Order Citation): NWP-96-1

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

Condition Approval 4/30/1996
Condition: NO_x 75.5 pounds per hour NO_x.
Periodic Monitoring: Recordkeeping & average fuel consumption rate determination shall be performed at least once per 12 months.
Test Method: EPA Method 7A of 40 CFR 60, App. A.
Test Frequency: Not applicable.
Required Records: 1. Monthly fuel burned (this calculation is based on fuel added to supply tank).
 2. Hours of operation logged.
State-Only No.
Calculation Model 2B.

Condition Approval 4/30/1996
Condition: Engine E shall burn only No. 2 fuel oil with sulfur content no more than 0.05 weight percent.
Periodic Monitoring: Recordkeeping for compliance with condition.
Test Method: Not specified.
Test Frequency: Not applicable.
Required Records: Vendor documentation of fuel purchase from retail outlet (i.e., for use in motor vehicles, see 40 CFR 80), or fuel analysis once per year showing ≤0.05wt% sulfur.
State-Only No.
Calculation Model Not applicable.

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

DISCHARGE POINT E-282WD 001

200W Area, Generators
Requirement Citation (WAC or Order Citation): NWP-96-1

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

Condition Approval 4/30/1996
Condition: NO_x 42 pounds per hour.
Periodic Monitoring: Recordkeeping & average fuel consumption rate determination shall be performed at least once per 12 months.
Test Method: EPA Method 7A of 40 CFR 60, App. A.
Test Frequency: Not applicable.
Required Records: 1. Monthly fuel burned (this calculation is based on fuel added to supply tank).
 2. Hours of operation logged.
State-Only No.
Calculation Model 2B.

Condition Approval 4/30/1996
Condition: Engine W shall burn only No. 2 fuel oil with sulfur content no more than 0.05 weight percent.
Periodic Monitoring: Recordkeeping for compliance with condition.
Test Method: Not specified.
Test Frequency: Not applicable.
Required Records: Vendor documentation of fuel purchase from retail outlet (i.e., for use in motor vehicles, see 40 CFR 80), or fuel analysis once per year showing ≤0.05 wt% sulfur.
State-Only No.
Calculation Model Not applicable.

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

DISCHARGE POINT EMERGENCY DIESEL GENERATORS

300 Area, Generators

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

Condition Approval 1/15/2002
Condition: Total Emission Limits
A. The activities described in the Notice of Construction application will be permitted without additional control technologies required, provided that the total emissions from all activities will not result in exceedance of WAC 173-460 ASILs.
B. A new Notice of Construction will be required, if total emissions of toxic air pollutants exceed the Small Quantity Emission Rates, unless dispersion modeling demonstrates that emissions would continue to result in concentrations less than the ASILs. Results of any such dispersion modeling demonstrations/calculations will be maintained on file and made available upon inspection.
C. A new NOC also is required if total emissions of criteria pollutants would exceed the WAC 173-400-110 thresholds.
Periodic Monitoring: Analyze each proposed change to determine if emissions would exceed an ASIL or NSR threshold.
Test Method: Not specified.
Test Frequency: Not applicable.
Required Records: Results of analyses.
State-Only NSR thresholds – No.
 ASILs - Yes.
Calculation Model Not applicable.

Condition Approval 1/15/2002
Condition: Emissions Control
SO_x emissions will be controlled through use of #2 Diesel Fuel with sulfur content less than 0.5%.
Periodic Monitoring: Recordkeeping.
Test Method: Not specified.
Test Frequency: Per fuel shipment.
Required Records: Vendor documentation or fuel analysis showing sulfur content < 0.5%.
State-Only No.
Calculation Model Not applicable.

Condition Approval 1/15/2002
Condition: Monitoring and Recordkeeping
Specific records shall be kept on-site by the Permittee and made available for inspection by Ecology upon request. The records shall be organized in a readily accessible manner and cover a minimum of the most recent sixty (60) month period. The records to be kept shall include the following:
A. Maintain records of the hours of operation.
Periodic Monitoring: Recordkeeping.
Test Method: Not specified.
Test Frequency: Not applicable.
Required Records: 1. Hours of operation
 2. Fuel consumption.
State-Only
Calculation Model Not applicable.

**DISCHARGE POINT EP-325-01-S HAZARDOUS WASTE
TREATMENT UNIT**

300 Area, Hazardous Waste Treatment Unit
Requirement Citation (WAC or Order Citation): DE 98NWP-004

Condition Approval 9/1/1998
Condition: A new Notice of Construction will be required if total building emissions of toxic air pollutants exceed the Small Quantity Emission Rates, unless a T-Screen analysis is run that shows the emissions would result in concentrations less than the ASILs.
Periodic Monitoring: Recordkeeping and emission calculations.
Frequency: Each proposed change.
Test Method: Not specified.
Test Frequency: Not applicable.
Required Records: Results of analyses.
State-Only Yes.
Calculation Model 7A and 7B.

Condition Approval 9/1/1998
Condition: Total Building Emission Limits:
 HWTU process and emission controls, building research and waste handling projects and supporting operations, and building equipment additions and changes, including control systems, can be made to accommodate changing research and support requirements without filing a new Notice of Construction, providing the total emissions meet the ASILs and WAC 173-400-110 NSR thresholds.
Periodic Monitoring: Recordkeeping and emission calculations.
Frequency: Each treatment process and proposed change.
Test Method: Not specified.
Test Frequency: Not applicable.
Required Records: Results of analyses.
State-Only NSR thresholds – No.
 ASILs - Yes.
Calculation Model 7A and 7B.

Condition Approval 9/1/1998
Condition: A new Notice of Construction also is required if total building emissions of criteria pollutants would exceed the WAC 173-400-110 thresholds.
Periodic Monitoring: Applicable if triggered.
Test Method: Not specified.
Test Frequency: Not applicable.
Required Records: Results of analyses.
State-Only No.
Calculation Model Not applicable.

Condition Approval	9/1/1998
Condition:	Monitoring and Recordkeeping: Specific records shall be kept on-site by the permittee and made available for inspection by Ecology upon request. The records shall be organized in a readily accessible manner and cover a minimum of the most recent 60-month period.
Periodic Monitoring:	Recordkeeping and emission calculations.
Test Method:	Not specified.
Test Frequency:	Not applicable.
Required Records:	1. HWTU unit feed rates for TAPS and NSR threshold listed criteria pollutants. 2. HWTU treatment process destruction efficiency data or engineering estimates. 3. Engineering estimates of the maximum emissions of reaction products of the HWTU treatment process. 4. Evaluations of each bench-scale treatment process or additions or changes not otherwise exempt.
State-Only	No.
Calculation Model	Not applicable.
Condition Approval	9/1/1998
Condition:	General Conditions: Visible Emissions - No visible emissions shall be allowed beyond the property line, as determined by opacity readings when warranted.
Periodic Monitoring:	See Section 2.1, Tier 3.
Test Method:	EPA Method 9 of 40 CFR 60, Appendix A.
Test Frequency:	Not applicable.
Required Records:	Operating log.
State-Only	No.
Calculation Model	Not applicable.
Condition Approval	9/1/1998
Condition:	HWTU Feed Rate: The process feed rate shall be limited to a rate that will control the WAC 173-460 listed Toxic Air Pollutants (TAPs) to meet the Acceptable Source Impact Level (ASIL), and in any case, not to exceed 8,000 kg of waste per calendar year total for the HWTU the permittee is proposing under the NOC application approval Order.
Periodic Monitoring:	Recordkeeping.
Frequency:	Daily when operating.
Test Method:	Not specified.
Test Frequency:	Not applicable.
Required Records:	HWTU daily feed rate (Total and WAC 173-460 TAPs).
State-Only	Yes.
Calculation Model	Not applicable.

DISCHARGE POINT P-2025E ETF

200E Area, Effluent Treatment

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

Condition Approval 6/6/2007 (DE07NWP-003)
Condition: Visible emissions from the ETF stack (Figure 1 of Order DE07NWP-003, Rev. 1) shall not exceed five percent (5%).
Periodic Monitoring: Tier 3 Visible Emission Survey, Section 2.1 of AOP ATT 1.
Test Method: Not specified.
Test Frequency: Not applicable.
Required Records: As required in AOP Attachment 2 for maintaining abatement control technology.
State-Only: No.
Calculation Model: Not applicable.

Condition Approval 6/6/2007 (DE07NWP-003)
Condition: Volatile Organic Compound (VOC) emissions from the ETF (Figure 1 of Order DE07NWP-003) shall not exceed 0.55 gram per cubic meter (g/m³) at standard conditions or 0.50 gram per minute (g/min).
Periodic Monitoring: Initial compliance verified by EPA Method 18 of 40 CFR 60, Appendix A in 1996 (NOC-93-3).
Test Method: EPA Method 18 or 25A of 40 CFR 60, Appendix A.
Test Frequency: Not applicable (initial test condition for construction).
Required Records: Testing Results of 1996 EPA Method.
State-Only: No.
Calculation Model: Not applicable.

Condition Approval 6/6/2007 (DE07NWP-003)
Condition: Volatile Organic Compound (VOC) emissions from ETF operations shall not exceed 4,000 lb/yr. [WAC 173-400-110(5)(b)]
Periodic Monitoring: Material emission estimates.
Test Method: Calculations and record-keeping.
Test Frequency: Annual.
Required Records: Records of data and calculations for the VOC emissions from ETF operations.
State-Only: No.
Calculation Model: Not applicable.

Condition Approval 6/6/2007 (DE07NWP-003)
Condition: Particulate matter emissions shall not exceed 1,500 lb/yr.
Periodic Monitoring: HEPA filtration of ETF stack gases
Test Method: See Required Records.
Test Frequency: Not applicable.
Required Records: Maintenance and operating records of all filtration systems.
State-Only: No.
Calculation Model: Not applicable.

Condition Approval **6/6/2007 (DE07NWP-003) and 9/27/2007 (Amendment 2), Revision 1 (8/10/2010)**

Condition: All TAPs in the NOC applications and identified in Table 1 of DE07NWP-003 Amendment 2 (9/27/2007) and Revision 1 (8/10/2010), shall not exceed ASILs. [WAC 173-460-070]

Periodic Monitoring: Waste analysis records (see Required Records).

Test Method: Not specified.

Test Frequency: Not applicable.

Required Records: (1) Laboratory or waste analysis results for TAPs identified in Table 1 of DE07NWP-003 Amendment 2 (9/27/2007) and Revision 1 (8/10/2010), and (2) waste stream influent volumetric records.

State-Only Yes.

Calculation Model Not applicable.

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

Condition: All newly identified TAPs shall not exceed ASILs (with assessment of ASIL compliance). [WAC 173-460-070]

Periodic Monitoring: Assessment of ASIL compliance (see Required Records).

Test Method: Not specified.

Test Frequency: Not applicable.

Required Records: (1) Report laboratory or waste analysis result of newly identified TAPs within 90 days of completion of analysis, and (2) waste stream influent volumetric records.

State-Only Yes.

Calculation Model Not applicable.

DISCHARGE POINT P-2706T 001

200W Area, T Plant Complex

Requirement Citation (WAC or Order Citation): DE01NWP-002 Revision 1 (6/29/2006)

Condition Approval	6/29/2006
Condition:	Visible Emissions A. Visible emissions from any T-Plant Complex stack will not exceed limits specified in WAC 173-400-040(2).
Periodic Monitoring:	Section 2, Tier 3.
Test Method:	40CFR60, Appendix A, Method 9
Test Frequency:	Not applicable (when visible emissions are observed).
Required Records:	Maintenance records.
State-Only	No.
Calculation Model	Not applicable.
Condition Approval	6/29/2006
Condition:	Emission Limits A. VOC emission will not exceed 3.5 tons per year. B. All TAPs, as submitted in the Permittee's Notice of Construction Application, will be below their respective ASIL.
Periodic Monitoring:	Analyze each proposed changed to determine if emissions would exceed Emission limits.
Test Method:	Section 3.0 of the Approval Order DE01NWP-002 Revision 1
Test Frequency:	Section 3.0 of the Approval Order DE01NWP-002 Revision 1
Required Records:	Results of analyses.
State-Only	No.
Calculation Model	Not applicable.

DISCHARGE POINT P-296A042-001⁴

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

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

Condition Approval	5/7/2008 (Rev 3)
Condition:	Visible emissions at the stack shall not exceed 5%. Should visible emissions be observed, the excess emissions shall be discontinued by removing the emission unit from service and Health notified immediately.
Periodic Monitoring:	Tier 3 requirements (Condition 2.1, Visible Emission Surveys).
Test Method:	Maintain abatement control technology (AOP Attachment 2).
Test Frequency:	Not applicable.
Required Records:	Operation logs or records.
State-Only	Yes.
Calculation Model	Not specified.
Condition Approval	5/7/2008 (Rev 3)
Condition:	The primary tank ventilation exhauster system for the 241-AY and 241-AZ double-shell tank farms shall not exceed daily average flow rates of 1,000 ft ³ /min (standard temperature and pressure).
Periodic Monitoring:	Flow calculations based on stack gas flow and temperature measurement.
Test Method:	Flow calculations.
Test Frequency:	Semi-annually.
Required Records:	Calibrations and calculations of exhauster system stack gas flow and temperature measurement devices.
State-Only	Yes.
Calculation Model	None specified.
Condition Approval	5/7/2008 (Rev 3)
Condition:	All toxic air pollutants (TAPs) shall be below their respective ASIL or Screening Level of Table 1 of the most updated NOC approval order.
Periodic Monitoring:	T-BACT compliance (HEME, HEPA, exhauster flow rate, etc.).
Test Method:	T-BACT compliance.
Test Frequency:	Not applicable.
Required Records:	All monitoring and operations records required for T-BACT compliance.
State-Only	Yes.
Calculation Model	Method 7B (Statement of Basis 3.1.7) or other approved methods.

⁴ 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.

Condition Approval **5/7/2008 (Rev 3)**
Condition: Emissions of ammonia shall not exceed 0.34 lbs/hr from the primary tank ventilation exhaust system.
Periodic Monitoring: Calculations based on ammonia concentration readings and stack flow rates.
Test Method: Field instruments, which may include Draeger Tubes.
Test Frequency: Semi-annually.
Required Records: Supporting data and calculations.
State-Only No.
Calculation Model Method 5 (Statement of Basis 3.1.4) or other approved methods.

Condition Approval **5/7/2008 (Rev 3)**
Condition: Emissions of VOCs shall not exceed 0.175 lb/hr from the primary tank ventilation exhaust system.
Periodic Monitoring: Calculations based on VOC concentration readings and stack flow rate.
Test Method: Field instruments, which may include Draeger Tubes.
Test Frequency: Semi-annually.
Required Records: Supporting data and calculations.
State-Only No.
Calculation Model Method 4 (Statement of Basis 3.1.3) or other approved methods.

DISCHARGE POINT P-296K142 001

100K Area, Cold Vacuum Drying

Requirement Citation (WAC or Order Citation): 97NM-022

Condition Approval	3/7/1997
Condition:	Approval to construct and install process equipment.
Periodic Monitoring:	None.
Test Method:	Not specified.
Test Frequency:	Not applicable.
Required Records:	None.
State-Only	No.
Calculation Model	Not applicable.

DISCHARGE POINT P-296W004 001

200W Area, Waste Receiving and Processing

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

Condition Approval 5/21/2003
Condition: Emission Controls Monitors: Source data from an Organic Vapor Analyzer using a Photoionization detector (PID) with at least an 11.7eV lamp, or other device capable of detecting TAPs, was conducted by the facility in providing verification of de minimis (i.e., parts per million levels) fugitive emissions in the drum storage and NDE/NDA areas. The results of source test information, conducted on or at the source(s) locations in lieu of downstream at the stack, have been provided to the permit writer under separate cover. This information has been determined to satisfy the previous approval order condition for this source in performing one-time monitoring to demonstrate TAP emissions are below the estimates provided in the NOC application and T-BACT analysis for the drum storage and DNE/NDA areas. As such, no additional sampling or monitoring will be required under this approval order. The facility will continue to perform at least once every two years, and make available upon request or inspection, results from any Industrial Hygiene program measurements to further demonstrate compliance with limits contained herein. The test plan for conducting these measurements shall also be maintained on file and made available upon request and/or inspection by Ecology.

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

Test Method: Not specified.

Test Frequency: Once every two years.

Required Records: Test plan.
Measurement results.

State-Only: Yes.

Calculation Model: Not applicable.

Condition Approval 5/21/2003
Condition: Total Emission Limits: For toxic compounds not included in the T-BACT analysis, the emission limits shall be the Small Quantity Emission Rate (SQER). A modification submittal of a Notice of Construction (NOC) application will be required if the SQER limit would be exceeded for compounds not addressed under the T-BACT assessment. The calculation/measurement methods described in section 4 of the NOC Approval Order DE03NWP-002, or other method as approved by Ecology, may be used to document compliance with the SQER limit.

Periodic Monitoring: PID or other device capable of detecting TAPs measurements.

Test Method: Not specified.

Test Frequency: Once every 2 years.

Required Records: 1. IH Test Plan.
2. Results of measurements.

State-Only: Yes.

Calculation Model: Not applicable.

Condition Approval	5/21/2003
Condition:	An internal annual assessment of the facility container tracking system, such as SWITS of the data management system (DMS), shall be conducted by the facility to document/verify de minimus emissions from the source. This assessment will be maintained on file, made available for Ecology inspector requests, and compiled into emission estimates that will be reported annually beginning as part of the Calendar Year 2003 nonradioactive inventory of airborne emissions.
Periodic Monitoring:	Recordkeeping; Comparison to threshold.
Test Method:	Not specified.
Test Frequency:	Annually.
Required Records:	1. Throughput records, SWITs query evaluation if > 1,000 drums. 2. Nonradioactive air emissions inventory report required by WAC 173-400-105.
State-Only	Yes.
Calculation Model	Not applicable.
Condition Approval	5/21/2003
Condition:	Total Emission Limits: The processing and repackaging activities described in the Notice of Construction application will be permitted without requiring additional emission controls, provided that the emissions from the stack, venting the 100 and 300 Series Waste Process Lines, the 200 and 400 Restricted Waste process Lines, the process area, and the storage areas are maintained below the level described in and meeting T-BACT (according to WRAP Module 1 Best Available Control Technology Assessment, WHC-SD-W026-TI-005, January 1993, Westinghouse Hanford Company, Richland, Washington).
Periodic Monitoring:	Recordkeeping.
Test Method:	Not specified.
Test Frequency:	Not applicable.
Required Records:	Documentation implementing T-BACT.
State-Only	Yes.
Calculation Model	Not applicable.

DISCHARGE POINT P-WTP-001

200E Area, Vitrification
Requirement Citation
WAC or Order Citation): WAC 173-400-040(9)(a); DE02NWP-002, Amendments 1, 2, 3 and 4;
and PSD-02-01, Amendment 2.

Condition Approval: 11/13/2006
Condition: FUGITIVE DUST CONTROL
8.1 Construction Phase Fugitive Dust Control Plan(s), prepared using EPA and Ecology guidelines, shall be developed and implemented. The plan(s) shall address fugitive dust control at the WTP construction site adjacent to the Hanford 200 Area and the Marshaling Yard established upon property leased from the Port of Benton. A copy of this plan(s) shall be maintained on-site at all times in a place known to facility employees that are responsible for complying with the requirements contained therein and shall be retrievable by those employees at all times when activities regulated by the documents are occurring. These documents shall be made available to Ecology upon request
Periodic Monitoring: Not applicable. The owner or operator shall take reasonable precautions (such as pre-job planning) to prevent fugitive dust from becoming airborne.
Test Method: Construction Phase Fugitive Dust Control Plan
Test Frequency: During construction or routine/*ad hoc* dust suppression
Required Records: Fugitive Dust Control Plan and records of actions taken to minimize fugitive dust
State-Only: No.
Calculation Model: Not applicable.

Condition Approval 11/24/2003
Condition: 1.3 Opacity from each exhaust stack from process facilities (Pretreatment, HLW, and LAW) shall not exceed 5%, other facility stacks shall not exceed 10 percent, over a 6 minute average as measured by EPA Reference Method 9 of 40 CFR 60, Appendix A, or an equivalent method approved in advance by Ecology. A certified opacity reader shall read and record the opacity concurrent with any source testing.
Periodic Monitoring: For Pretreatment, HLW, and LAW, See Section 2.1, Tier 3.
Test Method: EPA Reference Method 9 of 40 CFR 60, Appendix A.
Test Frequency: Initial test.
Required Records: Test Records.
State-Only: No.
Calculation Model: Not applicable.

Condition Approval 11/24/2003
Condition: 1.3 Opacity from each exhaust stack from process facilities (Pretreatment, HLW, and LAW) shall not exceed 5%, other facility stacks shall not exceed 10 percent, over a 6 minute average as measured by EPA Reference Method 9 of 40 CFR 60, Appendix, or an equivalent method approved in advance by Ecology. A certified opacity reader shall read and record the opacity concurrent with any source testing.
Periodic Monitoring: For boilers, generators, and fire pumps, See Section 2.1, Tier 1.
Test Method: EPA Reference Method 9 of 40 CFR 60, Appendix.
Test Frequency: At least once per calendar quarter.
Required Records: Test records.
State-Only: No.
Calculation Model: Not applicable.

Condition Approval 11/24/2003
Condition: 1.3 Opacity from each exhaust stack from process facilities (Pretreatment, HLW, and LAW) shall not exceed 5%, other facility stacks shall not exceed 10 percent, over a 6 minute average as measured by EPA Reference Method 9 of 40 CFR 60, Appendix A, or an equivalent method approved in advance by Ecology. A certified opacity reader shall read and record the opacity concurrent with any source testing.

Periodic Monitoring: For other facility stacks, See Section 2.1, Tier 3.
Test Method: EPA Reference Method of 40 CFR 60, Appendix A.
Test Frequency: Initial test.
Required Records: Test records.
State-Only: No.
Calculation Model: Not applicable.

Condition Approval 11/24/2003
Condition: 1.4; PSD-02-01, Cond. 2 All boilers, generators and the diesel fire pump shall be fired on Ultra-Low Sulfur Fuel (ULSF). ULSF means natural gas, propane, or fuel oil with a sulfur content of 0.0030% or less. Compliance shall be monitored by maintaining and submitting reports of fuel purchases.

Periodic Monitoring: Recordkeeping and Semiannual report.
Test Method: Not Specified.
Test Frequency: Not Applicable.
Required Records: Records of monthly fuel purchases and use and an annual certification, from the fuel distributor, stating the sulfur content of the fuel that was supplied. (PSD-02-01 Cond 17.3)

State-Only: No.
Calculation Model: Not applicable.

Condition Approval 11/10/2005
Condition: 1.5; PSD-02-01 Cond. 8 The operation of the six steam generating boilers shall not exceed an annual aggregated fuel consumption limit of 13,400,000 gallons per year summed daily for the previous 365 days.

Periodic Monitoring: Recordkeeping and Semiannual report of consumption over 12 months.
Test Method: Not Specified.
Test Frequency: Daily.
Required Records: Maintain fuel purchase records (PSD-02-01, Cond 17.3).
State-Only: No.
Calculation Model: Not applicable.

Condition Approval 7/8/2002
Condition: 1.7; PSD-02-01 Cond. 11, Cond.13 Each of the 3 emergency generators shall not operate for more than 164 hours per year on a 12 month rolling summation calculated once per month. Compliance shall be monitored by installing and operating non-resettable totalizers on each generator.

Periodic Monitoring: Recordkeeping.
Test Method: Not Specified.
Test Frequency: Monthly.
Required Records: Records showing all hours of operation.
State-Only: No.
Calculation Model: Not applicable.

Condition Approval	11/24/2003
Condition:	1.8; PSD-02-01 Cond. 15 Each of the diesel fire pumps shall not operate for more than 110 hours per year on a 12 month rolling summation calculated once per month. Compliance shall be monitored by installing and operating a non-resettable totalizer on the fire pump.
Periodic Monitoring:	Recordkeeping.
Test Method:	Not Specified.
Test Frequency:	Not Applicable.
Required Records:	Monthly.
State-Only	No.
Calculation Model	Not applicable.
Condition Approval	11/24/2003
Condition:	2.2 A new NOC will be required, if total emissions of toxic air pollutants exceed the values specified in the tables in Attachment 1. These values shall be confirmed by emission calculations, for indicator constituents, derived from waste characterization data obtained through implementation of the Ecology approved Regulatory Data Objectives Supporting Tank Waste Remediation System Privatization Project (PNNL-12040). The mass feed rates for the indicator constituents will be verified to be less than or equal to the mass feed rates used in the Integrated Emissions Baseline Report for the Hanford Tank Waste Treatment and Immobilization Plant (24590-WTP-RPT-PO-03-008, Rev. 0). Results of any such calculations will be maintained on file and made available upon inspection/request.
Periodic Monitoring:	Recordkeeping
Test Method:	Not Specified.
Test Frequency:	At least once per calendar year.
Required Records:	1. Calculations of TAPs emissions derived from waste feed characterization. 2. Calculations of ammonia emissions from LAW and HLW.
State-Only	Yes.
Calculation Model	Not applicable.
Condition Approval	7/8/2002
Condition:	2.3 A new NOC also is required if total emissions of any criteria pollutants, derived from calculations/monitoring, would exceed the estimates listed under the Emissions section of this order.
Periodic Monitoring:	Recordkeeping
Test Method:	Not Specified.
Test Frequency:	At least once per calendar year.
Required Records:	Calculations of criteria pollutants.
State-Only	Yes.
Calculation Model	Not applicable.

Condition Approval	11/24/2003
Condition:	3.1; PSD-02-01 Conditions 3.2, 4.2, 5.2, 6.2, and 7.2 Within 180-days of achieving the optimized feed rate of simulant at which the facilities will be operated, the permittee shall demonstrate initial compliance through a performance demonstration conducted per an Ecology approved Performance Demonstration Plan. The permittee shall utilize the Performance Demonstration Plan requirements identified in the Dangerous Waste Portion of the Resource Conservation and Recovery Act Permit for the Treatment, Storage, and Disposal of Dangerous Waste Hanford Tank Waste Treatment and Immobilization Plant (DWP), condition III.10.H.5 f (LAW) and III.10.J.5.f (HLW). Ecology shall be notified at least 30 days prior to the test and invited to participate in the test activities at least one week prior to testing.
Periodic Monitoring:	Recordkeeping.
Test Method:	Not specified.
Test Frequency:	Not applicable.
Required Records:	1. Notification Documentation. 2. Performance Demonstration Plan.
State-Only	Yes.
Calculation Model	Not applicable.
Condition Approval	11/24/2003
Condition:	3.2 Testing per the initial compliance testing identified in 3.1 shall be conducted in accordance with the frequency identified in the DWP, condition III.10.I.1 h (LAW) and II.10.K.1 h (HLW).
Periodic Monitoring:	Recordkeeping, measurements, and emission calculations.
Test Method:	As stated in DWP conditions III.10.I.1.h (LAW) and III.10.K.1 h (HLW).
Test Frequency:	At startup and at least once every 5 years thereafter.
Required Records:	Test records.
State-Only	Yes.
Calculation Model	Not applicable.

Condition Approval **11/24/2003; 11/12/03 (PSD)**
 Condition: 3.5; PSD-02-01 Conditions 3-7, 9-10, 12, 14 Within 180 days of initial startup, boiler, emergency generator, and process facility source testing shall be conducted according to the following methods, unless an alternate method has been proposed in writing by the permittee and approved by 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

Periodic Monitoring: Recordkeeping, measurements, and emission calculations.
 Test Method: As stated in condition.
 Test Frequency: Initial startup and every 5 years thereafter.
 Required Records: Test Records.
 State-Only No.
 Calculation Model Not applicable.

Condition Approval **11/24/2003**
 Condition: 3.6 During the boiler source testing, a direct-reading measurement device for carbon monoxide with a minimum measurement accuracy of five percent or less shall take readings according to methods proposed by the permittee and approved by Ecology in writing in advance of the testing. The direct-reading instrument shall be calibrated for future use, using the results of the source testing.

Periodic Monitoring: Recordkeeping, measurements, and emission calculations.
 Test Method: Portable emissions analyzer calibrated during most recent source test.
 Test Frequency: Initial startup.
 Required Records: Logs of boiler tune-ups and significant boiler maintenance activities will be maintained.
 State-Only Yes.
 Calculation Model Not applicable.

Condition Approval	11/24/2003
Condition:	4. Emissions from boilers and generators shall be monitored for CO, and Oxygen by means of a portable emissions analyzer (direct-reading measurement device) at initial startup and after routinely scheduled maintenance activities and burner/control adjustments such as fuel/air metering ratio control and oxygen trim control.
Periodic Monitoring:	Recordkeeping, measurements, and emission calculations.
Test Method:	Portable emissions analyzer calibrated during most recent source test.
Test Frequency:	Initial startup and after routinely scheduled maintenance activities and burner/control adjustments such as fuel/air metering ratio control and oxygen trim control.
Required Records:	Logs of boiler tune-ups and significant boiler maintenance activities will be maintained.
State-Only	Yes.
Calculation Model	Not applicable

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 PM ₁₀ ≤ 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 PM ₁₀ ≤ 0.36 lb/hr at 21% O ₂ , 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.
	Approval Condition 4 NO _x ≤ 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.

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
HLW Vitrification Plant	Approval Condition 7 PM ₁₀ ≤ 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 NO _x 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 shall not exceed 13,400,000 gallons per year	Verification of fuel purchases	Semiannual	Fuel purchase records and a written statement in each semiannual report of the total fuel consumption over the previous 12 months. .
	Approval Condition 10 PM or PM ₁₀ <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 NO _x ≤ 0.09 lb/MMBtu 3% O ₂ , 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.

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 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.
	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.
Diesel Fire Water Pumps	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 Condition 15 Hours of operation for each pump \leq 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.

DISCHARGE POINT: INTEGRATED DISPOSAL FACILITY (IDF)

200E, General Standards

Requirement Citation

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

Condition Approval: 05/31/2005

Condition: FUGITIVE DUST

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

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

Test Method: Not specified.

Test Frequency: Not applicable.

Required Records: None listed.

State-Only: No.

Calculation Model: Not applicable.

Condition Approval: 05/31/2005

Condition: 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.

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

Test Method: Not specified.

Test Frequency: Not applicable.

Required Records: None listed.

State-Only: No.

Calculation Model: Not applicable.

Condition Approval: 05/31/2005

Condition: EMISSION LIMITS FOR WASTE COVERING OPERATIONS

During waste covering operations, aggregate, a mixture of minerals, sand and soil, will be used to cover the waste package at the IDF. Dust control for covering the waste package will consist of watering and/or chemical wetting agents. Waste covering operations will be curtailed during high winds in accordance with abnormal operating procedures for high winds. Prior to long periods of inactivity, an assessment shall be made to implement more comprehensive dust control methods, such as chemical stabilization, on disturbed areas. A reassessment will be made once per week.

Periodic Monitoring: Recordkeeping.

Test Method: Not specified.

Test Frequency: Not applicable.

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

State-Only: Yes.

Calculation Model: Not applicable.

Condition Approval: 05/31/2005
Condition: EMISSION LIMITS FOR TRAVEL ON UNPAVED ROADS
Surface treatment for dust control will consist of watering and/or chemical stabilization. Minimize vehicle use on unpaved road. Perform regular maintenance of road surface. Reduce vehicle speed limit on unpaved roads.
Periodic Monitoring: Recordkeeping
Test Method: Not specified
Test Frequency: Not applicable.
Required Records: Daily activity reports, logs, pre-job reviews, management assessments, surveillances or similar documents.
State-Only: Yes
Calculation Model: Not applicable

Condition Approval: 05/31/2005
Condition: EMISSION LIMITS FOR AGGREGATE COVER COMPACTING ACTIVITIES
A water truck will be provided, and operated as needed to spray water for compaction. Waste covering operations will be curtailed during high winds in accordance with abnormal operating procedures for high winds. Prior to long periods of inactivity an assessment shall be made to implement more comprehensive dust control methods, such as chemical stabilization, on disturbed areas. A reassessment will be made once per week.
Periodic Monitoring: Recordkeeping.
Test Method: Not specified.
Test Frequency: Not applicable.
Required Records: Daily activity reports, logs, pre-job reviews, management assessments, surveillances or similar documents.
State-Only: Yes.
Calculation Model: Not applicable.

Condition Approval: 05/31/2005
Condition: EMISSION LIMITS FOR AGGREGATE STORAGE PILE
Watering will be utilized to minimize wind erosion during storage pile operation. Storage pile work will be curtailed during high winds in accordance with abnormal operating procedures for high winds. Prior to long periods of inactivity, an assessment shall be made to implement more comprehensive dust control methods, such as chemical stabilization, on disturbed areas. A reassessment will be made once per week. Minimize vehicle traffic. Minimize areas of disturbance.
Periodic Monitoring: Recordkeeping.
Test Method: Not specified.
Test Frequency: Not applicable.
Required Records: Daily activity reports, logs, pre-job reviews, management assessments, surveillances or similar documents.
State-Only: Yes
Calculation Model: Not applicable.

**DISCHARGE POINT: VENTILATION SYSTEMS FOR 241-AN AND 241 AW
TANK FARMS**

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

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

Condition Approval: 2/18/2005 (DE05NWP-001)

Condition: EMISSION LIMITS

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

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

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

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

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

State-Only: No.

Calculation Model: Not applicable.

Condition Approval: 2/18/2005 (DE05NWP-001)

Condition: EMISSION LIMITS

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

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

Test Method: Not specified.

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

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

State-Only: No.

Calculation Model: Not applicable.

Condition Approval:	7/31/2007 (DE05NWP-001 Rev 1)
Condition:	EMISSION LIMITS All TAPs, as shown in Table 2 of Approval Order DE05NWP-001, Rev 1, shall be below their respective ASIL or Screening Level of Table 1 of Approval Order DE05NWP-001 Rev 1.
Periodic Monitoring:	Compliance and monitoring shall be met by operating the exhauster systems only when in accord with T-BACT emission controls for the project. T-BACT for this project has been determined to be operation of the primary tank ventilation exhauster systems not exceeding 4,000 cubic feet per minute with moisture de-entrainment, pre-heater, and HEPA filtration in service in the treatment train.
Test Method:	Not specified.
Test Frequency:	None Specified (as needed for monitoring and compliance).
Required Records:	Documentation and record-keeping of T-BACT compliance of emission control found for this project (operation of the primary tank ventilation exhauster system not exceeding 4,000 ft ³ /min with moisture de-entrainment, pre-heater, and HEPA filtration in service in the treatment train).
State-Only:	Yes.
Calculation Model:	Not applicable.
Condition Approval:	2/18/2005 (DE05NWP-001)
Condition:	EMISSIONS LIMITS Emissions of ammonia shall not exceed 0.22 pounds per hour (2.77E-02 gram/second) from either primary tank ventilation exhauster system. The term 'either exhauster system' shall mean each individual primary tank ventilation exhauster system within the 241-AN and 241-AW Tank Farms, where an exhauster system may be operated in single-train or dual-train modes.
Periodic Monitoring:	Conduct of ammonia concentration readings as described in Sections 3.1 and 3.2 of NOC approval order DE05NWP-001 (2/18/2005), and applying these concentration readings with contemporaneous stack flow rate and temperatures to determine instantaneous mass release rate of ammonia.
Test Method:	Ammonia sampling and analysis will be in accord with approved alternative sampling procedures including the use of Draeger tubes to measure stack gas concentration of ammonia providing such devices are spanned to appropriately measure the stack gas ammonia concentration. Stack flow rate and temperature will be applied with the ammonia stack gas concentration to report ammonia emission in terms of grams per second.
Test Frequency:	In order to assess baseline emission concentrations from each exhauster system, emission levels of ammonia will be assessed between 12 and 24 hours after initiation of exhauster operation (single train or dual train). Ammonia stack concentrations shall be sampled a minimum of three times.
<u>Baseline Assessments</u>	Baseline assessments shall be conducted within ninety (90) days of commencement of operations. Should dual exhauster train operation not be required by the Permittee during this ninety (90) day period, assessment of dual train operation emissions shall be conducted on the first occasion of dual train operation which is anticipated to exceed 24 hours duration.
<u>Bi-Annual Assessment</u>	In order to maintain reasonable assurance of continued compliance with emission limitations from these exhauster systems, bi-annual assessment of ammonia stack emissions will be conducted beginning the second calendar year following completion of single train exhauster operation assessment under Section 3.1 of NOC approval order DE05NWP-001. A minimum of three samples shall be used to assess these emissions.
Required Records:	Results of emission assessments, baseline and bi-annual emission monitoring results, supporting data and calculations to demonstrate compliance with ammonia limits.
State-Only:	Yes.
Calculation Model:	Not applicable.

Condition Approval: 2/18/2005 (DE05NWP-001)
Condition: REPORTING
Visible emission surveys conducted and a report of the maintenance conducted to maintain the subject exhaust system's T-BACT operations shall be submitted to Ecology within 30 days of completion of the survey with an assessment of the cause of visible emissions.

Periodic Monitoring: Compliance of this condition is met by submitting to Ecology within thirty (30) days of completion of the survey with an assessment of the cause of visible emissions.

Test Method: Not specified.
Test Frequency: Not applicable.
Required Records: Visible emission surveys conducted and a report of the maintenance.
State-Only: No.
Calculation Model: Not applicable

Condition Approval: 2/18/2005 (DE05NWP-001)
Condition: REPORTING
Identification of any TAP not previously identified within the Notice of Construction Application or Supplement emissions estimates shall be submitted to Ecology within ninety (90) days of completion of laboratory analyses which verify emissions of that toxic air pollutant from the project.

Periodic Monitoring: Compliance of this condition is met by submitting to Ecology within ninety (90) days of completion of laboratory analyses which verify emissions of that toxic air pollutant from the project.

Test Method: Not specified.
Test Frequency: Not applicable.
Required Records: Laboratory analysis.
State-Only: No.
Calculation Model: Not applicable

Condition Approval: 2/18/2005 (DE05NWP-001)
Condition: REPORTING
Results of emission assessments conducted shall be submitted to Ecology within 90 days of completion of the assessment.

Periodic Monitoring: Compliance of this condition is met by submitting to Ecology within ninety (90) days of completion of such assessment.

Test Method: Not specified.
Test Frequency: Not applicable.
Required Records: Emission assessment results.
State-Only: No.
Calculation Model: Not applicable

DISCHARGE POINT: 200 AREA SST CATEGORICAL WASTE RETRIEVAL

200 Area SST Categorical Waste Retrieval

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

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

EMISSION LIMITS

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

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

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

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

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

State-Only: No.

Calculation Model: Not applicable.

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

Condition: EMISSION LIMITS

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

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

Test Method: Not specified.

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

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

State-Only: No.

Calculation Model: Not applicable.

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

Condition: EMISSION LIMITS

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

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

Test Method: Not specified.

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

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

State-Only: No.

Calculation Model: Not applicable.

Condition Approval:	7/31/2007 (DE05NWP-002, Rev 2)
Condition:	EMISSION LIMITS All TAPs, as submitted in the permittee's NOC Applications, shall be below their respective ASIL or Screening Level of Table 1 in Approval Order DE05NWP-002, Rev 2.
Periodic Monitoring:	Compliance and monitoring with this condition shall be met by: <ol style="list-style-type: none">(1) Operating the exhauster systems only when in accord with T-BACT emission controls found for this project (operation of the tank ventilation exhauster systems with moisture de-entrainment, pre-heater, and HEPA filtration in service in the treatment train).(2) Development and implementation of a sampling and analysis plan (SAP) for each tank retrieval. For each retrieval, the SAP shall address the emission of a minimum of the three TAPs with the higher potential ambient concentration relative to their ASILs of WAC 173-460-150 and WAC-173-460-160 or relative to their Screening Level of Table 1 of the Approval Order DE05NWP-002, Rev 2. The TAPs addressed in the SAP shall be identified from Table 2 of the Approval Order DE05NWP-002, Rev 2, and based upon best engineering judgment and most current tank content data. Analytical methods for the analysis shall be the United States EPA, OSHA, or NIOSH approved, or by approved equivalent method.
Test Method:	Not specified.
Test Frequency:	None specified (as needed for monitoring and compliance).
Required Records:	<ol style="list-style-type: none">(1) All monitoring and operations records required to operate and maintain the emission control equipment which implements T-BACT as required in Periodic Monitoring above.(2) SAPs developed for compliance demonstration as described in Periodic Monitoring above.(3) Laboratory analysis result summaries of any samples undertaken after the effective date of the Approval Order DE05NWP-002, Rev 2, from SST tank farm tank headspaces or SST ventilation system exhaust which are examined for organic species or other TAPs.
State-Only:	Yes.
Calculation Model:	Not applicable.
Condition Approval:	2/18/2005 (DE05NWP-002)
Condition:	REPORTING Visible emission surveys, conducted pursuant to Compliance Demonstration requirement 1.3.2, per NOC approval DE05NPW-002, and a report of the maintenance conducted to maintain the subject exhaust system's T-BACT operations.
Periodic Monitoring:	The reporting condition shall be submitted to Ecology within thirty (30) days of completion of the survey with an assessment of the cause of visible emissions.
Test Method:	Not specified.
Test Frequency:	Not applicable.
Required Records:	Visible emission surveys conducted and a report of the maintenance.
State-Only:	No.
Calculation Model:	Not applicable

Condition Approval:	10/12/2005 (DE05NWP-002, Rev. 1)
Condition:	REPORTING Identification of any TAP not previously identified within the Notice of Construction Application or Supplement emissions estimates as defined in Table 2, per NOC approval DE05NWP-002R1, shall be submitted to Ecology within ninety (90) days of completion of laboratory analyses which verify emissions of that toxic air pollutant from the project.
Periodic Monitoring:	The reporting condition shall be submitted to Ecology within ninety (90) days of completion of laboratory analyses which verify emissions of that toxic air pollutant from the project.
Test Method:	Not specified.
Test Frequency:	Not applicable.
Required Records:	Laboratory analysis.
State-Only:	Yes.
Calculation Model:	Not applicable.
Condition Approval:	2/18/2005 (DE05NWP-002)
Condition:	REPORTING An annual schedule (Federal fiscal year basis) of anticipated operations and installations of exhauster systems.
Periodic Monitoring:	The reporting condition shall be submitted by November first of each year.
Test Method:	Not specified.
Test Frequency:	Not applicable.
Required Records:	Annual Schedule
State-Only:	Yes.
Calculation Model:	Not applicable.
Condition Approval:	2/18/2005 (DE05NWP-002)
Condition:	OPERATIONAL NOTICE Notification shall be made at least ten (10) days prior to initial operation of any exhauster system covered by this ORDER DE05NWP-002 when installed to ventilate a tank not previously actively ventilated under this ORDER.
Periodic Monitoring:	Not applicable.
Test Method:	Not specified.
Test Frequency:	Not applicable.
Required Records:	Not applicable.
State-Only:	Yes.
Calculation Model:	Not applicable.

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.

DISCHARGE POINT: HAMMER TRAINING AND EDUCATION FACILITY

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

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

Condition Approval: 4/19/2007
Condition: Visible emissions from training operations shall not exceed twenty (20) percent opacity. [WAC 173-400-040(2)]
Periodic Monitoring: Tier 2 Visible Emissions Survey requirements of the Hanford Air Operating Permit if visible emissions from training operations materials, other than those from “fog machines,” are exhibited outside training structures.
Test Method: Tier 2 Visible Emissions Survey requirements Section 2.1 of the Hanford AOP, Attachment 1 and/or EPA Method 9 of 40 CFR 60, Appendix A.
Test Frequency: Once per year, if visible emissions are observed (see Periodic Monitoring).
Required Records: Records of Tier 2 visible emission event surveys including EPA Method 9 results.
State-Only: No.
Calculation Model: Not applicable.

Condition Approval: 4/19/2007
Condition: Fugitive emissions from training operations shall be minimized. [WAC 173-400-040(4)(a)]
Periodic Monitoring: Use of operating procedures: (1) keep containers closed when not in use, and (2) ensure proper handling and storage to minimize unintentional losses.
Test Method: Not specified.
Test Frequency: Not applicable.
Required Records: Records of (1) fugitive release control procedure training, and (2) events which detail non-compliance with fugitive release control procedures or unintentional releases and response to such events.
State-Only: No
Calculation Model: Not applicable.

Condition Approval: 4/19/2007
Condition: Particulate Matter emissions from training materials shall not exceed 1,500 pounds per year (lb/yr). [WAC 173-400-110(5)(b)]
Periodic Monitoring: Material record-keeping.
Test Method: Not applicable.
Test Frequency: Not applicable.
Required Records: Material balance records which detail materials receipt and disposal, with a summary assessment of losses calculated each calendar quarter.
State-Only: No.
Calculation Model: Not applicable.

Condition Approval: 4/19/2007 (DE07NWP-001)
Condition: Volatile Organic Compound (VOC) emissions from training materials shall not exceed 4,000 pounds per year (lb/yr). [WAC 173-400-110(5)(b)]
Periodic Monitoring: Materials record-keeping.
Test Method: Not applicable.
Test Frequency: Not applicable.
Required Records: Material balance records which detail materials receipt and disposal with a summary assessment of losses, calculated each calendar quarter.
State-Only: No.
Calculation Model: Not applicable.

Condition Approval:	4/19/2007 (DE07NWP-001) and 7/31/2007 (Amendment 1)
Condition:	Emissions of all TAPs, as identified in Table 1 of NOC Order DE07NWP-001 (4/19/2007) and Amendment 1 (7/31/2007), or newly identified, shall be below their respective SQERs. [WAC 173-460-150]
Periodic Monitoring:	Materials record-keeping.
Test Method:	Not applicable.
Test Frequency:	Not applicable.
Required Records:	Material balance records which detail materials receipt and disposal with a summary assessment of losses, calculated each calendar quarter. Emission of any TAP exceeding SQERs detailed in Table 1 of Order DE07NWP-001 shall be reported to Ecology in accord with WAC 173-400-107. Identification of any TAP not previously identified within Order DE07NWP-001, shall be submitted to Ecology within 90 days of initiation of use in training with an estimate of annual emissions.
State-Only:	Yes.
Calculation Model:	Not applicable.

DISCHARGE POINT 100B-181B/182B

100 Area, Emergency Diesel Engines
Requirement Citation (WAC or Order Citation): DE07NWP-002

Condition Approval	6/27/2007
Condition:	(1) Visible emissions will not exceed 20 % during acceleration mode [WAC 173-400-040(2), 40 CFR §60.4205(b), and 40 CFR §89.113(a)(1)]. (2) Visible emissions will not exceed 15 % during lugging mode [40 CFR §60.4205(b), and 40 CFR §89.113(a)(2)]. (3) Visible emissions will not exceed 50 % during peak in either acceleration or lugging mode. [WAC 173-400-040(2)(a), 40 CFR §60.4205(b), and 40 CFR §89.113(a)(3)].
Periodic Monitoring:	Use Tier 1 Visible Emission Survey (Section 2.1 of AOP Attachment 1), unless otherwise specified (see Test Frequency below).
Test Method:	Tier 1 Visible Emissions Survey and EPA Method 9 (40 CFR §60, App. A). Test Frequency: Each engine authorized by this order shall be surveyed for visible emissions during maintenance and readiness testing and emergency-use based upon the following frequency or events: (1) During maintenance and readiness testing, a visible emission survey shall be conducted with each readiness test startup, (2) During emergency-use operations exceeding, or anticipated to exceed, eight hours duration, a visible emissions survey shall be conducted daily, (3) Visible emissions of each engine shall be determined by procedures detailed in 40 CFR 86 Subpart I (40 CFR §86.884 et seq.) within 90 days of initial startup and as required by Ecology.
Required Records:	Results of visible emissions survey and EPA Method 9 tests conducted pursuant to periodic monitoring.
State-Only	No.
Calculation Model	Not applicable.
Condition Approval	6/27/2007
Condition:	Emissions of Polyaromatic Hydrocarbons (PAHs) will not result in ambient concentrations exceeding $4.8E-04 \mu\text{g}/\text{m}^3$ [WAC 173-460-080(2)].
Periodic Monitoring:	Compliance will be demonstrated by calculation of the sum of PAH TAP emissions from all engines employing air pollution emission factors of AP 42, Table 3.3-2, for engines less than 600 HP, and AP-42, Table 3.4-4, for engines 600 HP and higher.
Test Method:	Not applicable.
Test Frequency:	Not applicable.
Required Records:	Calculations and dispersion analyses prepared semiannually in concert with cumulative operating hour calculations, retained for a minimum of 36 months. AP 42, fifth edition, shall be used for the calculation.
State-Only	Yes.
Calculation Model	Not applicable.

Condition Approval

6/27/2007

Condition:

Emissions of Toxic Air Pollutants (TAPs), as identified in the table below, 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

Periodic Monitoring:

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

Test Method:

Not applicable.

Test Frequency:

Not applicable.

Required Records:

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

State-Only

Yes.

Calculation Model

Not applicable.

Condition Approval

6/27/2007

Condition:

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

Periodic Monitoring:

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

Test Method:

Not applicable.

Test Frequency:

Not applicable.

Required Records:

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

State-Only

No.

Calculation Model

Not applicable.

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

Condition Approval 6/27/2007

Condition: Emission rates of installed engines shall not exceed values identified in the 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

- Periodic Monitoring: Compliance shall be demonstrated by:
- (1) procuring and installing only engines certified to emission standards of 40 CFR §60.4205(b) for the same model year and maximum engine rating [40 CFR §60.4211(c)].
 - (2) operating and maintaining the stationary compression ignition internal combustion engines and control devices according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer [40 CFR §60.4211(a)].
 - (3) installing and configuring the engines according to manufacturer specifications [40 CFR §60.4211(c)].
 - (4) maintaining records of engine certification as detailed in the Required Records below.
- Test Method: Not applicable.
- Test Frequency: Not applicable.
- Required Records:
- (1) Manufacturer's engine certifications.
 - (2) Records of cumulative operating hours for each engine, calculated semi-annually, will be retained for a minimum of 36 months.
 - (3) Records of emergency use operational duration and the basis of the emergency.
- State-Only: No.
- Calculation Model: Not applicable.

DISCHARGE POINT WTP HEATERS AND DEHUMIDIFIERS

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

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

Condition Approval	11/21/2007
Condition:	Emission Limits (1) Total Suspended Particulates emission shall not exceed 1.25 tons per year [WAC 173-400-110(5)(b)]. (2) PM-10 particulate emission shall not exceed 0.75 tons per year [WAC 173-400-110(5)(b)].
Periodic Monitoring:	Compliance shall be monitored by: (1) Emission of visible emissions of no more than five percent opacity during normal operation of diesel-fired heaters. (2) Diesel-fired heaters exceeding five percent opacity shall be removed from operation until maintenance of the unit results in visible emissions in compliance (no more than 5%). (3) Compliance with visible emissions survey requirements of Approval Condition 3.0 of the Approval Order DE07NWP-004. Visible emissions (VE) from diesel-fired heaters in normal operation (not start-up or shut-down) will be monitored through a VE survey described herein. A minimum representation of 20 percent of active diesel-fired heaters under this ORDER shall be subject to VE survey. If VEs from one of these emission units are observed for more than 10 consecutive minutes, an attempt to identify the cause(s) of the VEs will be made and those results recorded. The recorded entry also will identify any corrective actions taken and the likely frequency of a future reoccurrence. If the event is likely to be re-occurring, and can not be demonstrated to consist of water vapor, a determination of opacity will be made using EPA Method 9 of 40 CFR 60, Appendix A. A VE survey shall be conducted weekly for a period of three months. If weekly VE surveys do not demonstrate emissions in excess of Approval Condition 1.3.1, the VE survey frequency will reduce to once every three months for a period of six months. After nine months of no excess visible emissions, visible emission surveys will be performed for any diesel-fired heater subject to this ORDER only when visible emissions are observed during normal operation.
Test Method:	VE Surveys and/or EPA Method 9 of 40 CFR 60, Appendix A (if needed).
Test Frequency:	Not specified.
Required Records:	(1) VE Surveys and/or EPA Method 9 of 40 CFR 60, Appendix A, results. (2) Maintenance records for any diesel-fired heater removed from service.
State-Only	No.
Calculation Model	Not applicable.

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

DISCHARGE POINT 300 AREA/339A

300 Area Building 339A, Emergency Diesel Engine
Requirement Citation (WAC or Order Citation): DE08NWP-001

Condition Approval 9/24/2008
Condition: Visible emissions will not exceed 20 %. [WAC 173-400-040(2)].
Periodic Monitoring: Use Tier 1 Visible Emission Survey (Section 2.1 of AOP Attachment 1), unless otherwise specified.
Test Method: Tier 1 Visible Emissions Survey and EPA Method 9 (40 CFR §60, App. A).
Test Frequency: The engine authorized by this order shall be surveyed daily for visible emissions during emergency-use exceeding, or anticipated to exceed, eight hours duration.
Required Records: Results of visible emissions survey and EPA Method 9 tests conducted pursuant to periodic monitoring.
State-Only
Calculation Model No.
 Not applicable.

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

Condition Approval 9/24/2008
Condition: Emissions of Toxic Air Pollutants (TAPs), as identified in the table below, 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

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

Test Method: Not applicable.

Test Frequency: Not applicable.

Required Records: Calculations and dispersion analyses calculated annually.

State-Only No.

Calculation Model Not applicable.

Condition Approval 9/24/2008
Condition: Emissions of Polyaromatic Hydrocarbons (PAHs) will not result in ambient concentrations exceeding 4.8E-04 µg/m³ [WAC 173-460-080(3)].

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

Test Method: Not applicable.

Test Frequency: Not applicable.

Required Records: Calculations and dispersion analyses calculated annually.

State-Only No.

Calculation Model Not applicable.

Condition Approval 9/24/2008
Condition: Emissions of sulfur dioxide will not exceed two tons per year [WAC 173-400-110(5)(b)].

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

Test Method: Not applicable.

Test Frequency: Not applicable.

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

State-Only No.

Calculation Model Not applicable.

Condition Approval 9/24/2008

Condition: Emission rates of installed engine shall not exceed values identified in the 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

Periodic Monitoring: Compliance shall be demonstrated by:

- (1) procuring and installing an engine compliant with emission standards of 40 CFR §60.4205(a) for the same model year and maximum engine rating [40 CFR §60.4211(b)(3) with emission standards expressed in Table 1 to NSPS III].
- (2) operating and maintaining the stationary compression ignition internal combustion engines and control devices according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer [40 CFR §60.4211(a)].
- (3) maintaining records of engine manufacturing data as detailed in the Required Records below.

Test Method: Not applicable.

Test Frequency: Not applicable.

Required Records:

- (1) Manufacturer's engine data will be retained through the life of the engine.
- (2) Maintenance records for Periodic Monitoring (2) above shall be retained for 60 months minimum.
- (3) Records of cumulative operating hours for the engine, recorded annually, will be retained for 36 months maximum.
- (4) Records of emergency use operational duration and the basis of the emergency.

State-Only No.

Calculation Model Not applicable.

DISCHARGE POINT 241-AP, 241-SY, AND 241-AY/AZ VENTILATION

200E Area, Tank Farms - Ventilation

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

Condition Approval	11/30/2011
Condition:	EMISSION LIMITS Visible emissions will not exceed five (5)% opacity. [WAC 173-400-040(2)].
Periodic Monitoring:	Compliance and monitoring shall be met by Tier 3 visible Emission Survey requirements of the Hanford AOP, Section 2. Should visible emissions be observed which are not solely attributable to water condensation, compliance shall be met by performing an opacity determination utilizing 40 CFR 60, Appendix A, Method 9, providing that such determination shall not place the visible emission observer in hazard greater than that identified for the general worker.
Test Method:	40 CFR 60, Appendix A, Method 9
Test Frequency:	Not specified except when visible emissions are observed.
Required Records:	Visible emission survey records in which a visible emission was observed and is not solely attributable to water condensation. 40 CFR 60, Appendix A, Method 9 results if conducted. Visible emission survey records shall be submitted to Ecology within thirty (30) days of completion of the survey with an assessment of the cause of visible emissions and a report of the maintenance conducted to maintain the subject system's tBACT operations.
State-Only	No.
Calculation Model	Not applicable.
Condition Approval	11/30/2011
Condition:	EMISSION LIMITS VOC emissions shall not exceed 3.1 tons per year for the 241-SY system. Emissions of VOCs are based upon the operation of two tanks being mixed at the tank farm.
Periodic Monitoring:	Compliance with this condition shall be demonstrated by stack gas flow and temperature measurement.
Test Method:	VOC stack sampling and calculation as identified in the DE11NWP-001 Approval Condition 3.0.
Test Frequency:	Annually.
Required Records:	1. Records of exhauster system stack flow rates and temperature records. 2. Records of calibration of stack flow rate and temperature measurement devices. 3. Laboratory analysis result summaries from tank headspaces or primary tank ventilation system exhaust for VOCs.
State-Only	No.
Calculation Model	Not applicable.

Condition Approval	11/30/2011
Condition:	EMISSION LIMITS VOC emissions shall not exceed 3.8 tons per year for 241-AP system. Emissions of VOCs are based upon the operation of two tanks being mixed at the tank farm.
Periodic Monitoring:	Compliance with this condition shall be demonstrated by stack gas flow and temperature measurement.
Test Method:	VOC stack sampling and calculation as identified in the DE11NWP-001 Approval Condition 3.0.
Test Frequency:	Annually.
Required Records:	<ol style="list-style-type: none">1. Records of exhauster system stack flow rates and temperature records.2. Records of calibration of stack flow rate and temperature measurement devices.3. Laboratory analysis result summaries from tank headspaces or primary tank ventilation system exhaust for VOCs.
State-Only Calculation Model	No. Not applicable.
Condition Approval	11/30/2011
Condition:	EMISSION LIMITS VOC emissions shall not exceed 3.2 tons per year for 241-AY/AZ system. Emissions of VOCs are based upon the operation of two tanks being mixed at the tank farm.
Periodic Monitoring:	Compliance with this condition shall be demonstrated by stack gas flow and temperature measurement.
Test Method:	VOC stack sampling and calculation as identified in the DE11NWP-001 Approval Condition 3.0.
Test Frequency:	Annually.
Required Records:	<ol style="list-style-type: none">1. Records of exhauster system stack flow rates and temperature records.2. Records of calibration of stack flow rate and temperature measurement devices.3. Laboratory analysis result summaries from tank headspaces or primary tank ventilation system exhaust for VOCs.
State-Only Calculation Model	No. Not applicable.

Condition Approval

11/30/2011

Condition:

EMISSION LIMITS

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

Periodic Monitoring:

Compliance with this condition shall be met by:

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

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

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

Frequency:

Annually.

Test Method:

Stack sampling and calculations identified in the DE11NWP-001 Section 3.3.

Test Frequency:

Annually.

Required Records:

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

1. Records of exhauster system stack flow rates and temperature records.
2. Records of calibration of stack flow rate and temperature measurement devices.
3. Emission monitoring results required in DE11NWP-001 Section 3.0
4. Supporting data and calculations to demonstrate compliance as detailed in DE11NWP-001 Condition 1.4.4

3. Laboratory analysis result summaries from tank headspaces or primary tank ventilation system exhaust for TAPs.

4. Documentation and record-keeping of BACT and tBACT compliance of emission controls

State-Only

No.

Calculation Model

Not applicable.

Condition Approval	11/30/2011
Condition:	EMISSION LIMITS Ammonia emissions shall not exceed 58.1 pounds per year for 241-SY system.
Periodic Monitoring:	Conduct ammonia concentration readings as described in in section 3.1.1 and 3.4 of NOC Approval Order DE11NWP-001, and applying these concentration readings with contemporaneous stack flow rate and temperatures to determine mass release rate of ammonia.
Test Method:	Baseline assessment of ammonia stack concentrations shall be sampled a minimum of three times within ninety (90) days of commencement of operations. Ammonia sampling and analysis will be in accord with approved alternative sampling procedures including the use of Draeger tubes to measure stack gas concentration of ammonia providing such devices are spanned to appropriately measure the stack gas ammonia concentration. Stack flow rate and temperature will be applied with the ammonia stack gas concentration to report ammonia emission in terms of pounds per day.
Test Frequency:	<u>Baseline Assessments</u> Baseline assessments shall be conducted within ninety (90) days of commencement of operations. Results of baseline emission assessments shall be submitted to Ecology within ninety (90) days of completion of such assessment. <u>Quarterly Assessment</u> In order to maintain reasonable assurance of continued compliance with emission limitations from these exhauster systems, quarterly assessment of ammonia stack emissions will be conducted according to DE11NWP-001 Section 3.1.1. A minimum of three samples shall be used to assess these emissions.
Required Records:	Results of emission assessments, baseline and quarterly emission monitoring results, supporting data and calculations to demonstrate compliance with ammonia limits.
State-Only	No.
Calculation Model	Not applicable.
Condition Approval	11/30/2011
Condition:	EMISSION LIMITS Ammonia emissions shall not exceed 71.9 pounds per year for 241-AP system.
Periodic Monitoring:	Conduct ammonia concentration readings as described in in section 3.1.1 and 3.4 of NOC Approval Order DE11NWP-001, and applying these concentration readings with contemporaneous stack flow rate and temperatures to determine mass release rate of ammonia.
Test Method:	Baseline assessment of ammonia stack concentrations shall be performed a minimum of three times within ninety (90) days of commencement of operations . Ammonia sampling and analysis will be in accord with approved alternative sampling procedures including the use of Draeger tubes to measure stack gas concentration of ammonia providing such devices are spanned to appropriately measure the stack gas ammonia concentration. Stack flow rate and temperature will be applied with the ammonia stack gas concentration to report ammonia emission in terms of pounds per day.
Test Frequency:	<u>Baseline Assessments</u> Baseline assessments shall be conducted within ninety (90) days of commencement of operations. Results of baseline emission assessments shall be submitted to Ecology within ninety (90) days of completion of such assessment. <u>Quarterly Assessment</u> In order to maintain reasonable assurance of continued compliance with emission limitations from these exhauster systems, quarterly assessment of ammonia stack emissions will be conducted according to DE11NWP-001 Section 3.1.1. A minimum of three samples shall be used to assess these emissions.
Required Records:	Results of emission assessments, baseline and quarterly emission monitoring results, supporting data and calculations to demonstrate compliance with ammonia limits.
State-Only	No.
Calculation Model	Not applicable.

Condition Approval **11/30/2011**
Condition: **EMISSION LIMITS**
 Ammonia emissions shall not exceed 60.8 pounds per year for 241-AY/AZ system.

Periodic Monitoring: Conduct ammonia concentration readings as described in in section 3.1.1 and 3.4 of NOC Approval Order DE11NWP-001, and applying these concentration readings with contemporaneous stack flow rate and temperatures to determine instantaneous mass release rate of ammonia.

Test Method: Baseline assessment of ammonia stack concentrations shall be performed a minimum of three times within ninety (90) days of commencement of operations . Ammonia sampling and analysis will be in accord with approved alternative sampling procedures including the use of Draeger tubes to measure stack gas concentration of ammonia providing such devices are spanned to appropriately measure the stack gas ammonia concentration. Stack flow rate and temperature will be applied with the ammonia stack gas concentration to report ammonia emission in terms of pounds per day.

Test Frequency: Baseline Assessments Baseline assessments shall be conducted within ninety (90) days of commencement of operations. Results of baseline emission assessments shall be submitted to Ecology within ninety (90) days of completion of such assessment.
Quarterly Assessment In order to maintain reasonable assurance of continued compliance with emission limitations from these exhauster systems, quarterly assessment of ammonia stack emissions will be conducted according to DE11NWP-001 Section 3.1.1 . A minimum of three samples shall be used to assess these emissions.

Required Records: Results of emission assessments, baseline and quarterly emission monitoring results, supporting data and calculations to demonstrate compliance with ammonia limits.

State-Only No.
Calculation Model Not applicable.

Condition Approval **11/30/2011**
Condition: **OPERATIONAL LIMITS**
 Normal Double-Shell Tank (DST) primary tank ventilation system flow rates during Normal Operations (e.g. storage, retrieval, and sampling) are shown in the Table below. The maximum flow rates for the DST ventilation systems shall not exceed ventilation rates for Maximum 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

Periodic Monitoring: Stack gas flow and temperature measurement
Frequency: Annually.
Test Method: None Specified.
Required Records: Records of calibration of stack gas flow rate and temperature measurement devices.
 Records of exhaust system stack flow rate and temperature measurements.

State-Only No.
Calculation Model Not applicable.

Condition Approval	11/30/2011
Condition:	OPERATIONAL LIMITS No more than two of the three tanks in the 241-SY Tank Farm (241-SY-101 through 241-SY-103) shall be under active mixing and Waste Feed Delivery operations at any one time. Waste Feed Delivery operations are defined as those which mix and transfer waste, including transfers to the Waste Treatment and Immobilization Plant.
Periodic Monitoring:	Compliance and monitoring of this condition shall be demonstrated by operational record keeping of Waste Feed Delivery operations recorded into operational records sufficient to determine onset and cessation of such operations for each tank.
Test Method:	Not specified
Test Frequency:	Not applicable.
Required Records:	Operational records
State-Only	No.
Calculation Model	Not applicable.
Condition Approval	11/30/2011
Condition:	OPERATIONAL LIMITS No more than two of the eight tanks in the 241-AP Tank Farm (241-AP-101 through 241-AP-108) shall be under active mixing and Waste Feed Delivery operations at any one time. Waste Feed Delivery operations are defined as those which mix and transfer waste, including transfers to the Waste Treatment and immobilization Plant.
Periodic Monitoring:	Compliance and monitoring of this condition shall be demonstrated by operational record keeping of Waste Feed Delivery operations recorded into operational records sufficient to determine onset and cessation of such operations for each tank.
Test Method:	Not specified
Test Frequency:	Not applicable.
Required Records:	Operational records
State-Only	No.
Calculation Model	Not applicable.
Condition Approval	11/30/2011
Condition:	OPERATIONAL LIMITS No more than two of the four tanks within the 241-AY and 241-AZ Tank Farm (241-AY-101, 241-AY-102, 241AZ-101, and 241-AZ-102) shall be under active mixing and Waste Feed Delivery operations at any one time. Waste Feed Delivery operations are defined as those which mix and transfer waste, including transfers to the Waste Treatment and immobilization Plant.
Periodic Monitoring:	Compliance and monitoring of this condition shall be demonstrated by operational record keeping of Waste Feed Delivery operations recorded into operational records sufficient to determine onset and cessation of such operations for each tank.
Test Method:	Not specified
Test Frequency:	Not applicable.
Required Records:	Operational records
State-Only	No.
Calculation Model	Not applicable.

DISCHARGE POINT LAGOON TREATMENT SYSTEM

200W Area,
Requirement Citation (WAC or Order Citation): NOC Approval Order DE12NWP-001 (2/6/2012)

Condition Approval	2/6/2012
Condition:	All TAPs, as submitted in the Permittee's Notice of Construction Application, shall be below their respective ASIL
Periodic Monitoring:	Emission estimation (Condition 3.2 of the NOC).
Test Method:	Surrogate wastewater sampling identified in the NOC section 3.0.
Test Frequency:	Annually.
Required Records:	Results of analyses.
State-Only	No.
Calculation Model	Not applicable.

1.4.4 Miscellaneous Emission Units

Table 1.7 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.
	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.
600 Area Gas Distribution	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.

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

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

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

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

Tier 3

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

2.2 General Standards Complaint Investigations

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

2.3 Measures to Control Fugitive Emissions and Fugitive Dust

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

1. Watering
2. Use of chemical stabilizers
3. Use of physical barriers and/or physical stabilization
4. Use of vegetative stabilization
5. Clearing only limited areas to reduce dust generation

6. Covering haul vehicles
7. Minimizing track-out
8. Controlling site traffic to decrease disturbance of soil and vegetation to decrease dust generated from unnecessary vehicular travel.

2.4 Reserved

2.5 Recordkeeping for Boilers

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

2.6 Steam Generating Units Source Tests

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

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

Distillate oil-fired boilers	Number of units
200 BHP	5
350 BHP	3
700 BHP	2
Natural gas-fired boilers	Number of units
200 BHP	2
300 BHP	4

In 2005 the U.S. Department of Energy Richland Office (DOE-RL) requested the removal of Air Operating Permit compliance testing for the energy-saving fossil fuel fired boilers operated by Johnson Controls, Inc (JCI) since 1998 at the Hanford Site. JCI conducted the initial air

compliance test in 1998, and the first 5-year follow-up test in 2003. Both tests demonstrated that the emissions were within the limits stated in the Notice of Construction (NOC) and Air Operating Permit (AOP). It is obvious that the same compliance can be maintained by continuously using low sulfur fuel and implementing good combustion practices. Ecology approved the request of eliminating future 5-year compliance tests on June 15, 2005. The emissions will be within the NOC and AOP limits as long as JCI continues to use low sulfur fuel and maintain good combustion practice and maximum achievable control technology (MACT) standards.

2.7 SO₂ Emissions Compliance

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

Tier 2: Other Significant Emission Units:

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

2.8 Visible Emissions Enforceability

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

2.9 SO₂ Enforceability

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

3.0 RECORDKEEPING

The Permittee shall maintain records of all required monitoring data and support information. These records shall be maintained for 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, all original continuous monitoring records (such as strip charts or equivalent), and required reports. Most of these records are retained on-site in electronic format. Regulatory agencies accept electronic records as supporting information.
[WAC 173-401-615(2)(a), WAC 173-401-615(2)(c)]

3.1 Emission Calculations

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