Air Operating Permit - Final

ConocoPhillips
Ferndale Refinery

Ferndale, Washington

January 1, 2011

northwest Clean Air agency

Serving Island, Skagit & Whatcom Counties

PERMIT INFORMATION

ConocoPhillips Company
3901 Unick Road, Ferndale, WA 98248

SIC: 2911
NAICS: 324110
NWCAA ID: 004-V-W
EPA AFS: 53-073-00005

Responsible Corporate Official

Marjorie Hatter
Refinery Manager
ConocoPhillips Company
PO Box 8
Ferndale, WA 98248-0008
(360) 384-8343
m.hatter@conocophillips.com

Corporate Inspection Contact

Sandy Paris
Environmental Supervisor
ConocoPhillips Company
PO Box 8
Ferndale, WA 98248
(360) 384-8375
Sandy.Paris@conocophillips.com

Northwest Clean Air Agency

1600 South Second Street
Mount Vernon, Washington 98273-5202
(360) 428-1617

Prepared by

Annie Naismith
Senior Engineer
(360) 428-1617 x 225

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Permit Modifications	**Modification Date:**
Supersedes Permit Number:	**Expiration Date:**
016	January 1, 2016
Application Received Date:	**Renewal Application Due:**
November 16, 2007	January 1, 2015

ATTEST

This permit is issued in accordance with the provisions of Section 322 of the Regulation of the Northwest Clean Air Agency and the provisions of Chapter 173-401 Washington Administrative Code.

Pursuant to Section 322 of the Regulation of the Northwest Clean Air Agency and Chapter 173-401 Washington Administrative Code, ConocoPhillips Company is authorized to operate subject to the terms and conditions of this permit.

Northwest Clean Air Agency Approval:

Date:	Date:
Annie Naismith, P.E. Senior Engineer	Mark Buford, P.E. Assistant Director

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SECTION 1 EMISSIONS UNIT DESCRIPTIONS

These tables list emission units and activities included within this permit that are located at the ConocoPhillips Ferndale Refinery, located in Ferndale, Washington, and hereinafter referred to as ConocoPhillips, COP, the facility, owner or operator, or the permittee. The information presented here in Section 1 is for informational purposes, only. The emission unit tables have been organized into logical groupings of the following processes, support, or treatment areas:

Table 1-1 Primary Crude Processing Area

Table 1-2 Catalytic Cracking Process Area

Table 1-3 Alkylation Process Area

Table 1-4 Reformer/Diesel Hydrotreater (DHT) Process Area

Table 1-5 Sulfur Plant/Treaters Process Area

Table 1-6 Utilities Plant

Table 1-7 Effluent Treatment Plant

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Table 1-9 Flare System

Table 1-10 Transfer (Loading) Racks

Table 1-11 Fire Training

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Table 1-1 Primary Crude Processing Area

Type and Description	Construction/ Modification Year	Notes
Individual Drain Systems		40 CFR part 61 subpart FF and part 63 Subpart CC affected waste streams
Miscellaneous Process Vent – HDF Stripper Offgas	1953	HDF stripper accumulator off gas (sent to refinery flare/fuel gas system by wet gas compressors)
1F-1A Crude Heater	1972	Combusts refinery fuel gas. Individual stack
1F-1 Crude Heater	1953, 1979	Combusts refinery fuel gas. Individual stack
14F-1, -2 HDF Heaters, Passes 1 and 2	1953	Refinery fuel gas.
#2 Hydrofiner Components in VOC/HAP service	2003	Valves, pumps, flanges, connectors

Type and Description	Construction/ Modification Year	Notes
#2 Hydrofiner Individual Drain Systems	2003	Subject to 40 CFR part 60 Subpart QQQ except streams subject to 40 CFR part 63 subpart CC
Equipment Components in HAP Service		Valves, pumps, flanges, connectors

Table 1-2 Catalytic Cracking Process Area

Type and Description	Construction/ Modification Year	Notes
Individual Drain Systems		40 CFR part 61 subpart FF and Subpart CC affected waste streams
Individual Drain Systems		Subject to 40 CFR part 60 Subpart QQQ except streams subject to 40 CFR part 63 subpart CC
Miscellaneous process vents vane case drains 5K-1 & 5K-1A	1953	Vented to atmosphere (group II)
FCCU Miscellaneous process vent 25-FV-007	1953, 2003	Vented to flare gas recovery/refinery flare (group I)
Vacuum Distillation, Unsaturated Gas Plant, Components in VOC/HAP Service	1953, 2003	Valves, pumps, flanges, connectors
FCCU, and CO Boiler Process Units Components in VOC/HAP Service	2003	Valves, pumps, flanges, connectors
FCCU Regenerator	2003	Exhausts through the CO Boiler and wet gas scrubber.
Carbon Monoxide (CO) Boiler	2003	Combusts refinery fuel gas and other process gas streams.
4F-100 FCCU Combustion Air Heater	2003	Combusts refinery fuel gas
Vacuum Distillation Tower Vacuum system	1953, 2003	
4F-2 Vacuum Flasher Heater	1953	Combusts refinery gas. Selective Catalytic Reduction added 2009.

Table 1-3 Alkylation Process Area

Type and Description	Construction/ Modification Year	Notes
Individual Drain Systems		40 CFR part 61 subpart FF and Subpart CC affected waste streams
Individual Drain Systems		Subject to 40 CFR part 60 Subpart QQQ except streams subject to 40 CFR part 63 subpart CC
Miscellaneous Process Vent 17HC-1717	1953	Olefin feed surge drum manual vent to flare gas recovery/refinery flare
Equipment in VOC/HAP Service (LSR Splitter, Cat Gas Splitter and Saturated Gas Plant)	1953	Valves, pumps, flanges, connectors
Equipment in VOC or HAP Service (Alkylation non-	1953, 2003	Valves, pumps, flanges, connectors

Type and Description	Construction/ Modification Year	Notes
acid section and alky debutanizer)		
Equipment in VOC or HAP Service (Alkylation acid section)	1953, 2003	Valves, pumps, flanges, connectors
17F-1 Alky Depropanizer Reboiler Heater	1953	Combusts refinery fuel gas
Butane Isomerization Unit Equipment in VOC Service (non-HAP)	1997	Valves, pumps, flanges, connectors
Butane Isomerization Equipment in Perchloroethylene Service	1997	Valves, pumps, flanges, connectors
38F-101 Cat Gas Desulfurizer (S-Zorb Unit) Feed Heater	2003	Combusts refinery fuel gas or natural gas.
Cat Gas Desulfurizer (S-Zorb Unit) Equipment in Organic HAP Service	2003	

Table 1-4 Reformer/Diesel Hydrotreater (DHT) Process Area

Type and Description	Construction/ Modification Year	Notes
Individual Drain Systems		40 CFR part 61 subpart FF and Subpart CC affected waste streams
DHT Individual drain systems in VOC (non-HAP) service	1992	Subject to 40 CFR part 60 Subpart QQQ
18F-1 #3 Reformer Pretreater Heater	1972	Combusts reformer fuel gas
18F-26 #3 Reformer Catalyst Regeneration Heater	1972	Combusts reformer fuel gas
Equipment in VOC and or HAP Service		Valves, pumps, flanges, connectors
Miscellaneous Process Vents		Reformer RBV body vents, Reformer reactor shroud vents, Reformer reactor dump nozzle, DHT sour water drain drum 33C-40 flash gas. All process vents to flare gas recovery/refinery flare.
#3 Reformer Catalyst Regeneration Vents	1972	
33F-1 Diesel Hydrotreater (DHT) Heater	1992, 1995, 2001	Combusts natural gas, reformer fuel gas
18F-21, -22 #3 Reformer Heater, Passes 1 and 2	1972	Combusts reformer fuel gas. Single heater stack
18F-23, -24 #3 Reformer Heater, Passes 3 and 4	1972	Combusts reformer fuel gas. Single heater stack

Table 1-5 Sulfur Plant/Treaters Process Area

Type and Description	Construction/ Modification Year	Notes
Individual Drain Systems		40 CFR part 61 subpart FF and part 63 Subpart CC affected waste streams
Individual Drain Systems		Subject to 40 CFR part 60 Subpart QQQ except streams subject to 40 CFR part 63 subpart CC
Sulfur Recovery Unit #1 (Claus Sulfur Recovery Unit and SCOT Tail Gas Unit)	1978, 1990, 1998, 2003	Single train three stage Claus Sulfur Recovery Unit +SCOT Tail Gas Treating Unit. Oxygen enrichment added 1998. Oxygen injection added 2003.
Sulfur Recovery Unit #2 (Claus Sulfur Recovery Unit and Scot Tail Gas Unit)	2007	Single train three- stage Claus Sulfur Recovery Unit +SCOT Tail Gas Treating Unit.
Sulfur Plant /Treaters Equipment in HAP service	1978	
Merox Extraction Unit Equipment in HAP service	2000	
Merox Extraction Unit Equipment in VOC service (non-HAP)	2000	
Merox Extraction Unit	2000	

Table 1-6 Utilities Plant

Type and Description	Construction/ Modification Year	Notes
Individual Drain Systems		40 CFR part 61 FF and Subpart CC affected waste streams
Equipment in VOC Service (non-HAP)		Valves, pumps, flanges, connectors
22F-1C #1 Boiler	1996	Combusts natural gas and refinery fuel gas
22F-1A #2 Boiler	1953	Combusts refinery fuel gas
22F-1B #3 Boiler	1953	Combusts refinery fuel gas
22F-1E #4 Boiler	2004	Combusts natural gas, refinery fuel gas
Cooling Tower #1	1953	
Cooling Tower #2	1953	
Caterpillar Model 3412 Emergency Generator	2004	

Table 1-7 Effluent Treatment Plant

Type and Description	Construction/ Modification Year	Notes
Individual Drain Systems (including Phenolic/oily water lift station)		40 CFR part 61 FF and Subpart CC affected waste streams
12S-204 Induced Air Flotation Unit (IAF)		Sealed, no vent
12S-2 API Separator		Floating/fixed roof
Closed vent systems and control devices		Controlled by activated carbon adsorption and gasketed closures
Vacuum trucks		
Wastewater Treatment System		

Table 1-8 Storage Vessels

Type and Description	Construction/ Modification Year	Notes
Individual Drain Systems		40 CFR part 61 subpart FF and Subpart CC affected waste streams
Individual Drain Systems		Subject to 40 CFR part 60 Subpart QQQ except streams subject to 40 CFR part 63 subpart CC
Equipment in VOC and or HAP Service		Valves, pumps, flanges, connectors
Tank Group 1 1340X110, 1340 X112, 1340X113, 1340X115, 1340X116, 1340X117, 300X43, 300X45, 550X101, 6000X1, 800X141, 800X143, 800X144, 1340X111, 1340X114, 3000X1, 300X41, 300X42, 550X102, 550X106, 800X142, 800X145, 800X151		External Floating Roof Storage Vessels subject to NWCAA 560, 580.3, 580.9 and Refinery MACT Phase I Group 1.
Tank Group 3 300X44		External Floating Roof Storage Vessels subject to NWCAA 560, 580.3, 580.9 and Subpart Kb
Tank Group 4 100X92		External Floating Roof Storage Vessels subject to NWCAA 560, 580.3, 580.9 Refinery MACT Phase I Group 1 and Subpart Kb (via OAC #314)
Tank Group 5 900X1, 900X2, 900X3		External Floating Roof Wastewater Storage Vessels subject to NWCAA 560, 580.3, 580.9, Subpart FF and Subpart Kb
Tank Group 6 100X95		External Floating Roof Wastewater Storage Vessels subject to NWCAA 560, 580.3, 580.9, Subpart FF, and Subpart Kb (via OAC #314)
Tank Group 7 100X96, 50X304		Internal Floating Roof Storage Vessels subject to 560, 580.3 and Refinery MACT Phase I Group 1
Tank Group 8: 400X1		Internal Floating Roof Storage Vessels subject to NWCAA 560, 580.3 and Subpart Kb

Type and Description	Construction/ Modification Year	Notes
Tank Group 9 300X40, 100X98		Internal Floating Roof Wastewater Storage Vessels subject to NWCAA 560, 580.3, Subpart FF, and Subpart Kb (via OAC #314)
Tank Group 10 100X99, 100X94		Internal Floating Roof Wastewater Storage Vessels subject to NWCAA 560, 580.3, and Subpart FF
Tank Group 11 6X10, 6X11, 50X300, 50X301, 50X302, 50X303, 100X91, 300X36, 300X37, 300X38, 300X39, 550X100, 550X103, 550X104, 550X105, 800X140, 800X146, 800X147, 800X148, 800X149, 800X150, 960X1		Storage Vessels subject only to Refinery MACT Phase I Group 2
Tank Group 12 300X35, 300X46		External Floating Roof Wastewater Storage Vessels subject to NWCAA 560, 580.3, 580.9, and Subpart FF

Table 1-9 Flare System

Type and Description	Construction/ Modification Year	Notes
Individual Drain Systems serving 40 CFR part 61 subpart FF and Subpart CC affected waste streams		Affected waste streams (including tank water draws) are listed in the refinery's annual Total Annual Benzene (TAB) report.
Equipment in VOC and or HAP Service		Valves, pumps, flanges, connectors
ZTOF 13V-10	1972	Main Refinery Flare
Ground Flare 13D-16	1954	Emergency Flare
Flare Gas Recovery System	Construction by Dec. 31, 2011	Consent Decree project to reduce fuel gas flaring.

Table 1-10 Transfer (Loading) Racks

Type and Description	Construction/ Modification Year	Notes
Individual Drain Systems		40 CFR part 61 Subpart FF and Subpart CC affected waste streams
Equipment in VOC and or HAP Service		Valves, pumps, flanges, connectors
Gasoline/Diesel Truck Load Rack Vapor Combustion Device (13V-11)	1990	John Zink Model GV-ZTOF-2400-1
Gasoline/Diesel Truck Load Rack	1953	One loading island

Type and Description	Construction/ Modification Year	Notes
Components in VOC/HAP Service		
Marine Terminal	1953	
Propane/Butane Railcar Loading Rack	1980	Insignificant Emission Unit
Diesel Railcar Loading Rack	1953	Railcars are top loaded
LPG Truck Loading		

Table 1-11 Fire Training

Emission Unit Type and Description	Construction/ Modification Year	Notes
Fire Training Grounds	1953	Permitted Annually with an Outdoor Fire Permit

Table 1-12 Miscellaneous Individual Drain Systems and Wastes

Type and Description	Construction/ Modification Year	Notes
Engine Lab Individual Drain Systems	2008	40 CFR part 61 subpart FF and Subpart CC affected waste streams
Engine Lab Individual Drain Systems	2008	Subject to 40 CFR part 60 Subpart QQQ except streams subject to 40 CFR part 63 subpart CC
Spills and Miscellaneous Waste Streams		40 CFR part 61 subpart FF and Subpart CC affected waste streams
Laboratory Waste Individual Drain Systems	2008	
Laboratory Individual Drain Systems	2008	Subject to 40 CFR part 60 Subpart QQQ except streams subject to 40 CFR part 63 subpart CC
Solid Waste		Subject to 40 CFR Part 61 subpart FF

SECTION 2 STANDARD TERMS AND CONDITIONS

Standard terms and conditions are administrative and/or other requirements that typically have no ongoing compliance monitoring requirements. The permittee must comply with the requirements listed below. All listed terms and conditions of this permit are enforceable by the Environmental Protection Agency (EPA) Administrator and by citizens under the Federal Clean Air Act (FCAA), except for those terms and conditions designated in the permit as "State Only". A requirement designated "State Only" is enforceable only by the state or the NWCAA, and not by EPA or through citizen suits. Unless the text of the term is specifically identified to be "Directly Enforceable", the language of the cited regulation takes precedence over a paraphrased requirement. A permit condition labeled "Directly Enforceable" is a legal requirement, and the permit shield in Section 2.3.1 of this permit applies.

2.1 Compliance Requirements

2.1.1 Duty to Comply

2.1.1.1 WAC 173-401-620(2)(a) (11/4/93)

The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of RCW 70.94 and, for federally enforceable provisions, a violation of the Federal Clean Air Act (FCAA). Such violations are grounds for enforcement action; for permit termination, revocation and re-issuance, or modification; or for denial of a permit renewal application.

2.1.1.2 State Only: NWCAA 322.3 (11/12/99)

It shall be unlawful for any person to operate a source that is subject to the requirements of Chapter 173-401 WAC without complying with the provisions of Chapter 173-401 WAC and any permit issued under its authority.

2.1.2 Civil and Criminal Penalties

2.1.2.1 WAC 173-400-230(2) (3/20/93), WAC 173-400-240 (3/22/91), NWCAA 132 & 133 (10/13/94), and Section 113 of the FCAA

Civil and criminal penalties may be issued in accordance with the applicable regulations listed above.

2.1.2.2 State Only: NWCAA 132 & 133 (11/8/07)

Civil and criminal penalties may be issued in accordance with the applicable regulations listed above. Under this "State Only" version of NWCAA 132, criminal penalties may be assessed on a "per day, per violation" basis.

Any person who violates the provisions of the applicable chapters of the RCW or the Regulations of the Northwest Clean Air Agency (NWCAA) or aids and abets in a violation shall be subject to civil penalties as stated in the above regulations.

2.1.3 Need to Halt or Reduce Activity Not a Defense

WAC 173-401-620(2)(b) (11/4/93)

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the terms and conditions of this permit.

2.1.4 Duty to Provide Information

WAC 173-401-620(2)(e) (11/4/93)

The permittee shall furnish to the NWCAA, within a reasonable time, any information that the NWCAA may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the NWCAA copies of records required to be kept by the permit or, for information claimed to be confidential, the permittee may furnish such records directly to the EPA Administrator along with a claim of confidentiality. The NWCAA shall maintain confidentiality of such information in accordance with RCW 70.94.205 and the NWCAA Regulation.

2.1.5 Confidential Information

2.1.5.1 NWCAA 114.1 (4/14/93)

Whenever the permittee requests that records or information eligible for confidentiality status be made confidential by the Board of the NWCAA, the NWCAA shall maintain confidentiality of such information in accordance with NWCAA 114. The records or information shall be only for the confidential use of the Board, the Advisory Council, and the NWCAA staff, but may not be accessed if, in the opinion of the Board, there is a conflict of interest.

2.1.5.2 State Only: NWCAA 114.1 (11/8/07)

Whenever any records or other information other than ambient air quality data or emission data furnished to or obtained by the Agency, relates to processes or production unique to the owner or operator, or are likely to affect adversely the competitive position of such owner or operator if released to the public or to a competitor, and the owner or operator of such processes or production so certifies, such records or information shall be only for the confidential use of the NWCAA.

Nothing herein shall be construed to prevent the use of records or information by the NWCAA in compiling or publishing analyses or summaries relating to the general condition of the outdoor atmosphere: provided, that such analyses or summaries do not reveal any information otherwise confidential under the provisions of this section: provided further, that emission data furnished to or obtained by the Board shall be correlated with applicable emission limitations and other control measures and shall be available for public inspection during normal business hours at the office of the NWCAA.

2.1.6 Inspection and Entry

WAC 173-400-105(3) (9/20/93), WAC 173-401-630(2) (11/4/93) NWCAA 110 & 111 (1/8/69)

Upon presentation of credentials and other documents as may be required by law, the permittee shall allow Ecology, NWCAA or an authorized representative to:

(i) Enter upon the permittee's premises where a Chapter 401 source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;

(ii) Have access to and copy, at reasonable times, any records that must be kept under the condition of the permit;

(iii) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and

(iv) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

No person shall willfully interfere with or obstruct the Control Officer or any NWCAA employee and/or assigned agent in carrying out any lawful duty.

2.1.7 Investigation and Studies

NWCAA 110 (1/8/69)

The Control Officer and/or his qualified agents may make any reasonable investigation or study which is necessary for the purpose of standards or any amendments thereto on reducing the amount or kind of contaminant.

When investigating conditions specific to the control, recovery or release of air contaminants, the Control Officer or his duly authorized representatives shall have the power to enter at reasonable times upon any private or public property, except non-multiple unit private dwellings housing two families or less.

If an authorized employee of the Agency, during the course of an inspection desires to obtain a sample of air contaminant, he shall notify the owner or lessee of the time and place of obtaining a sample so the owner or lessee has the opportunity to take a similar sample at the same time and place. A receipt shall be given to the owner or lessee for the sample obtained.

2.1.8 Source Testing

2.1.8.1 WAC 173-400-105(4) (9/20/93)

To demonstrate compliance, Ecology or the NWCAA may conduct or require that a test be conducted of the source using approved EPA methods from 40 CFR Parts Appendix A which are adopted by reference, or approved procedures contained in the "Source Test Manual – Procedures for Compliance Testing," state of Washington, Department of Ecology, as of July 12, 1990, on file at Ecology. The operator of a source may be required to provide the necessary platform and sampling ports for Ecology personnel or others to perform a test of an emissions unit. Ecology shall be allowed to obtain a sample from any emissions unit. The operator of the source shall be given an opportunity to observe the sampling and to obtain a sample at the same time.

2.1.8.2 State Only: WAC 173-400-105(4) (6/8/07)

To demonstrate compliance, the required test must be conducted using approved EPA methods from 40 CFR Parts 51, 60, 61, and 63 (in effect on October 1, 2006). All other language is the same as 2.1.8.1.

2.1.8.3 State Only: NWCAA 367 and Appendix A (7/14/05)

Source tests required by NWCAA to assess compliance with an air emission standard shall be conducted according to the following provisions:

(i) A source test plan shall be submitted to the NWCAA for approval for all compliance source tests at least 30 days prior to scheduled testing. A summary of the test shall accompany the test plan and be submitted on a template provided by NWCAA.

(ii) Once a test plan has been approved, any changes in test dates or methodology shall require NWCAA approval.

(iii) Results of required source tests must be submitted within sixty days of completion of the test unless prior approval is granted by NWCAA.

2.1.9 Testing and Sampling

2.1.9.1 NWCAA 360.1 (2/14/73)

Any person operating or using any article, machine, equipment or other contrivance shall provide and maintain such sampling and testing facilities as specified in the approval to construct or an Air Operating Permit.

2.1.9.2 State Only: NWCAA 367 and Appendix A (7/14/05)

All ambient monitoring, compliance testing, continuous monitoring systems and continuous opacity monitoring systems required by a regulation, order of approval or permit issued by the NWCAA shall comply with the applicable requirement of Section 367 and Appendix A of the NWCAA Regulation. The applicable requirements of Section 367 and Appendix A of the NWCAA Regulation are in addition to any monitoring, testing, calibration or quality assurance/quality control requirements that otherwise apply.

Any person operating an air operating permit source may, at any time, be required to monitor the ambient air, process emissions or conduct emission tests as deemed necessary by the Control Officer:

The Control Officer may take such samples and make any tests and investigations deemed necessary to determine the accuracy of the monitoring reports and tests submitted to the Agency, and evaluate the validity of the data. The owner or operator may also be required by the Control Officer to take a sample using an approved procedure and submit the results thereof within a reasonable period of time.

Once initiated, a compliance test shall be completed unless interrupted by severe weather, test equipment failure or other conditions beyond control of the facility. Failure to complete a test shall be a violation of the requirement to test, and, in cases where the initial data indicate a non-compliance of the applicable emission standard, the results may be considered a violation of that standard.

2.1.10 Ambient Air and Continuous Emission Monitoring

2.1.10.1 NWCAA 365.1 (2/8/89)

Any person operating an air contaminant source or an air operating permit source may, at any time, be required to monitor the ambient air, process emissions or conduct emission tests as deemed necessary by the Control Officer under the following provisions:

The Board or Control Officer may require any person operating any source to conduct a monitoring program on site or adjacent off site for emissions, ambient air concentrations or any other pertinent special studies deemed necessary.

All monitoring data shall be submitted in a form which the Board or Control Officer may require. Averaging time and collection periods will be determined by the Control Officer. Failure to record and/or report data as specified in the "Guidelines for Industrial Monitoring Equipment and Data Handling" may be cause for a Notice of Violation to be issued.

All data and records shall be kept for a period of at least one year and made available to the Control Officer upon request.

All required continuous emission monitors or required opacity monitors used to monitor compliance and all instruments used for special studies must meet appropriate EPA performance specifications (40 CFR 60, Appendix B) and shall be calibrated and maintained in accordance with the "Guidelines for Industrial Monitoring Equipment and Data Handling" procedures approved by the Control Officer.

The Control Officer may take such samples and make any tests and investigations deemed necessary to determine the accuracy of the monitoring reports and tests submitted to the Authority, and evaluate the validity of the data. The owner or operator may also be required by the Control Officer to take a sample using an approved procedure and submit the results thereof within a reasonable period of time.

The Board or the Control Officer may require additional reasonable monitoring be undertaken at any appropriate time to insure compliance with this Regulation.

2.1.10.2 State Only: NWCAA 367 and Appendix A (7/14/05)

All ambient air monitors shall be operated and maintained as required by the appropriate Sections of 40 CFR Parts 50 and 58.

A Quality Assurance (QA) manual and station log book shall be kept for all stations. Written calibration and precision/span check procedures shall be included in the QA manual. A station audit shall be conducted by NWCAA at least once per year.

Unless subject to acid rain regulations (40 CFR Part 72 and 75), all continuous emissions monitoring systems (CEMS) shall be capable of meeting appropriate EPA performance specifications using procedures outlined in 40 CFR Part 60 Appendix B. CEMS subject to acid rain regulations shall be capable of meeting the specifications outlined in the appropriate section of 40 CFR Part 75.

All CEMS shall be operated in accordance with the appropriate section of 40 CFR Part 60 Appendix F, and the operator shall assess the operation of each CEMS daily.

Continuous opacity monitors shall be maintained according to "Recommended Quality Assurance Procedures for Opacity Continuous Monitoring Systems" (EPA 340/1-86-10) and the manufacturer's procedures. All gaseous CEMS shall be maintained using the QA criteria of 40 CFR Part 60 Appendix F and the manufacturer's procedures.

Auditing of opacity monitors shall be conducted according to recommended procedures. Data accuracy assessments shall be conducted at least once every calendar quarter for gaseous monitors and at appropriate periodic intervals. Relative Accuracy Test Audits (RATAs), Relative Accuracy Audits (RAAs) and Cylinder Gas Audits (CGAs) shall be employed as described in 40 CFR Part 60 (or 40 CFR Part 75 if the facility is subject to acid rain regulations).

Strip charts and approved data acquisition systems shall be used to capture and store data. All data must be retained for a period of at least five years and be available to the NWCAA upon request.

CEMS are required to maintain greater than 90% data availability on a monthly basis. A supplemental report shall be submitted if during any calendar month a CEMS fails to produce 90% data availability stating the reasons for the low data availability.

2.1.11 Credible Evidence

40 CFR 51.212(c) (2/24/97), 40 CFR 52.12 (2/24/97), and 40 CFR 52.33 (2/24/97)

For the purpose of compliance certifications or establishing whether or not a person has violated or is in violation of this permit, nothing shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

2.2 Permit Terms

2.2.1 Permit Expiration and Renewal

WAC 173-401-610 (11/4/93) and WAC 173-401-710 (10/17/02)

This permit is issued for a fixed term of five years from date of issuance. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted. A complete permit renewal application shall be submitted to the NWCAA no later than the date established in the permit.

2.2.2 Permit Actions

WAC 173-401-620(2)(c) (11/4/93)

This permit may be modified, revoked, reopened, reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and re-issuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

2.2.3 Emissions Trading

WAC 173-401-620(2)(g) (11/4/93)

No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading, and other similar programs or processes, for changes that are provided for in this permit.

2.2.4 Emission Reduction Credits

State Only: WAC 173-400-136 (2/10/05)

An emission reduction credit may be used in accordance with the applicable regulation listed above.

2.2.5 Severability

WAC 173-401-620(2)(h) (11/4/93)

If any provision of this permit is held to be invalid, all unaffected provisions of the permit shall remain in effect and be enforceable.

2.2.6 Permit Appeals

WAC 173-401-620(2)(i) (11/4/93) and WAC 173-401-735 (5/3/97)

This permit or any conditions in it may be appealed only by filing an appeal with the pollution control hearings board and serving it on the NWCAA within thirty days of receipt. This provision for appeal is separate from and in addition to any federal rights to petition and review under 505(b) of the FCAA.

2.2.7 Permit Continuation

WAC 173-401-620(2)(j) (11/4/93)

This permit and all terms and conditions contained therein, including any permit shield provided under WAC 173-401-640, shall not expire until the renewal permit has been issued or denied if a timely and complete application has been submitted. If a timely and complete application has been submitted, an application shield granted pursuant to WAC 173-401-705(2) shall remain in effect until the renewal permit has been issued or denied.

2.2.8 Reopening for Cause

WAC 173-401-730(11/4/93)

The permit shall be reopened and revised under any of the following circumstances:

(i) Additional requirements become applicable to the source with a remaining permit term of three or more years. Such a reopening shall be completed no later than eighteen months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions have been extended pursuant to WAC 173-401-620(2)(j);

(ii) Additional requirements (including excess emissions requirements) become applicable to an affected source under the acid rain program. Upon approval by the EPA Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit;

(iii) The NWCAA or the EPA Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or

(iv) The NWCAA or the EPA Administrator determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

2.2.9 Changes not Requiring Permit Revisions/Off-Permit Changes

WAC 173-401-722 (10/17/02) and WAC 173-401-724 (11/4/93)

The permittee may make the changes described in WAC 173-401-722 and WAC 173-401-724 without revising this permit, provided that the changes satisfy the criteria set forth in those sections.

2.2.10 Permit Modifications

WAC 173-401-720 (11/4/93) and WAC 173-401-725 (11/4/93)

This permit may be revised as provided in WAC 173-401-720 (administrative permit amendments) and 173-401-725 (permit modifications).

2.2.11 Property Rights

WAC 173-401-620(2)(d) (11/4/93)

This permit does not convey any property rights of any sort, or any exclusive privilege.

2.2.12 Definitions

2.2.12.1 NWCAA 200 (10/13/94)

Particular references to terms not otherwise defined in this permit or the associated Statement of Basis have the meaning assigned to them in the specific regulation being cited. The terms NWCAA, Ecology, and EPA shall mean the Northwest Clean Air Agency, the Washington State Department of Ecology, and the United States Environmental Protection Agency, respectively. FCAA means the Federal Clean Air Act.

2.2.12.2 State Only: NWCAA 200 (11/8/07)

In the new version of the NWCAA Regulations some of the definitions have been modified slightly to provide clarification and some have been revised to include an expanded definition of the term.

2.2.13 Compliance Schedule

WAC 173-401-630(3) (11/4/93) and WAC 173-401-510(2)(h)(iii) (6/17/94)

The permittee shall continue to comply with all applicable requirements with which the source was in compliance as of the date of permit issuance. The permittee shall meet on a timely basis any applicable requirements that become effective during the permit term.

2.2.14 Permit Fees

2.2.14.1 WAC 173-401-620(2)(f) (11/4/93)

The permittee shall pay fees as a condition of this permit in accordance with the NWCAA fee schedule.

2.2.14.2 State Only: NWCAA 322.4 (11/12/99)

The NWCAA shall assess and collect annual air operating permit fees for sources in its jurisdiction that are required to have Title V Air Operating Permits (excluding sources regulated by WDOE directly). The total fees required to administer the program shall be determined by a workload analysis conducted by NWCAA staff and approved annually by the NWCAA Board of Directors.

2.2.15 Transfer or Permanent Shutdown

2.2.15.1 NWCAA 325 (2/14/73)

Approval to construct a stationary source is not to be transferable from one location to another (outside the plant boundary), from one piece of equipment to another, or from one person to another, except portable sources may retain the same registration so long as they remain within the jurisdiction of the NWCAA.

2.2.15.2 State Only: NWCAA 325 (11/8/07)

Approval to construct a stationary source is not to be transferable from one location to another (outside the plant boundary), from one piece of equipment to another, or from one person to another, except portable sources may retain the same registration so long as they remain within the jurisdiction of the NWCAA and they comply with the NWCAA Regulation 300 and 301.

The registered owner or operator shall report the transfer of ownership or permanent shutdown of a registered source to the NWCAA within ninety (90) days of shutdown or transfer. The new owner of a registered source shall file a written report with the NWCAA within ninety (90) days of completing transfer of ownership and/or assuming operational control.

In the case of a permanent shutdown, process and pollution control equipment may remain in place and on site, but shall be rendered incapable of generating emissions to the atmosphere.

2.3 Permit Shield

2.3.1 Shield Requirement

WAC 173-401-640(1) (11/4/93)

Compliance with a permit condition shall be deemed compliance with the applicable requirements upon which that condition is based, as of date of permit issuance. The permit shield does not apply to any insignificant emissions unit or activity designated under WAC 173-401-530.

2.3.2 Inapplicable Requirements

WAC 173-401-640(2) (11/4/93)

As of the date of permit issuance, the requirements listed in the Inapplicable Requirements section of this permit do not apply to the permittee. The permit shield applies to all requirements so identified.

2.3.3 Exclusions

WAC 173-401-640(4) (11/4/93)

Nothing in this section or in this permit shall alter or affect the following:

(i) Provisions of Section 303 of the FCAA (emergency orders), including the authority of the EPA Administrator under that section;

(ii) Liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;

(iii) Ability of EPA to obtain information from a source pursuant to Section 114 of the FCAA; or

(iv) Ability of the permitting authority to establish or revise requirements for the use of reasonably available control technology (RACT) as provided in RCW 70.94.154.

2.3.4 Reasonably Available Control Technology

2.3.4.1 WAC 173-401-605(3) (11/4/93)

Emission standards and other requirements contained in rules or regulatory orders in effect at the time of operating permit issuance shall be considered RACT for purposes of permit issuance or renewal.

2.3.4.2 WAC 173-400-040 (9/20/93)

All emissions units are required to use RACT which may be determined for some sources or source categories to be more stringent than the applicable emission limitations of any chapter of Title 173 WAC. Where current controls are determined to be less than RACT, Ecology or the NWCAA shall, as provided in Section 8, Chapter 252, Laws of 1993, define RACT for each source or source category and issue a rule or regulatory order requiring the installation of RACT.

2.3.4.3 State Only: WAC 173-400-040 (2/10/05)

All emissions units are required to use RACT which may be determined for some sources or source categories to be more stringent than the applicable emission limitations of any chapter of Title173 WAC. Where current controls are determined to be less than RACT, Ecology or the NWCAA shall, as provided in RCW 70.94.154, define RACT for each source or source category and issue a rule or regulatory order requiring the installation of RACT.

2.3.5 Emergencies

WAC 173-401-645 (11/4/93)

An emergency, as defined in WAC 173-401-645(1), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if conditions of WAC 173-401-645 (3) and (4) are met. This provision is in addition to the affirmative defense for unavoidable excess emissions found in any applicable requirement.

The permittee shall submit a notice of emergency to the NWCAA within two working days of the time when the emission limitation was exceeded due to an emergency or shorter periods of time specified in an applicable requirement.

2.4 Recordkeeping and Reporting

2.4.1 Compliance Certification

2.4.1.1 WAC 173-401-630(5) (11/4/93)

The Permittee shall submit ongoing certifications of compliance with permit terms and conditions. The first such certification shall cover the period from the last compliance certification until issuance of this permit. The following compliance certification shall cover the period from permit issuance to the end of the calendar year. Subsequent compliance certifications shall be made on a yearly basis. Each certification shall include:

(i) Identification of each term and condition of the permit that is the basis of the certification;

(ii) Compliance status;

(iii) Whether the compliance was continuous or intermittent;

(iv) Methods used for determining the compliance status of the source, currently and over the reporting period. These methods must be consistent with the permit Monitoring, Recordkeeping, and Reporting requirements.

All compliance certifications shall be submitted to EPA Region 10 and the Northwest Clean Air Agency at the following addresses by February 28 for the previous calendar year:

U.S. EPA, Region 10
Suite 900, AWT-107
Attn: Air Operating Permits
1200 Sixth Avenue
Seattle, WA 98101

Northwest Clean Air Agency
Attn: Air Operating Permits
1600 South Second Street
Mount Vernon, WA 98273-5202

2.4.1.2 WAC 173-401-520 (11/4/93)

Any application form or compliance certification that is submitted pursuant to this permit shall contain certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under this permit shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

2.4.1.3 WAC 173-401-615 (10/17/02) and 630 (11/4/93)
Directly enforceable under WAC 173-401-615(1)(b) & (c), (10/17/02)

All required monitoring reports must be certified by a responsible official consistent with WAC 173-401-520. Where an applicable requirement requires reporting more frequently than once every six months, the responsible official's certification need only to be submitted once every six months, covering all required reporting since the date of the last certification, provided that the certification specifically identifies all documents subject to the certification.

All semiannual monitoring certifications are due as follows:

- January 31 for reports from July through December
- July 31 for reports from January through June

2.4.1.4 WAC 173-401-530(2)(d) (10/17/02)

Where a permit does not require testing, monitoring, recordkeeping and reporting for insignificant emissions units or activities, the permittee may certify continuous compliance if there were no observed, documented, or known instances of noncompliance of an insignificant emission unit during the reporting period. Where an underlying OAC requires testing,

monitoring, recordkeeping and reporting for insignificant emission units or activities, the permittee may certify continuous compliance when the testing, monitoring and recordkeeping required by the permit revealed no violations during the period, and there were no observed, document or known instances of noncompliance during the reporting period.

2.4.2 False and Misleading Oral Statement: Unlawful Reproduction or Alteration of Documents

2.4.2.1 NWCAA 112 (2/14/73)

No person shall willfully make a false or misleading oral statement to the Board as to any matter within the jurisdiction of the Board.

No person shall reproduce or alter or cause to be reproduced or altered any order or other paper issued by the Agency if the purpose of such reproduction or alteration is to evade or violate any provision or Regulation of this Agency, or any other law.

2.4.2.2 State Only: NWCAA 112 (11/12/99)

No person shall willfully make a false or misleading oral statement to the NWCAA Board, Control Officer, or their duly authorized representatives as to any matter within the jurisdiction of the Board.

No person shall reproduce or alter or cause to be reproduced or altered any order or other paper issued by the Agency if the purpose of such reproduction or alteration is to evade or violate any provision or Regulation of this Agency, or any other law.

2.4.3 Required Recordkeeping

2.4.3.1 WAC 173-401-615(2)(10/17/02)

Records of required monitoring information shall include, where applicable, the following:

(i) Date, time, and location of sampling or measurements;

(ii) Operating conditions existing at the time of sampling or measurement;

(iii) If analyses were performed, the date, company or entity performing the analyses, the analytical techniques or methods used, and the results of such analyses;

A record shall be kept describing changes made that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.

Records of all required monitoring data and support information will be retained for a period of five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

2.4.3.2 WAC 173-401-615 (10/17/02) and 630 (11/4/93)
Directly enforceable under WAC 173-401-615(1)(b) & (c), (10/17/02)

Monitoring and associated recordkeeping is not required when an emission unit is not operating and there are no emissions to the atmosphere unless such monitoring is specifically required by the NWCAA. The facility must record the time periods that the unit is shut down and not monitored, and include the time periods and a summary of why the emission unit was shut down in the periodic report of monitoring required by WAC 173-401-615(3)(a).

2.4.4 Pollutant Disclosure - Reporting by Air Contaminant Sources

2.4.4.1 NWCAA 150 (9/8/93) and WAC 173-400-105(1) (9/20/93)

The permittee shall file annually at a time determined by the NWCAA and on forms furnished by the NWCAA a report setting forth:

(i) The nature of the enterprise;

(ii) A list of process materials which are potentially significant sources of emissions used in, and incidental to, its manufacturing processes, including any by-products and waste products;

(iii) An estimated annual total production of wastes discharged into the air in units and contaminants designated by the NWCAA.

Annual emission reports shall be submitted to the NWCAA within 105 days after the end of the previous calendar year. If the emission report is not submitted by the required date and the emissions are used to determine operating permit fees as described in NWCAA Regulation 324.126 then potential to emit will be used to determine said fees.

The permittee shall maintain records of information necessary to substantiate any reported emissions, consistent with the averaging times for the applicable standards.

2.4.4.2 State Only: WAC 173-400-105(1) (6/8/07)

In addition to the requirements of 2.4.4.1, the permittee shall report oxides of nitrogen, $PM_{2.5}$, and ammonia on forms available from the NWCAA or Ecology. Emission estimates may be based on the most recent published EPA emission factors or other information available to the source, whichever is the better estimate.

2.4.4.3 State Only: NWCAA 150 (11/8/07)

Annual emission reports shall be submitted to the NWCAA no later than April 15 of the following calendar year. If the emission report is not submitted by the required date and the emissions are used to determine operating permit fees as described in NWCAA Regulation 322.4, then potential to emit may be used to determine said fees.

2.4.5 Reporting to Verify Emissions from Potential PSD Sources

State Only: WAC 173-400-720(4)(b)(iii) (6/8/07)

The owner of operator shall monitor the emissions of any regulated pollutants from all projects for which PSD applicability was determined according to the provisions of 40 CFR 52.21(b)(41)(ii)(a) through (c), and calculate and maintain a record of annual emissions on a calendar year basis.

The owner or operator shall submit a report to NWCAA within 60 days after the end of the year in which the emissions occurred. The report shall include the emissions in tons per year for the project, the baseline actual emissions and the pre-construction projected emissions.

2.4.6 Reporting of Deviations from Permit Conditions

WAC 173-401-615(3)(b) (10/17/02)
Directly enforceable under WAC 173-401-615(1)(b) & (c) (10/17/02)

Prompt Reporting of Deviations: The permittee shall promptly report all deviations from permit requirements, including those attributable to upset conditions as defined in this permit. The report shall include a description of the probable cause of such deviations, if known, and any corrective actions or preventive measures taken. Prompt means reporting according to the shortest time period listed below which applies to the situation:

(i) In the case where the deviation represents a potential threat to human health or safety "prompt" means as soon as possible, but in no case later than twelve hours after the deviation is discovered. A follow up report on the deviation shall be included in the next monthly report.

(ii) For all other deviations, the deviation shall be reported as part of the next routine monitoring report, but no later than 30 days after the end of the month during which the deviation is discovered, whichever is sooner.

2.4.7 Report of Breakdown and Upset

2.4.7.1 NWCAA 340.1, 340.2 and 340.3 (10/13/94)

If a breakdown or upset condition occurs which results in or may have resulted in an emission and/or ambient air quality standard being exceeded, the owner or operator of the source shall take the following actions:

(i) The upset or breakdown shall be reported as promptly as possible and in no event later than 12 hours to the NWCAA.

(ii) The person responsible shall, upon the request of the Control Officer, submit a full report within ten (10) days including the known causes, corrective measures taken, and preventive measures to be taken to minimize or eliminate a recurrence.

Compliance with the requirements of this section does not relieve the owner or operator of the source from the responsibility to maintain continuous compliance with all the requirements of this Regulation nor from the resulting liabilities for failure to comply.

It shall be prima facie evidence of violation of the NWCAA Regulation if any control equipment or other equipment creating emissions to the atmosphere is turned off, broken down or otherwise inoperative, and a notice of breakdown has not been filed, under 340.1.

2.4.7.2 State Only: NWCAA 340.1, 340.2 and 340.3 (11/8/07)

If a breakdown or upset condition occurs which results in or may have resulted in an exceedence of an emission and/or ambient air quality standard being exceeded, the owner or operator of the source shall take the following actions:

(i) The upset or breakdown shall be reported as promptly as possible and in no event later than twelve (12) hours to the NWCAA.

(ii) The responsible official or his designee shall submit a full report on forms provided by the NWCAA within 30 days after the end of a calendar month in which the upset occurred and must include as a minimum the known causes, corrective action taken, preventive measures put in place to reduce the possibility of or eliminate a recurrence, and an estimate of the quantity of emissions above the applicable limit caused by the event.

In addition to the reporting requirements of the 10/13/94 version of NWCAA 340, the permittee must also report to the NWCAA if the emission release to the air requires agency notification as specified in 40 CFR 302 (CERCLA) or 40 CFR 355 (SARA).

It shall be prima facie evidence of violation of the NWCAA Regulation if any other equipment creates new or increased emissions to the atmosphere as the result of being turned off, broken down or otherwise inoperative, and a notice of breakdown has not been filed under NWCAA Section 340.1.

2.4.8 Report of Shutdown or Startup

2.4.8.1 NWCAA 341 (2/10/93)

If the permittee schedules a total or partial shutdown or startup of control or process equipment which may result in emissions or any additional emissions to the atmosphere which may temporarily exceed the emission standards of this Regulation; the permittee shall notify the NWCAA prior to the shutdown or startup.

Prompt notification shall be made and in no event less than 24 hours before the scheduled shutdown or startup. The permittee shall submit a general schedule of steps to be taken to minimize the release of air contaminants to the atmosphere including the reasons for and duration of the proposed shutdown or startup, the nature of the action to be taken, the date and time for the action and an estimate of the anticipated rate and concentration of emission.

Compliance with the requirements of this section does not relieve the owner or operator of the source from the responsibility to maintain continuous compliance with the requirements of this Regulation nor from the resulting liabilities for failure to comply.

2.4.8.2 State Only: NWCAA 341(7/14/05)

If the permittee schedules a total or partial shutdown or startup of control or process equipment that the source reasonably believes would result in emissions which may temporarily exceed an emission standard of this Regulation, the operator or owner of the source shall notify the NWCAA in advance of the shutdown or startup.

The advanced notification shall include a general schedule of steps to be taken to minimize the release of air contaminants to the atmosphere including the reasons for and duration of the proposed shutdown or startup, the nature of the action to be taken, the date and time for the action and an estimate of the anticipated rate and concentration of emission.

Compliance with the requirements of this section does not relieve the owner or operator of the source from the responsibility to maintain continuous compliance with the requirements of this Regulation nor from the resulting liabilities for failure to comply.

Excess emissions due to shutdown or startup shall be considered unavoidable, and not subject to penalty, provided the stationary source adequately demonstrates that the excess emissions could not have been prevented through careful planning and design, the emissions did not result in a violation of an ambient air quality standard and if a bypass of control equipment occurs, that such bypass is necessary to prevent loss of life, personal injury, or severe property damage.

The responsible official or their designee shall submit a full report no later than 30 days after the end of the calendar month in which the shutdown or startup occurred that resulted in an exceedance of an ambient or an emission standard of this Regulation. The report shall be submitted on forms provided by the NWCAA and must include, at minimum, the known causes, corrective action taken, preventive measures put in place to reduce the possibility of or eliminate a recurrence, and an estimate of the quantity of emissions above the applicable limit caused by the event.

2.4.9 Operation and Maintenance

2.4.9.1 NWCAA 342 (9/84/93)

Keep all process and/or air pollution control equipment in good operating condition and repair. If a breakdown or upset condition occurs and it is determined by the Control Officer to be due to poor operating and maintenance procedures, the Control Officer may take any legal steps necessary to prevent a recurrence of the breakdown or upset condition.

Operation and maintenance instructions and schedules for process and/or control equipment must be available and may be required to be posted on the site. This section is specifically applicable to the operation of equipment where untrained personnel may operate or otherwise have access to or use the equipment.

If a breakdown or violation occurs and is due to the improper operation or maintenance of equipment, the owner or operator of the source will, in addition to filing a report of breakdown under NWCAA 340, submit a report if requested by the Control Officer on what measures will be taken in training or re-orienting personnel to prevent a recurrence of the breakdown.

2.4.9.2 State Only: NWCAA 342 (7/14/05)

All air contaminant stationary sources are required to keep any process and/or air pollution control equipment in good operating condition and repair.

Operating instructions and maintenance schedules for process and/or control equipment must be available on site.

2.5 Excess Emissions

2.5.1 Excess Emission

WAC 173-400-107(9/20/93)

The permittee shall have the burden of proving to Ecology or the NWCAA or the decision-making authority in an enforcement action that excess emissions were unavoidable. Excess emissions determined to be unavoidable under the procedures and criteria of this section shall be excused and not subject to penalty.

Excess emissions which represent a potential threat to human health or safety or which the owner or operator of the source believes to be unavoidable shall be reported to Ecology or the NWCAA as soon as possible. Other excess emissions shall be reported within thirty days after the end of the month during which the event occurred or as part of the routine emission monitoring reports. Upon request by Ecology or the NWCAA, the permittee shall submit a full written report including the known causes, the corrective actions taken, and the preventive measures to be taken to minimize or eliminate the chance of recurrence.

Excess emissions due to startup or shutdown shall be considered unavoidable provided the source reports as required and adequately demonstrates that the excess emissions could not have been prevented through careful planning and design and if a bypass of control equipment occurs, that such bypass is necessary to prevent loss of life, personal injury, or severe property damage.

Excess emissions due to scheduled maintenance shall be considered unavoidable provided the source reports as required and adequately demonstrates that the excess emissions could not have been prevented through reasonable design, better scheduling for maintenance or through better operation and maintenance practices.

Excess emissions due to upsets shall be considered unavoidable provided the source reports as required and adequately demonstrates that:

(i) The event was not caused by poor or inadequate design, operation, maintenance, or any other reasonably preventable condition;

(ii) The event was not of a recurring pattern indicative of inadequate design, operation, or maintenance; and

(iii) The permittee took immediate and appropriate corrective action in a manner consistent with good air pollution control practice for minimizing emissions during the event, taking into account the total emissions impact of the corrective action,

including slowing or shutting down the emission unit as necessary to minimize emissions, when the operator knew or should have known that an emission standard or permit condition was being exceeded.

2.5.2 Excess Emissions Due to Breakdowns, Upsets, Startup, or Shutdown

State Only: NWCAA 340.4 (11/8/07) and 341.4 (7/14/05)

Excess emissions due to breakdowns and upsets shall be considered unavoidable, and not subject to penalty, provided the stationary source adequately demonstrates that:

(i) The event was not caused by poor or inadequate design, operation, maintenance, or any other reasonably preventable condition;

(ii) The event was not of a recurring pattern indicative of inadequate design, operation, or maintenance;

(iii) The operator took immediate and appropriate corrective action in a manner consistent with good air pollution control practice; and

(iv) The emissions did not result in a violation of an ambient air quality standard.

Excess emissions due to shutdown or startup shall be considered unavoidable, and not subject to penalty, provided the stationary source adequately demonstrates that the excess emissions could not have been prevented through careful planning and design, the emissions did not result in a violation of an ambient air quality standard and if a bypass of control equipment occurs, that such bypass is necessary to prevent loss of life, personal injury, or severe property damage.

2.6 Duty to Supplement or Correct Information

State Only: WAC 173-401-500(6) (10/17/02)

Upon becoming aware that the source has failed to submit any relevant facts in a permit application or that information submitted in a permit application is incorrect, the source shall promptly submit such supplementary facts or corrected information.

2.7 Prohibitions

2.7.1 Concealment and Masking

2.7.1.1 WAC 173-400-040(7) (9/20/93) and (2/10/05 State only)

No person shall cause or permit the installation or use of any means, which conceals or masks an emission of an air contaminant, which would otherwise violate the provisions of this chapter.

2.7.1.2 State Only: NWCAA 540 (1/8/69)

It shall be unlawful for any person to willfully cause or permit the installation or use of any device or use of any means which, without resulting in a reduction in the total amount of air contaminant emitted, conceals an emission of air contaminant which would otherwise violate the emission standards of this Regulation.

It shall be unlawful for any person to cause or permit the installation or use of any device or use of any means designed to mask the emission of an air contaminant, which causes detriment to health, safety, or welfare of any person.

2.7.2 Adjustment for Atmospheric Conditions

WAC 173-400-205 (3/22/91)

The permittee shall not vary the rate of emission of a pollutant according to atmospheric conditions or ambient concentrations of that pollutant except as directed according to air pollution episode regulations.

2.7.3 Outdoor Burning

2.7.3.1 WAC 173-425-036 (9/17/90) and WAC 173-425-045 (1/3/89), WAC 173-435-050(2) (01/3/89) Although SIP-Approved, WAC 173-425-036 and –045, and -055 (referenced below) have been repealed.

No person shall conduct outdoor burning during an air pollution episode or a declared period of impaired air quality. Except as provided in WAC 173-425-055, the following materials shall not be burned in any open fire: (1) garbage, (2) dead animals, (3) asphaltic products, (4) waste petroleum products, (5) paints, (6) rubber products, (7) plastics, (8) treated wood, and (9) any substance, other than natural vegetation, which normally emits dense smoke or obnoxious odors.

2.7.3.2 State Only: WAC 173-425-040, 050, and 060 (4/13/00), NWCAA 502 (11/8/07)

No person shall conduct outdoor burning except in accordance with the applicable regulations listed above. Outdoor burning shall be conducted under a valid fire permit and shall not contain prohibited materials, unless specifically exempted. Emissions from burning shall not create a nuisance and/or interfere with visibility on any public road.

2.7.4 Asbestos

2.7.4.1 State Only: NWCAA 570 (11/8/07)

The permittee shall conduct all renovation or demolition projects in accordance with the applicable asbestos control standards listed in NWCAA 570.

2.7.4.2 40 CFR 61.145 (1/16/91), 61.148 (11/20/90) and 61.150 (9/18/03)

The permittee shall comply with 40 CFR Sections 61.145, 61.148 and 61.150 when conducting any renovation or demolition at the facility.

2.7.5 Stratospheric Ozone and Climate Protection

2.7.5.1 40 CFR 82 Subpart F (4/30/09)

The permittee shall comply with the standards for recycling and emissions reduction in accordance with the requirements listed in 40 CFR 82 Subpart F.

2.7.5.2 State Only: RCW 70.94.970 (1991 c 199 §602)

A person who services or repairs or disposes of a motor vehicle air conditioning system; commercial or industrial air conditioning, heating, or refrigeration system; or consumer appliance shall use refrigerant extraction equipment to recover regulated refrigerant that would otherwise be released into the atmosphere. This subsection does not apply to off-road commercial equipment.

The willful release of regulated refrigerant from a source listed in this section is prohibited.

2.7.6 Display of Orders, Certificates and Other Notices: Removal or Mutilation Prohibited

NWCAA 124 (2/14/73)

Any order or other certificate obtained from the NWCAA shall be available at the facility. If the NWCAA requires a notice to be displayed, it shall be posted. No one shall mutilate, obstruct or remove any notice unless authorized to do so by the NWCAA.

2.7.7 Obstruction of Access

State Only: RCW 70.94.200, (1987 c 109 §38)

The permittee shall not obstruct, hamper or interfere with any authorized representative of the NWCAA who requests entry for the purposes of inspection and who presents appropriate credential; nor shall any person obstruct, hamper, or interfere with any such inspection.

2.7.8 False Statement, Representation or Certification

State Only: WAC 173-400-105(7) (6/8/07)

No person shall make any false material statement, representation or certification in any form, notice or report required under Chapter 70.94 or 70.120 RCW, or any ordinance, resolution, regulation, permit, or order in force pursuant thereto.

2.7.9 Inaccurate Monitoring

State Only: WAC 173-400-105(8) (6/8/07)

No person shall render inaccurate any monitoring device or method required under Chapter 70.94 or 70.120 RCW, or any ordinance, resolution, regulation, permit, or order in force pursuant thereto.

2.7.10 Prevention of Accidental Release

40 CFR 68 Subpart F (4/9/04)

This stationary source, as defined in 40 CFR Section 68.3, is subject to Part 68, the accidental release prevention regulations. This stationary source shall submit a risk management plan (RMP) by the date specified in section 68.10. This stationary source shall certify compliance with the requirements of part 68 as part of the annual compliance certification as required by 40 CFR Part 70.

2.7.11 Cutback Asphalt Paving

NWCAA 580.7 (4/14/93)

The application of cutback asphalt in paving during the months of June, July, August and September is limited to use as prime coatings and patch mixes, or when the temperature is less than 50°F.

2.7.12 Creditable Stack Height and Dispersion Techniques

State Only: WAC 173-400-200 (3/22/91) (State Only – 2/10/05)

For stacks for which construction or reconstruction commenced, or for which major modifications were carried out, after December 31, 1970, no source may use dispersion techniques or excess stack height to meet ambient air quality standards or PSD increment limitations.

2.8 Notice of Construction and Application for Approval/New Source Review

2.8.1 Minor New Source Review (NSR)

2.8.1.1 WAC 173-400-110 (9/20/93), NWCAA 300, 301, 302 & 324.2 (10/13/94), and NWCAA 303 (8/9/78)

No person shall construct, install, establish, modify or alter an air contaminant source or an emission unit without filing a "notice of construction and Application for Approval" and receiving approval for the Agency in accordance with the cited regulations.

2.8.1.1 State Only: WAC 173-400-110 (6/20/09), WAC 173-460-010 through -100, and -150 (6/20/09), NWCAA 300.1-300.12 (6/10/10), NWCAA 301 (11/8/07), 303 (11/12/98), and 324.2 (11/8/07)

A Notice of Construction application must be filed by the owner or operator and an Order of Approval issued by the NWCAA prior to the establishment of any new source in accordance with the cited regulations. For purposes of this section "establishment" shall mean to "begin actual construction" as that term is defined in NWCAA 200, and "new source" shall include any "modification" to an existing "stationary source" as those terms are defined in NWCAA 200.

2.8.2 General Order

State Only: WAC 173-400-560 (2/10/05) and NWCAA 300.14 (6/10/10)

An owner or operator may apply for an applicable general order for approval to construct certain specified sources as defined in WAC 173-400-560. A general order of approval shall identify criteria by which an emission unit or source may qualify for coverage under a general order of approval and shall include terms and conditions for installing and/or operating the source.

2.8.3 Requirements to Comply

State Only: NWCAA 300.15 (6/10/10)

It shall be unlawful for an owner or operator of a source or emission unit to not abide by the operating and reporting conditions in the Order of Approval.

2.8.4 Prevention of Significant Deterioration (PSD)

State Only: WAC 173-400-710 (6/8/07), WAC 173-400-700, 730, 740 and 750 (2/10/05)

A Prevention of Significant Deterioration (PSD) permit application must be filed by the owner or operator and a PSD permit issued by Ecology prior to the establishment of any new source in accordance with the cited regulations. No major stationary source or major modification as defined in the cited regulation shall begin actual construction without having received a PSD permit. Allowable emissions from the proposed major stationary source or major modification shall not cause or contribute to a violation of any ambient air quality standard.

An applicant for a PSD permit must submit an application that provides complete information for Department of Ecology to determine compliance with all PSD program requirements. Detailed procedures for submitting a complete application, for public review and involvement, and for revisions to an existing PSD permit are provided in detail in the cited regulations (WAC 173-400-700 through 750).

2.8.5 Replacement or Substantial Alteration of Control Technology at an Existing Source

State Only: WAC 173-400-114 (9/15/01), NWCAA 300.13 (6/10/10)

Any person proposing to replace or substantially alter emission control technology installed on an existing stationary source or emission unit shall file a notice of construction application with the NWCAA.

SECTION 3 STANDARD TERMS AND CONDITIONS FOR NSPS AND NESHAP

Standard terms and conditions are administrative and/or other requirements that typically have no ongoing compliance monitoring requirements. The permittee must comply with the requirements listed below for specific "affected facilities" as defined in the New Source Performance Standards (NSPS) in 40 CFR Part 60.2, "affected sources" defined in the National Emission Standards for Hazardous Air Pollutants (NESHAP) in 40 CFR Part 63.2, and owners or operators of any stationary source for which a standard is prescribed under 40 CFR Part 61. The affected facilities, affected sources, and stationary sources subject to these requirements are identified in Section 5 of the permit. The conditions in this section do not apply generally to all emission units at the facility.

3.1 Part 60 – New Source Performance Standard Requirements

3.1.1 Address for Reports, Notifications and Submittals

Title 40 CFR 60.4(a) and (b) (4/25/75) (as amended by Delegation Letter of 12/02/10 from Richard Albright, EPA Region X to Mark Asmundson, Director of NWCAA), NWCAA 104.2 (6/10/10)

Notifications, reports, and applications for delegated New Source Performance Standards (NSPS) shall be sent to the NWCAA at the following address:

Northwest Clean Air Agency
1600 S. Second Street
Mount Vernon, WA 98273-5202

Authority to approve major changes in emission units, test methods and monitoring methods prescribed by 40 CFR Part 60 has not been delegated to NWCAA. Prior to filing an application under any NSPS regulation that authorizes EPA to approve alternate emission limits, test methods, or monitoring methods, the permittee shall consult with NWCAA to determine whether the application falls within the scope of NWCAA's delegated authority.

Applications under NSPS authorities that have been excluded from delegation shall be submitted to the NWCAA at the above address and to the EPA at the following address:

Director, Office of Air, Waste, and Toxics U.S. EPA Region 10
1200 Sixth Avenue
Seattle WA 98101

3.1.2 Compliance with Opacity Standards

Title 40 CFR 60.11(b) and (c) (10/17/00), NWCAA 104.2 (6/10/10)

Compliance with opacity standards in 40 CFR Part 60 shall be determined by EPA Method 9 in appendix A. For purposes of determining inital compliance, the minimum total time of observations shall be 3 hours (30 6-minute averages) for the performance test. The opacity standards set forth in this part shall apply at all times except during periods of startup, shutdown, malfunction, and as otherwise provided in the applicable standard.

3.1.3 Operation and Maintenance

Title 40 CFR 60.11(d) (10/17/00), NWCAA 104.2 (6/10/10)

At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions.

3.1.4 Credible Evidence

Title 40 CFR 60.11(g) (10/17/00), NWCAA 104.2 (6/10/10)

For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any standard in this part, nothing in this part shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

3.1.5 Circumvention

Title 40 CFR 60.12 (3/8/74), NWCAA 104.2 (6/10/10)

No owner or operator subject to the provisions of this part shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.

3.1.6 Notification

Title 40 CFR 60.7(a) (2/12/99)(as amended by Delegation Letter of 12/02/10 from Richard Albright, EPA Region X to Mark Asmundson, Director of NWCAA, NWCAA 104.2 (6/10/10))

Furnish written notification to NWCAA of the following:

(i) The date construction (or reconstruction as defined by 40 CFR 60.15) of an affected facility commenced postmarked no later than 30 days after such date.

(ii) Notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.

(iii) Notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 40 CFR 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change.

(iv) Notification of the date upon which demonstration of the continuous monitoring system performance commences in accordance with 40 CFR 60.13(c). Notification shall be postmarked not less than 30 days prior to such date.

(v) Notification of the anticipated date for conducting the opacity observations required by 40 CFR 60.11(e)(1) of this part. The notification shall be postmarked not less than 30 days prior to such date.

(vi) Notification that continuous opacity monitoring system data results will be used to determine compliance with the applicable opacity standard during a performance test required by 60.8 in lieu of Method 9 observation data as allowed by 40 CFR 60.11(e)(5) of this part. This notification shall be postmarked not less than 30 days prior to the date of the performance test.

3.1.7 Startup, Shutdown, and Malfunction Records

Title 40 CFR 60.7(b) (2/12/99), NWCAA 104.2 (6/10/10)

Maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.

3.1.8 Excess Emission Records

Title 40 CFR 60.7(c) and (d) (2/12/99)(as amended by Delegation Letter of 12/02/10 from Richard Albright, EPA Region X to Mark Asmundson, Director of NWCAA), NWCAA 104.2 (6/10/10)

Each owner or operator required to install a continuous monitoring device shall submit excess emissions (as defined in applicable subparts) and monitoring systems performance and/or summary report form to the NWCAA semiannually, except when: more frequent reporting is specifically required in any subpart; or the NWCAA determines that more frequent reporting is necessary. Written reports of excess emissions shall include the information in 40 CFR 60.7(c) (1) through (4). All semiannual monitoring certifications are due as follows:

- January 31 for reports from July through December
- July 31 for reports from January through June

3.1.9 Maintenance of Records

Title 40 CFR 60.7(f) (2/12/99), NWCAA 104.2 (6/10/10)

Maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this part recorded in a permanent form be retained for at least two years following the date of such measurements, maintenance, reports, and records, except as described in 60.7(f)(1) through (3).

Note: Under WAC 173-401-615(2), records of required monitoring data and support information will be retained for a period of five years from the date of the monitoring sample, measurement, report, or application.

3.1.10 Recordkeeping and Reporting for 40 CFR Part 60 Subpart Kb

Title 40 CFR 60.115b (4/8/87) and 60.116b(a) (10/15/03), NWCAA 104.2 (6/10/10)

Copies of all records required under Subpart Kb shall be kept for at least two years, except for records required to be kept under 60.116b(b), which must be kept for the life of the source.

Note: Under WAC 173-401-615(2), records of required monitoring data and support information will be retained for a period of five years from the date of the monitoring sample, measurement, report, or application.

3.1.11 Compliance During Startup, Shutdown, and Malfunction for 40 CFR Part 60 Subpart QQQ

Title 40 CFR 60.692-1 (11/23/88), NWCAA 104.2 (6/10/10)

Each owner or operator subject to the provisions of Subpart QQQ shall comply with the requirements of 60.692-1 to 60.692-5 except during periods of startup, shutdown, or malfunction.

3.1.12 Recordkeeping for Stormwater Systems Excluded from 40 CFR Part 60 Subpart QQQ

Title 40 CFR 60.697(h) (10/17/00), NWCAA 104.2 (6/10/10)

For stormwater sewer systems subject to the exclusion in 60.692-1(d)(1), an owner or operator shall keep for the life of the facility in a readily accessible location, plans or specifications which demonstrate that no wastewater from any process units or equipment is directly discharged to the stormwater sewer system.

3.1.13 Recordkeeping for Ancillary Equipment Excluded from 40 CFR Part 60 Subpart QQQ

Title 40 CFR 60.697(i) (10/17/00), NWCAA 104.2 (6/10/10)

For ancillary equipment subject to the exclusion in 60.692-1(d)(2), an owner or operator shall keep for the life of the facility in a readily accessible location, plans or specifications that demonstrate that the ancillary equipment does not come in contact with or store oily wastewater.

3.1.14 Recordkeeping for Non-Contact Cooling Water Systems Excluded from Subpart QQQ

Title 40 CFR 60.697(j) (10/17/00), NWCAA 104.2 (6/10/10)

For non-contact cooling water systems subject to the exclusion in 60.692-1(d)(3), an owner or operator shall keep for the life of the facility in a readily accessible location, plans or specifications which demonstrate that the cooling water does not contact hydrocarbons or oily wastewater and is not recirculated through a cooling tower.

3.2 Part 61 – National Emission Standard for Hazardous Air Pollutant Requirements

3.2.1 Address for Reports, Notifications and Submittals

Title 40 CFR 61.04 (4/25/75) (as amended by Delegation Letter of 11/29/10 from Richard Albright, Director, EPA Office of Air, Waste, and Toxics to Mark Asmundson, Director of NWCAA), NWCAA 104.2 (6/10/10).

Notifications, reports, and applications for delegated Part 61 NESHAPS shall be sent to the NWCAA at the following address:

Northwest Clean Air Agency
1600 South Second Street
Mount Vernon, WA 98273-5202

All NESHAP Subparts referenced in this permit have been delegated to NWCAA. Authority to approve major changes in emission units, test methods and monitoring methods prescribed by Part 61 has not been delegated to NWCAA. Prior to filing an application under any NESHAP regulation that authorizes EPA to approve alternate emission limits, test methods, or monitoring methods, the permittee shall consult with NWCAA to determine whether the application falls within the scope of NWCAA's delegated authority.

Applications under NSPS authorities that have been excluded from delegation shall be submitted to the NWCAA at the above address and to the EPA at the following address:

Director, Office of Air, Waste, and Toxics U.S. EPA Region 10
1200 Sixth Avenue
Seattle WA 98101

3.2.2 Credible Evidence

Title 40 CFR 61.12(e)(2/24/97), NWCAA 104.2 (6/10/10)

For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any standard in this part, nothing in this part shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

3.2.3 Recordkeeping Requirements

Title 40 CFR 61.13(g) (5/16/07), and 61.356 (11/12/02), NWCAA 104.2 (6/10/10)

The owner or operator of a source subject to Part 61 shall retain at the source and make available, upon request, for inspection by the NWCAA, for a minimum of 2 years, records of emission test results and other data needed to determine emissions.

Each owner or operator complying with the recordkeeping requirements of 61.356 shall maintain records in a readily accessible location at the facility site for a period not less than two years from the date the information is recorded unless otherwise specified.

Note: Under WAC 173-401-615(2), records of required monitoring data and support information will be retained for a period of five years from the date of the monitoring sample, measurement, report, or application.

3.2.4 Notification of Startup

Title 40 CFR 61.09(a)(11/7/85), NWCAA 104.2 (6/10/10)

The owner or operator shall provide the NWCAA with written notification of the anticipated date of initial startup of the source not more than 60 days or less than 30 days before that date, and, the actual date of initial startup of the source within 15 days after that date.

3.2.5 Circumvention

Title 40 CFR 61.19 (11/7/85), NWCAA 104.2 (6/10/10)

No owner or operator subject to the provisions of this part shall build, erect, install, or use any article, machine, equipment, process, or method, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous dilutants to achieve compliance with a visible emissions standard, and the piecemeal carrying out of an operation to avoid coverage by a standard that applies only to operations larger than a specified size.

3.2.6 Requirements for Existing, Newly Constructed, and Reconstructed Sources

Title 40 CFR Part 61.05(a) (11/7/85), 61.07(11/7/85), and 61.10(a) and (c) (3/16/94), NWCAA 104.2 (6/10/10)

After the effective date of a Part 61 standard, no owner or operator shall construct or modify any stationary source subject to that standard without obtaining written approval from the NWCAA in accordance with Part 61 Subpart A, except under an exemption granted by the President under Section 112(c)(2) of the Act. Sources, the construction or modification of which commenced after the publication date of the standards proposed to be applicable to the sources, are subject to this prohibition.

The owner or operator shall submit to the NWCAA an application for approval of the construction of any new source or modification of any existing source. The application shall be submitted

before the construction or modification is planned to commence, or within 30 days after the effective date if the construction or modification had commenced before the effective date and initial startup has not occurred. A separate application shall be submitted for each stationary source. Each application for approval of construction shall include:

i. The name and address of the applicant;

ii. The location or proposed location of the source; and

iii. Technical information describing the proposed nature, size, design, operating design capacity, and method of operation of the source, including a description of any equipment to be used for control of emissions. Such technical information shall include calculations of emission estimates in sufficient detail to permit assessment of the validity of the calculations.

Each application for approval of modification shall include, in addition to the information required in paragraph (b) of this section:

i. The precise nature of the proposed changes;

ii. The productive capacity of the source before and after the changes are completed; and

iii. Calculations of estimates of emissions before and after the changes are completed, in sufficient detail to permit assessment of the validity of the calculations.

The owner or operator of each existing source or each new source which had an initial startup before the effective date of a relevant standard shall provide the following information in writing to the Administrator within 90 days after the effective date:

The name and address of the owner or operator;

i. The location of the source;

ii. The type of hazardous pollutants emitted by the stationary source;

iii. A brief description of the nature, size, design, and method of operation of the stationary source including the operating design capacity of the source. Identify each point of emissions for each hazardous pollutant.

iv. The average weight per month of the hazardous materials being processed by the source, over the last 12 months preceding the date of the report.

v. A description of the existing control equipment for each emission point including – (i) each control device for each hazardous pollutant; and (ii) estimated control efficiency (percent) for each control device.

vi. A statement by the owner or operator of the source as to whether the source can comply with the standards within 90 days after the effective date.

Any change in the information provided under paragraph (a) of this section or 61.07(b) shall be provided to the NWCAA within 30 days after the change. However, if any change will result from modification of the source, 61.07(c) and 61.08 apply.

3.2.7 Prohibited Activities and Circumvention

Title 40 CFR 61.05(b)(c) and (d) (11/7/85), NWCAA 104.2 (6/10/10)

No owner or operator subject to the provisions of Part 61 Subpart FF- National Emission Standards for Benzene Waste Operations shall operate a new stationary source in violation of the standard except under an extension granted by the President under Section 112(c)(2) of the Act.

Ninety days after the effective date of any standard, no owner or operator shall operate any existing source subject to that standard in violationof the standard, except under a waiver granted by the Administrator under this part or under an exemption granted by the President under Section 112(c)(2) of the Act.

No owner or operator subject to the provisions of Part 61 shall fail to report, revise reports, or report source test results as required under this part.

3.2.8 Operation and Maintenance

Title 40 CFR 61.12(c) (2/24/97), NWCAA 104.2 (6/10/10)

The owner or operator of each stationary source shall maintain and operate the source, including associated equipment for air pollution control, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the NWCAA which may include, but is not limited to, monitoring results, review of operating and maintenance procedures, and inspection of the source.

3.3 Part 63 – National Emission Standard for Hazardous Air Pollutant Requirements

3.3.1 Address for Reports, Notifications and Submittals

Title 40 CFR 63.9(a)(5/30/03) and 63.10(a)(4/20/06) (as amended by Delegation Letter of 11/29/10 from Richard Albright, Director, EPA Office of Air, Waste, and Toxics to Mark Asmundson, Director of NWCAA), NWCAA 104.2 (6/10/10).

Notifications, reports, and applications for delegated Part 63 NESHAPS shall be sent to the NWCAA at the following address:

Northwest Clean Air Agency
1600 South Second Street
Mount Vernon, WA 98273-5202

All NESHAP Subparts referenced in this permit have been delegated to NWCAA. Authority to approve major alternatives to test methods, monitoring, and recordkeeping and reporting have not been delegated to NWCAA (see 68 Federal Register 37334 published June 23, 2003). Prior to filing an application under any NESHAP regulation that authorizes EPA to approve alternate test methods, monitoring methods, and recordkeeping and reporting, the permittee shall consult with NWCAA to determine whether the application falls within the scope of NWCAA's delegated authority.

Applications under NESHAP authorities that have been excluded from delegation shall be submitted to the NWCAA at the above address and to the EPA at the following address:

Director, Office of Air, Waste, and Toxics U.S. EPA Region 10
1200 Sixth Avenue
Seattle WA 98101

3.3.2 Recordkeeping Requirements for Refinery MACT (Subpart CC) Equipment

Title 40 CFR Part 63.642(e) (6/12/96), NWCAA 104.2 (6/10/10)

Each owner or operator of a source subject to this subpart (Subpart CC) shall keep copies of all applicable reports and records required by this subpart for at least 5 years except as otherwise specified in this subpart. All applicable records shall be maintained in such a manner that they can be readily accessed within 24 hours. Records may be maintained in hard copy or computer-

readable form including, but not limited to, on paper, microfilm, computer, floppy disk, magnetic tape, or microfiche.

3.3.3 Additional Refinery MACT (Subpart CC) Process Units Added or Process Changes Not Meeting Construction or Reconstruction Definition

Title 40 CFR 63.640(l) and (m) (5/25/01), NWCAA 104.2 (6/10/10)

If an additional petroleum refining process unit or a process change is made that is subject to 63.640(l), the added emission point(s) and any emission point(s) within the added or changed petroleum refining process unit are subject to the requirements for an existing source.

If a process unit is added to a plant site or an emission point(s) is added to any existing petroleum refining process unit, the added emission point(s) shall be in compliance upon initial startup.

If a deliberate operational process change to an existing petroleum refining process unit causes a Group 2 emission point to become a Group 1 emission point, the owner or operator shall be in compliance upon initial startup unless they demonstrate to the NWCAA that achieving compliance will take longer than making the change. If this demonstration is made to the NWCAA's satisfaction, the owner or operator shall follow the procedures as noted below to establish a compliance date:

i. The owner or operator shall submit a compliance schedule along with a justification for the schedule;

ii. The compliance schedule shall be submitted within 180 days after the change is made, unless the compliance schedule has been previously submitted to the NWCAA; and

iii. The NWCAA shall approve or deny the compliance schedule or request within 120 calendar days of receipt of receipt of the compliance schedule and justification.

The emission points are subject to the Notification of Compliance Status Report as required by 63.655 (f), Periodic Reports as required by 63.655 (g) and (h), and other reports as required by 40 CFR 63.640(l)(3)(i) through (vi) and Subpart A of Part 63 except that components that are added to an existing source are not required to provide a Notification of Status report for such added equipment as provided by 40 CFR 63.640(l)(4).

3.3.4 Requirements for Existing, Newly Constructed, and Reconstructed Part 63 NESHAPS Sources

Title 40 CFR Part 63.5(b)(1), (3), (4), (6) (4/5/02), NWCAA 104.2 (6/10/10)

A new affected source for which construction commences after proposal of a relevant standard is subject to relevant standards for new affected sources, including compliance dates. An affected source for which reconstruction commences after proposal of a relevant standard is subject to relevant standards for new sources, including compliance dates, irrespective of any change in emissions of hazardous air pollutants from that source.

After the effective date of any relevant standard promulgated by the EPA under Part 63, no person may, without obtaining written approval in advance from the *NWCAA* in accordance with the procedures in paragraphs (d) and (e) of this Part 63.5, do any of the following:

i. Construct a new affected source that is major-emitting and subject to such standard;

ii. Reconstruct an affected source that is major-emitting and subject to such standard; or

iii. Reconstruct a major source such that the source becomes an affected source that is major-emitting and subject to the standard.

After the effective date of any relevant standard promulgated by the EPA under this part, an owner or operator who constructs a new affected source that is not major-emitting or reconstructs an affected source that is not major-emitting that is subject to such standard, or reconstructs a source such that the source becomes an affected source subject to the standard, must notify the Administrator of the intended construction or reconstruction. The notification must be submitted in accordance with the applicable procedures in 63.9(b).

After the effective date of any relevant standard promulgated by the Administrator under this part, equipment added (or a process change) to an affected source that is within the scope of the definition of affected source under the relevant standard must be considered part of the affected source and subject to all provisions of the relevant standard established for that affected source.

3.3.5 Notification

3.3.5.1 Notification Requirements for New or Reconstructed Part 63 NESHAPS Sources

Title 40 CFR Part 63.9(b)(4) (5/30/03), NWCAA 104.2 (6/10/10)

The owner or operator of a new or reconstructed major affected source for which an application for approval of construction or reconstruction is required under 63.5(d) must provide the following information in writing to the *NWCAA*:

i. A notification of intention to construct a new major-emitting affected source, reconstruct a major-emitting affected source, or reconstruct a major source such that the source becomes a major-emitting affected source with the application for approval of construction or reconstruction as specified in 63.5(d)(1)(i); and

ii. A notification of the actual date of startup of the source delivered or postmarked within 15 calendar days after that date.

3.3.5.2 Notification Requirements for EXISTING Part 63 NESHAPS Sources Except Refinery MACT (Subpart CC) Affected Sources

Title 40 CFR Part 63.9 (b)(2) and (j) (5/30/03), NWCAA 104.2 (6/10/10)

The owner or operator of an affected source that has an initial startup before the effective date of a relevant standard under this part shall notify the NWCAA in writing that the source is subject to the relevant standard. The notification, which shall be submitted not later than 120 calendar days after the effective date of the relevant standard (or within 120 calendar days after the source becomes subject to the relevant standard) shall provide the following information:

i. The name and address of the owner or operator;

ii. The address (i.e., physical location) of the affected source;

iii. An identification of the relevant standard, or other requirement that is the basis of notification and the source's compliance date;

iv. A brief description of the nature and size, design, and method of operation of the source and an identification of the types of emission points within the affected source subject to the relevant standard and the types of hazardous air pollutants emitted; and

v. A statement of whether the affected source is a major source or an area source.

Any change in the information provided under this section shall be provided to the Administrator in writing within 15 calendar days after the change.

3.3.6 Startup, Shutdown, and Malfunction Reports

3.3.6.1 SSM Reports for Part 63 NESHAPS Sources

Title 40 CFR 63.10(b)(1),(2) and (d)(5) (4/20/06), NWCAA 104.2 (6/10/10)

The owner or operator of an affected source shall maintain files of all information (including all reports and notifications) required by this part recorded in a form suitable and readily available for expeditious inspection and review. The files shall be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report or record. At a minimum, the most recent 2 years of data shall be retained on site. The remaining 3 years of data may be retained off site. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.

The owner or operator of an affected source subject to the provisions of this part shall maintain relevant records for such source of—

i. The occurrence and duration of each startup or shutdown when the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards;

ii. The occurrence and duration of each malfunction of operation (*i.e.* , process equipment) or the required air pollution control and monitoring equipment;

iii. All required maintenance performed on the air pollution control and monitoring equipment;

iv. A) Actions taken during periods of startup or shutdown when the source exceeded applicable emission limitations in a relevant standard and when the actions taken are different from the procedures specified in the affected source's startup, shutdown, and malfunction plan (see §63.6(e)(3)); or

(B) Actions taken during periods of malfunction (including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation) when the actions taken are different from the procedures specified in the affected source's startup, shutdown, and malfunction plan (see §63.6(e)(3));

v. All information necessary, including actions taken, to demonstrate conformance with the affected source's startup, shutdown, and malfunction plan (see §63.6(e)(3)) when all actions taken during periods of startup or shutdown (and the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards), and malfunction (including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation) are consistent with the procedures specified in such plan. (The information needed to demonstrate conformance with the startup, shutdown, and malfunction plan may be recorded using a "checklist," or some other effective form of recordkeeping, in order to minimize the recordkeeping burden for conforming events);

vi. Each period during which a CMS is malfunctioning or inoperative (including out-of-control periods);

vii. All required measurements needed to demonstrate compliance with a relevant standard (including, but not limited to, 15-minute averages of CMS data, raw performance testing measurements, and raw performance evaluation measurements, that support data that the source is required to report);

(A) This paragraph applies to owners or operators required to install a continuous emissions monitoring system (CEMS) where the CEMS installed is automated, and where the calculated data averages do not exclude periods of CEMS breakdown or malfunction. An automated CEMS records and reduces the measured data to the form of the pollutant emission standard through the use of a computerized data acquisition system. In lieu of maintaining a file of all CEMS subhourly measurements as required under paragraph (b)(2)(vii) of this section, the owner or operator shall retain the most recent consecutive three averaging periods of subhourly measurements and a file that contains a hard copy of the data acquisition system algorithm used to reduce the measured data into the reportable form of the standard.

(B) This paragraph applies to owners or operators required to install a CEMS where the measured data is manually reduced to obtain the reportable form of the standard, and where the calculated data averages do not exclude periods of CEMS breakdown or malfunction. In lieu of maintaining a file of all CEMS subhourly measurements as required under paragraph (b)(2)(vii) of this section, the owner or operator shall retain all subhourly measurements for the most recent reporting period. The subhourly measurements shall be retained for 120 days from the date of the most recent summary or excess emission report submitted to the Administrator.

(C) The NWCAA, upon notification to the source, may require the owner or operator to maintain all measurements as required by paragraph (b)(2)(vii), if the NWCAA determines these records are required to more accurately assess the compliance status of the affected source.

viii. All results of performance tests, CMS performance evaluations, and opacity and visible emission observations;

ix. All measurements as may be necessary to determine the conditions of performance tests and performance evaluations;

x. All CMS calibration checks;

xi. All adjustments and maintenance performed on CMS;

xii. All documentation supporting initial notifications and notifications of compliance status under §63.9.

If actions taken by an owner or operator during a startup, shutdown (and the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards), or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan (SSMP), the owner or operator shall state such information in a SSMP report. Actions taken to minimize emissions during such startups, shutdowns, and malfunctions shall be summarized in the report and may be done in checklist form; if actions taken are the same for each event, only one checklist is necessary. Such a report shall also include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. Reports shall only be required if a startup or shutdown caused the source to exceed any applicable emission limitation in the relevant emission standards, or if a malfunction occurred during the reporting period.

Any time an action taken by an owner or operator during a startup or shutdown that caused the source to exceed any applicable emission limitation in the relevant emission standards, or malfunction (including actions taken to correct a malfunction) is not consistent with the

procedures specified in the affected source's SSMP, the owner or operator shall report the actions taken for that event within 2 working days after commencing actions inconsistent with the plan followed by a letter within 7 working days after the end of the event. The immediate report required under this paragraph shall consist of a telephone call (or a facsimile transmission) to the NWCAA within 2 working days after commencing actions inconsistent with the plan, and it shall be followed by a letter, delivered or postmarked within 7 working days after the end of the event, that contains the name, title, and signature of the owner or operator or other responsible official who is certifying its accuracy, explaining the circumstances of the event, the reasons for not following the SSMP, describing all excess emissions and/or parameter monitoring exceedances which are believed to have occurred (or could have occurred in the case of malfunctions), and actions taken to minimize emissions in conformance with §63.6(e)(1)(i).

3.3.6.2 *SSM Reports for Part 63 NESHAPS Refinery MACT (Subpart CC) Affected Sources*

Title 40 CFR 63.10(b)(2) and (d)(5) (4/20/06), NWCAA 104.2 (6/10/10)

The requirements for startup, shutdown and malfunction reports for Subpart CC affected sources is the same as noted in Subsection 3.3.6.1 above with the following exceptions and differences:

i. Under Subsection 63.10(b)(2) - Maintenance of Relevant Records

ii. Provisions listed under 63.10(b)(2)(iii), (vi), (vii), (viii), (ix), (xii), (xiii) and (xiv) do not apply.

iii. Under Subsection 63.10(d)(5) - Startup, Shutdown, and Malfunction Reports

iv. Provisions listed under 63.10(d) (5) (i) apply except that periodic SSM reports may be submitted at the same time as periodic reports specified in 63.655(e).

v. Provisions listed under 63.10(d)(5)(ii) apply except that actions taken during a startup, shutdown or malfunction that are not consistent with the SSM plan do not need to be reported within 2 and 7 days of commencing and completing the action, respectively, but must be included in the next periodic report.

3.3.6.3 *SSM Reports for Part 63 NESHAPS Refinery Phase II (Subpart UUU) Affected Sources*

Title 40 CFR 63.1575(h) and 63.1577 (4/11/02), NWCAA 104.2 (6/10/10)

The requirements for startup, shutdown and malfunction reports for Subpart UUU affected sources is the same as noted in Subsection 3.3.6.1 above with the following exceptions and differences:

i. When actions taken to respond during startups, shutdowns and malfunctions are consistent with the plan, it is not required to report these events in the semiannual compliance report and the reporting requirements in §§ 63.6(e)(3)(iii) and 63.10(d)(5) do not apply. Confirm that actions taken during the relevant reporting period during periods of startup, shutdown, and malfunction were consistent with the affected source's startup, shutdown and malfunction plan in the semiannual (or more frequent) startup, shutdown, and malfunction report required in § 63.10(d)(5).

ii. When actions taken to respond during startups, shutdowns and malfunctions are not consistent with the plan, it is required to report these events and the response taken in the semiannual compliance report. In this case, the reporting timeframe requirements in §§ 63.6(e)(3)(iv) and 63.10(d)(5) do not apply (the events shall be reported in the next semiannual report instead of reporting verbally within 2 working days and in writing within 7 working days).

3.3.7 Prohibited Activities and Circumvention

Title 40 CFR 63.4(4/5/02), NWCAA 104.2 (6/10/10)

No owner or operator subject to the provisions of this part must operate any affected source in violation of the requirements of this part. Affected sources subject to and in compliance with either an extension of compliance or an exemption from compliance is not in violation of the requirements of this part. An extension of compliance can be granted by the Administrator under this part; by a State with an approved permit program; or by the President under Section 112(i)(4) of the Act.

No owner or operator subject to the provisions of this part shall fail to keep records, notify, report, or revise reports as required under this part.

No owner or operator subject to the provisions of this part shall build, erect, install, or use any article, machine, equipment, or process to conceal an emission that would otherwise constitute noncompliance with a relevant standard. Such concealment includes, but is not limited to –

i. The use of diluents to achieve compliance with a relevant standard based on the concentration of a pollutant in the effluent discharged to the atmosphere;

ii. The use of gaseous diluents to achieve compliance with a relevant standard for visible emissions.

Fragmentation after November 15, 1990 which divides ownership of an operation, within the same facility among various owners where there is no real change in control, will not affect applicability. The owner and operator must not use fragmentation or phasing of reconstruction activities (i.e., intentionally dividing reconstruction into multiple parts for purposes of avoiding new source requirements) to avoid becoming subject to new source requirements.

3.3.8 Operation and Maintenance

Title 40 CFR part 63.6(e)(1)(i),(ii),and (iii) (4/20/06), NWCAA 104.2 (6/10/10)

i. At all times, including periods of startup, shutdown, and malfunction, owners or operators must operate and maintain any affected source, including associated air pollution control and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. During a period of startup, shutdown, or malfunction, this general duty to minimize emissions requires that the owner or operator reduce emissions from the affected source to the greatest extent which is consistent with safety and good air pollution control practices. The general duty to minimize emissions during a period of startup, shutdown, or malfunction does not require the owner or operator to achieve emission levels that would be required by the applicable standard at other times if this is not consistent with safety and good air pollution control practices, nor does it require the owner or operator to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures (including the startup, shutdown, and malfunction plan required in paragraph (e)(3) of this section), review of operation and maintenance records, and inspection of the source.

ii. Malfunctions must be corrected as soon as practicable after their occurrence. To the extent that an unexpected event arises during a startup, shutdown, or malfunction, an owner or operator must comply by minimizing emissions during such a startup,

shutdown, and malfunction event consistent with safety and good air pollution control practices.

iii. Operation and maintenance requirements established pursuant to section 112 of the Act are enforceable independent of emissions limitations or other requirements in relevant standards.

3.3.9 Startup, Shutdown, and Malfunction Plan

3.3.9.1 SSM Plans for Part 63 NESHAPS Sources Title 40 CFR Part 63.6(e)(3) (4/20/06), NWCAA 104.2 (6/10/10)

i. The owner or operator of an affected source must develop a written startup, shutdown, and malfunction plan that describes, in detail, procedures for operating and maintaining the source during periods of startup, shutdown, and malfunction, a program of corrective action for malfunctioning process, air pollution control, and monitoring equipment used to comply with the relevant standard. This plan shall be developed by the source's compliance date for the relevant standard.

iii. When actions taken by the owner or operator during a startup or shutdown (and the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards), or malfunction (including actions taken to correct a malfunction) are consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the owner or operator must keep records for that event which demonstrate that the procedures specified in the plan were followed. These records may take the form of a "checklist," or other effective form of recordkeeping that confirms conformance with the startup, shutdown, and malfunction plan and describes the actions taken for that event. In addition, the owner or operator must keep records of these events as specified in paragraph 63.10(b), including records of the occurrence and duration of each startup or shutdown (if the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards), or malfunction of operation and each malfunction of the air pollution control and monitoring equipment. Furthermore, the owner or operator shall confirm that actions taken during the relevant reporting period during periods of startup, shutdown, and malfunction were consistent with the affected source's startup, shutdown and malfunction plan in the semiannual (or more frequent) startup, shutdown, and malfunction report required in §63.10(d)(5).

iv. If an action taken by the owner or operator during a startup, shutdown, or malfunction (including an action taken to correct a malfunction) is not consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, and the source exceeds any applicable emission limitation in the relevant emission standard, then the owner or operator must record the actions taken for that event and must report such actions within 2 working days after commencing actions inconsistent with the plan, followed by a letter within 7 working days after the end of the event, in accordance with §63.10(d)(5) (unless the owner or operator makes alternative reporting arrangements, in advance, with the Administrator).

v. The owner or operator must maintain at the affected source a current SSMP and must make the plan available upon request for inspection and copying by the NWCAA. In addition, if the SSMP is subsequently revised, the owner or operator must maintain at the affected source each previous (i.e., superseded) version of the SSMP, and must make each such previous version available for inspection and copying by the NWCAA for a period of 5 years after revision of the plan. If at any time after adoption of a SSMP the affected source ceases operation or is otherwise no longer subject to the

provisions of this part, the owner or operator must retain a copy of the most recent plan for 5 years from the date the source ceases operation or is no longer subject to this part and must make the plan available upon request for inspection and copying by the NWCAA.

vi. To satisfy the requirements of this section to develop a SSMP, the owner or operator may use the affected source's standard operating procedures (SOP) manual, or an Occupational Safety and Health Administrations (OSHA) or other plan, provided the alternative plans meet all the requirements of this section and are made availabe for inspection when requested by the NWCAA.

vii. Based on the results of a determination made under paragraph 63.6(e)(2) of this 40 CFR 63 Subpart, the Administrator may require than an owner or operator of an affected source make changes to the SSMP for that source. The NWCAA may require reasonable revisions to a SSMP if the NWCAA finds that the plan:

A. Does not address a startup, shutdown, or malfunction event that has occurred;

B. Fails to provide for the operation of the source (including associated air pollution control and monitoring equipment) during a startup, shutdown, or malfunction event in a manner consistent with safety and good air pollution control practices for minimizing emissions to the levels required by the relevant standards;

C. Does not provide adequate procedures for correcting malfunctioning process and/or air pollution control and monitoring equipment as quickly as practicable; or

D. Includes an event that does not meet the definition of startup, shutdown, or malfunction listed in 63.2.

viii. The owner or operator may periodically revise the startup, shutdown, and malfunction plan for the affected source as necessary to satisfy the requirements of this part or to reflect changes in equipment or procedures at the affected source. Unless the permitting authority provides otherwise, the owner or operator may make such revisions to the startup, shutdown, and malfunction plan without prior approval by the Administrator or the permitting authority. However, each such revision to a startup, shutdown, and malfunction plan must be reported in the semiannual report required by §63.10(d)(5). If the startup, shutdown, and malfunction plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the startup, shutdown, and malfunction plan at the time the owner or operator developed the plan, the owner or operator must revise the startup, shutdown, and malfunction plan within 45 days after the event to include detailed procedures for operating and maintaining the source during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control and monitoring equipment. In the event that the owner or operator makes any revision to the startup, shutdown, and malfunction plan which alters the scope of the activities at the source which are deemed to be a startup, shutdown, or malfunction, or otherwise modifies the applicability of any emission limit, work practice requirement, or other requirement in a standard established under this part, the revised plan shall not take effect until after the owner or operator has provided a written notice describing the revision to the permitting authority.

3.3.9.2 SSM Plans for Part 63 NESHAPS Refinery MACT (Subpart CC) Affected Sources Title 40 CFR Part 63.6(e)(3) (4/20/06), NWCAA 104.2 (6/10/10)

The requirements for startup, shutdown and malfunction plans for Subpart CC affected sources are the same as noted in Subsection 3.3.9.1 above with the following exceptions or differences:

The requirements specified in 40 CFR 63.6(e)(3) above do not apply to Group 2 emission points nor does it apply to wastewater operations not subject to Subpart G.

Actions taken during a startup, shutdown or malfunction that are not consistent with the SSM plan do not need to be reported within 2 and 7 days, but must be include in the next periodic report.

3.3.9.3 SSM Plans for Part 63 NESHAPS Refinery MACT II (Subpart UUU) Affected Sources Title 40 CFR Part 63.6(e)(3) (4/20/06), NWCAA 104.2 (6/10/10)

The requirements for startup, shutdown and malfunction plans for Subpart UUU affected sources are the same as noted in Subsection 3.3.9.1 above with the following exceptions or differences:

Actions taken during a startup, shutdown or malfunction that are not consistent with the SSM plan do not need to be reported within 2 and 7 days, but must be include in the next periodic report.

3.3.10 Extension of Compliance for Early Reductions and Other Reductions

Title 40 CFR part 63.6(i)(4/20/06) and 63.9(c) (5/30/03), NWCAA 104.2 (6/10/10)

Until a compliance extension has been granted by the NWCAA under this paragraph, the owner or operator of an affected source subject to the requirements of this section shall comply with this part's applicable requirements. A compliance extension may be possible if it meets 63.6(i)(4) and 63.6(i)(6).

3.3.11 Notification of Performance Tests

40 CFR Part 63.9(e) (5/30/03), NWCAA 104.2 (6/10/10)

The owner or operator of an affected source shall notify the Administrator in writing of his or her intention to conduct a performance test at least 30 calendar days before the performance test is scheduled to begin to allow the Administrator to review and approve the site-specific test plan required under §63.7(c), if requested by the Administrator, and to have an observer present during the test.

3.3.12 Conduct of Performance Tests

Title 40 CFR part 63.7(e)(1) (5/16/07), NWCAA 104.2 (6/10/10)

Performance tests shall be conducted under such conditions as the Administrator specifies to the owner or operator based on representative performance (i.e., performance based on normal operating conditions) of the affected source. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test, nor shall emissions in excess of the level of the relevant standard during periods of startup, shutdown, and malfunction be considered a violation of the relevant standard unless otherwise specified in the relevant standard or a determination of noncompliance is made under §63.6(e). Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

3.3.13 Operation and Maintenance of Continuous Monitoring Systems (CMS)

40 CFR Part 63.8(c)(1),(2),(3 and (4) (4/20/06), NWCAA 104.2 (6/10/10)

The owner or operator of an affected source shall maintain and operate each CMS as specified in this section, or in a relevant standard, and in a manner consistent with good air pollution control practices.

(i) The owner or operator of an affected source must maintain and operate each CMS as specified in §63.6(e)(1).

(ii) The owner or operator must keep the necessary parts for routine repairs of the affected CMS equipment readily available.

(iii) The owner or operator of an affected source must develop a written startup, shutdown, and malfunction plan for CMS as specified in §63.6(e)(3).

All CMS must be installed such that representative measures of emissions or process parameters from the affected source are obtained. In addition, CEMS must be located according to procedures contained in the applicable performance specification(s).

(ii) Unless the individual subpart states otherwise, the owner or operator must ensure the read out (that portion of the CMS that provides a visual display or record), or other indication of operation, from any CMS required for compliance with the emission standard is readily accessible on site for operational control or inspection by the operator of the equipment.

Except for system breakdowns, out-of-control periods, repairs, maintenance periods, calibration checks, and zero (low-level) and high-level calibration drift adjustments, all CMS, including COMS and CEMS, shall be in continuous operation and shall meet minimum frequency of operation requirements as follows:

(i) All COMS shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(ii) All CEMS for measuring emissions other than opacity shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

The owner or operator of a CMS which is installed in accordance with the provisions of this part and the applicable CMS performance specification(s), must check the zero (low-level) and high-level calibration drifts at least once daily in accordance with the written procedure specified in the performance evaluation plan developed under paragraphs (e)(3)(i) and (ii) of this section. The zero (low-level) and high-level calibration drifts must be adjusted, at a minimum, whenever the 24-hour zero (low-level) drift exceeds two times the limits of the applicable performance specification(s) specified in the relevant standard. The system shall allow the amount of excess zero (low-level) and high-level drift measured at the 24-hour interval checks to be recorded and quantified whenever specified.

3.3.14 Continuous Monitoring Systems (CMS) Out of Control Periods

40 CFR Part 63.8(c)(7), and (8) (4/20/06), NWCAA 104.2 (6/10/10)

A CMS is out of control if:

(A) The zero (low-level), mid-level (if applicable), or high-level calibration drift (CD) exceeds two times the applicable CD specification in the applicable performance specification or in the relevant standard; or

(B) The CMS fails a performance test audit (e.g., cylinder gas audit), relative accuracy audit, relative accuracy test audit, or linearity test audit; or

When the CMS is out of control, the owner or operator of the affected source shall take the necessary corrective action and shall repeat all necessary tests which indicate that the system is out of control. The owner or operator shall take corrective action and conduct retesting until the performance requirements are below the applicable limits. The beginning of the out-of-control period is the hour the owner or operator conducts a performance check (e.g., calibration drift) that indicates an exceedance of the performance requirements established under this part. The end of the out-of-control period is the hour following the completion of corrective action and successful demonstration that the system is within the allowable limits. During the period the CMS is out of control, recorded data shall not be used in data averages and calculations, or to meet any data availability requirement established under this part.

The owner or operator of a CMS that is out of control as defined in paragraph (c)(7) of this section shall submit all information concerning out-of-control periods, including start and end dates and hours and descriptions of corrective actions taken, in the excess emissions and continuous monitoring system performance report required in §63.10(e)(3).

3.3.15 Continuous Monitoring Systems (CMS) Quality Control Program

40 CFR Part 63.8(d) (4/20/06), NWCAA 104.2 (6/10/10)

The results of the quality control program required in this paragraph will be considered by the Administrator when he/she determines the validity of monitoring data.

The owner or operator of an affected source that is required to use a CMS and is subject to the monitoring requirements of this section and a relevant standard shall develop and implement a CMS quality control program. As part of the quality control program, the owner or operator shall develop and submit to the Administrator for approval upon request a site-specific performance evaluation test plan for the CMS performance evaluation required in paragraph (e)(3)(i) of this section, according to the procedures specified in paragraph (e). In addition, each quality control program shall include, at a minimum, a written protocol that describes procedures for each of the following operations:

(i) Initial and any subsequent calibration of the CMS;

(ii) Determination and adjustment of the calibration drift of the CMS;

(iii) Preventive maintenance of the CMS, including spare parts inventory;

(iv) Data recording, calculations, and reporting;

(v) Accuracy audit procedures, including sampling and analysis methods; and

(vi) Program of corrective action for a malfunctioning CMS.

The owner or operator shall keep these written procedures on record for the life of the affected source or until the affected source is no longer subject to the provisions of this part, to be made available for inspection, upon request, by the Administrator. If the performance evaluation plan is revised, the owner or operator shall keep previous (i.e., superseded) versions of the performance evaluation plan on record to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan. Where relevant, e.g., program of corrective action for a malfunctioning CMS, these written procedures may be incorporated as part of the affected source's startup, shutdown, and malfunction plan to avoid duplication of planning and recordkeeping efforts.

3.3.16 Continuous Monitoring Systems (CMS) Data Reduction

40 CFR Part 63.8(g)(1-4) (4/20/06), NWCAA 104.2 (6/10/10)

The owner or operator of each CMS must reduce the monitoring data as specified in paragraphs (g)(1) through (5) of this section.

Data from CEMS for measurement other than opacity, unless otherwise specified in the relevant standard, shall be reduced to 1-hour averages computed from four or more data points equally spaced over each 1-hour period, except during periods when calibration, quality assurance, or maintenance activities pursuant to provisions of this part are being performed. During these periods, a valid hourly average shall consist of at least two data points with each representing a 15-minute period. Alternatively, an arithmetic or integrated 1-hour average of CEMS data may be used. Time periods for averaging are defined in §63.2.

The data may be recorded in reduced or nonreduced form (e.g., ppm pollutant and percent O_2or ng/J of pollutant).

All emission data shall be converted into units of the relevant standard for reporting purposes using the conversion procedures specified in that standard. After conversion into units of the relevant standard, the data may be rounded to the same number of significant digits as used in that standard to specify the emission limit (e.g., rounded to the nearest 1 percent opacity).

SECTION 4 GENERALLY APPLICABLE REQUIREMENTS

The cited requirements in the "Citation" column and incorporated herein by reference are applicable plantwide at the source, including insignificant emission units. These requirements are federally enforceable unless identified as "state only". A requirement designated "state only" is enforceable only by the state or the NWCAA, and not by the EPA or through citizen suits. The "Description" column is a brief description of the applicable requirements for informational purposes only and is not enforceable. Periodic or continuous monitoring requirements (including testing) are specified in the "Monitoring, Recordkeeping and Reporting" column, which identifies monitoring, recordkeeping and reporting (MR&R) obligations the source must perform as required by WAC 173-401-605(1) and 615(1) and (2) or the underlying requirement. MR&R obligations do not apply to insignificant emission units.

The requirements in the MR&R column listed below the "Directly Enforceable" label are legally enforceable requirements added under the NWCAA's "gap-filling" authority [WAC 172-401-615(1)(b) & (c), (10/17/02]. Other requirements not labeled "Directly Enforceable" or above the "Directly Enforceable" label are brief descriptions of the regulatory requirements for information purposes, and are not enforceable. Unless the text of the MR&R column is specifically identified to be directly enforceable, the language of the cited regulation takes precedence over a paraphrased requirement.

The provisions of federally approved NWCAA 365, 366 and the "Guidelines for Industrial Monitoring Equipment and Data Handling" have been replaced in this section by NWCAA 367 and Appendix A - "Ambient Monitoring, Emission Testing and Continuous Emission and Opacity Monitoring". NWCAA 367 and Appendix A were adopted on July 14, 2005 with a provision that applicable sources would be allowed one year from the date of adoption to achieve compliance with Appendix A. The new regulations are "State Only" until incorporated into the State Implementation Plan. NWCAA 367 and Appendix A are not materially different from the previous rule and guideline, but have been updated to include current monitoring technology and methods.

Table 4-1 Generally Applicable Requirements

Term	Citation	Description	Monitoring, Recordkeeping and Reporting
4.1 General	NWCAA 342.1 (7/14/05) State Only	<u>Operation and Maintenance</u> Sources are required to keep any process and/or air pollution control equipment in good operating condition and repair.	*Directly Enforceable* Monitor, keep records and report in accordance with the terms of this permit

Term	Citation	Description	Monitoring, Recordkeeping and Reporting
4.2 General	NWCAA 342.2 (4/14/93) NWCAA 342.2 (7/14/05) State Only	<u>Operating Instructions/Maintenance Schedules</u> Make operating instructions and maintenance schedules available to operators.	
4.3 VOC	NWCAA 580.25 (2/8/96)	Equipment for the reduction, collection or disposal of VOC shall be maintained and operated in a manner commensurate with accepted industrial practices.	

Term	Citation	Description	Monitoring, Recordkeeping and Reporting
4.4 Opacity	NWCAA 451.1 (10/13/94) NWCAA 451.1 (11/8/07) State Only WAC 173-400-040(1) (9/20/93) WAC 173-400-040(1) (2/10/05) State Only	<u>Emission of Air Contaminant - Visual Standard</u> Opacity shall not exceed 20% for any period aggregating more than 3 minutes in any one hour. Excess emissions as a result of soot blowing or grate cleaning shall not occur for more than 15 minutes in any 8 hour period, or another approved schedule.	*Directly Enforceable* For combustion units burning oil, visually observe stacks on a daily basis to qualitatively assess whether emissions are visible. The frequency may be reduced to weekly if no visible emissions are observed for thirty consecutive days. The permittee shall revert to daily observations of individual stacks if any visible emissions are noted during the observation. For combustion units burning gaseous fuels, visually observe stacks monthly to qualitatively assess whether emissions are visible. The frequency may be reduced to quarterly if no visible emissions are observed for six consecutive months. The permittee shall revert to monthly observations of individual stacks if any visible emissions are noted during the observation. If visible emissions are observed, reduce to no visible emissions as soon as possible. If visible emissions cannot be reduced to zero, the permittee may monitor by State of Washington Department of Ecology Source Test Method 9A - Visual Determination of Opacity for a three Minute Standard (Revised July 12, 1990) no later than 24 hours after detection and daily thereafter until opacity is shown to be less than 20%. Otherwise visual emissions shall be considered in excess of the opacity standard. Record observation results for stacks with visible emissions and any related equipment or operational failure, the occurrence dates and times, actions taken, and the type of fuel burned. Record that an observation was performed, with date, time, background conditions, and identification of the observer. Keep records of all observations available for inspection. Combustion units with specifically applicable permit terms in Section 5 for opacity and particulate matter shall be monitored in accordance with Section 5 requirements only.

Term	Citation	Description	Monitoring, Recordkeeping and Reporting
4.5 PM	NWCAA 455.1 (4/14/93) NWCAA 455.1 (5/11/95) State Only	Emission of Particulate Matter Emissions shall not exceed 0.10 grain/dscf (corrected to 7% oxygen), except, from all gaseous and distillate fuel burning equipment (the definition of fuel burning equipment does not include internal combustion engines), emissions shall not exceed 0.05 grain/dscf (0.11 g/m3) corrected to 7% oxygen. For catalytic cracking units, emissions shall not exceed 0.20 grains/dscf (corrected to 7% oxygen).	*Directly Enforceable* For combustion units burning oil, visually observe stacks on a daily basis to qualitatively assess whether emissions are visible. The frequency may be reduced to weekly if no visible emissions are observed for thirty consecutive days. The permittee shall revert to daily observations of individual stacks if any visible emissions are noted during the observation. For combustion units burning gaseous fuels, visually observe stacks monthly to qualitatively assess whether emissions are visible. The frequency may be reduced to quarterly if no visible emissions are observed for six consecutive months. The permittee shall revert to monthly observations of individual stacks if any visible emissions are noted during the observation. If visible emissions are observed, reduce to no visible emissions as soon as possible. If visible emissions cannot be reduced to zero, the permittee may monitor by State of Washington Department of Ecology Source Test Method 9A - Visual Determination of Opacity for a three Minute Standard (Revised July 12, 1990) no later than 24 hours after detection and daily thereafter until opacity is shown to be less than 20%. Otherwise visual emissions shall be considered in excess of the opacity standard. Record observation results for stacks with visible emissions and any related equipment or operational failure, the occurrence dates and times, actions taken, and the type of fuel burned. Record that an observation was performed, with date, time, background conditions, and identification of the observer. Keep records of all observations available for inspection. Combustion units with specifically applicable permit terms in Section 5 for opacity and particulate matter shall be monitored in accordance with Section 5 requirements only.
4.6 PM	WAC 173-400-060 (3/22/91) WAC 173-400-060 (2/10/05) State Only	Emission Standards for General Process Units Particulate emissions greater than 0.1 grain/dscf prohibited.	
4.7 PM	WAC 173-400-050(1) and (3) (3/22/91) WAC 173-400-050(1) and (3) (2/10/05) State Only	Emission Standards for Combustion and Incineration Units Particulate emissions from combustion units greater than 0.1 grains/dscf prohibited. Measured concentrations for combustion and incineration units shall be adjusted for volumes corrected to seven percent oxygen, except when Ecology or NWCAA determines that an alternate oxygen correction factor is more representative of normal operations.	

Term	Citation	Description	Monitoring, Recordkeeping and Reporting
4.8 SO_X	NWCAA 410 (4/14/93)	<u>Sulfur oxide standards</u> Unlawful for any person to cause or permit sulfur oxides to be emitted into the ambient air, calculated as sulfur dioxide, measured at an ambient air monitoring station to exceed: • 0.800 ppmv for any 5 minute average, not to be exceeded more than once per year • 0.400 ppmv for any hour average, not to be exceeded more than once per year • 0.250 ppmv for any one hour average, not to be exceeded more than twice in any 7 consecutive days • 0.100 ppmv for any one day (24 hours), not to be exceeded more than once per year. • 0.020 ppmv for any one year (annual arithmetic mean).	*Directly Enforceable* Monitor ambient air continuously and report to the NWCAA as per the requirements in NWCAA Regulations Appendix A (07/14/06).

Term	Citation	Description	Monitoring, Recordkeeping and Reporting
4.9 SO_2	NWCAA 460 (4/14/93) NWCAA 460 (7/14/05) State Only	Weight/Heat Rate Standard – Emission of Sulfur Compounds Sulfur compound emissions, as sulfur dioxide, shall not exceed 1.5 lbs/MMBtu of heat input per hour, on a monthly average basis for the facility	*Directly Enforceable* From the monthly average sulfur content of combusted fuel oil, calculate the SO_2 emissions from burning fuel oil. Calculate SO_2 emissions from refinery process heaters and boilers combusting refinery fuel gas using H_2S fuel gas monitoring results as required in Section 5 of this permit. For purposes of this report, calculate SO_2 emissions from flares using process information, or other information available; include emissions from upset or breakdown conditions. Generate the "base input heat capacity" in accordance with the NWCAA Regulation 367 and Appendix A from fuel records and calculate the monthly average weight/heat ratio for the facility. Report results monthly to the NWCAA by the end of the month subsequent to the reporting period.
4.10 SO_2	WAC 173-400-040(6) (8/20/93) The second paragraph of this citation is state only) WAC 173-400-040(6) (2/10/05) State Only	Sulfur dioxide Sulfur compounds calculated as sulfur dioxide and corrected to 7% O_2 emitted greater than 1000 ppmdv average for a sixty consecutive minute period prohibited.	*Directly Enforceable* Continuously monitor and record the concentration of hydrogen sulfide in refinery fuel gas, or alternatively stack SO_2, in accordance with the applicable permit terms listed in Section 5. Burn only low sulfur diesel (0.05% by weight) as an alternative to gaseous fuel. When combusting diesel, sample the oil daily or with each batch and analyze for sulfur content as per ASTM D-4294. Retain records of the analysis on-site for five years. The test results shall be traceable to each batch of diesel fuel combusted, the dates the fuel is combusted, and the date of each analysis. During process upsets, the concentration of sulfur in gases from the

Term	Citation	Description	Monitoring, Recordkeeping and Reporting
4.11 SO_X	NWCAA 462 (4/14/93) NWCAA 462 (3/13/97) State Only	Emission of sulfur compounds Sulfur compounds emitted greater than 1000 ppm (corrected to 7% O2) averaged for a sixty consecutive minute period from any equipment prohibited. This requirement is not violated if reasonable evidence is presented that concentrations will not exceed ambient standards and the permittee shows that no practical method of reducing concentration exists.	flares will be calculated based on the processes contributing to the flare feed stream.
4.12 Sulfur	NWCAA 520 (4/14/93)	Sulfur Compounds in Fuel Prohibited to burn, sell, or make available for sale for burning in fuel burning equipment within the jurisdiction of the NWCAA, fuel containing sulfur in excess of the following: • #1 distillate- 0.3 wt%; • #2 distillate-0.5 wt%; • other fuel oils-2.0 wt%; • solid fuels-2.0 wt% for a time period not to exceed 30 days in a 12-month period.	*Directly Enforceable* Retain fuel specifications and purchase records verifying that fuel sold or combusted in NWCAA's jurisdiction has a sulfur content of no more than the allowable limits.

Term	Citation	Description	Monitoring, Recordkeeping and Reporting
4.13 Sulfur	NWCAA 520 (5/9/96) State Only	Sulfur Compounds in Fuel Prohibited to burn fuel containing sulfur in excess of the following: • #1 distillate- 0.3%; • #2 distillate-0.5%; • other fuel oils-2.0%; • solid fuels-2.0%. This version exempts ocean-going vessels.	*Directly Enforceable* Retain fuel specifications and purchase records verifying that fuel combusted at the refinery has a sulfur content of no more than the allowable limits.
4.14 Odor	WAC 173-400-040(4) (2/10/05) State Only	Odors Off-site nuisance odors prohibited.	*Directly Enforceable* Upon receiving an odor complaint from the NWCAA or the public, COP shall investigate the complaint and the operations of the refinery to determine whether (a) refinery emissions of odorous air contaminants

Term	Citation	Description	Monitoring, Recordkeeping and Reporting
4.15 Odor	NWCAA 535 (3/09/00) State Only	Odor Control Measures Appropriate practices and control equipment shall be installed and operated to reduce odor-bearing gasses emitted into the atmosphere to a reasonable minimum. Any person who shall cause the generation of any odor from any source which may reasonably interfere with any other property owner's use and enjoyment of their property must use recognized best practices and control equipment to reduce these odors to a reasonable minimum. No person shall cause or permit the emission of any odorous air contaminant from any source if it is detrimental to the health, safety, or welfare of any person, or causes damage to property or business.	are detrimental to the health, safety and welfare of any person, or causing damage to property of business and (b) the refinery is using recognized best practices and control equipment to reduce these odors to a reasonable minimum. If COP determines that emissions from the refinery caused or are causing a nuisance condition, or that odor control measures are inadequate, and if the identified problems cannot be repaired or corrected within four hours, action shall be taken to minimize odors until repairs can be made and the NWCAA shall be notified within 12 hours with a description of the complaint and action being taken to resolve the problem. The results of the investigation, identification of any malfunctioning equipment or aberrant operation, and the date and time of repair or mitigation shall be recorded. A log of these records shall be maintained for inspection. Receipt of a nuisance complaint in itself shall not necessarily be a violation.

Term	Citation	Description	Monitoring, Recordkeeping and Reporting
4.16 Nuisance	NWCAA 530 (3/09/00) State Only)	General Nuisance No person shall discharge from any source quantities of air contaminants, with the exception of odors, in sufficient amounts and of such characteristics and duration as is likely to be injurious or cause damage to human health, plant or animal life, or property; or which unreasonably interferes with enjoyment of life and property. An air contaminant is defined as "dust, fumes, mist, smoke, other particulate matter, vapor gas, odorous substance, or any combination thereof.	*Directly Enforceable* Upon receiving an odor complaint from the NWCAA or the public, COP shall investigate the complaint and the operations of the refinery to determine whether (a) refinery emissions of odorous air contaminants are detrimental to the health, safety and welfare of any person, or causing damage to property of business and (b) the refinery is using recognized best practices and control equipment to reduce these odors to a reasonable minimum. If COP determines that emissions from the refinery caused or are causing a nuisance condition, or that odor control measures are inadequate, and if the identified problems cannot be repaired or corrected within four hours, action shall be taken to minimize odors until repairs can be made and the NWCAA shall be notified within 12 hours with a description of the complaint and action being taken to resolve the problem. The results of the investigation, identification of any malfunctioning equipment or aberrant operation, and the date and time of repair or mitigation shall be recorded. A log of these records shall be maintained for inspection. Receipt of a nuisance complaint in itself shall not necessarily be a violation.

Term	Citation	Description	Monitoring, Recordkeeping and Reporting
4.17 Nuisance	WAC 173-400-040(5) (8/20/93) WAC 173-400-040(5) (2/10/05) State Only	Emission Detrimental to Persons or Property Emissions detrimental to health or property prohibited.	*Directly Enforceable* Upon receiving an air contaminant complaint from the NWCAA or the public addressing conditions other than odors, COP shall investigate the complaint and the operations of the refinery to determine whether refinery emissions have caused or are causing injury or damage to human health, plant or animal life or property, or unreasonably interfere with enjoyment of life or property. If COP determines that emissions from the refinery caused or are causing a nuisance condition, and if the identified problems cannot be repaired or corrected within four hours, action shall be taken to minimize emissions until repairs can be made and the NWCAA shall be notified within 12 hours with a description of the complaint. The results of the investigation, identification of any malfunctioning equipment or aberrant operation, and the date and time of repair or mitigation shall be recorded. A log of these records shall be maintained for inspection. Receipt of a nuisance complaint in itself shall not necessarily be a violation.
4.18 PM	NWCAA 550 (4/14/93) NWCAA 550 (7/14/05) State Only	Preventing Particulate Matter from Becoming Airborne Best Available Control Technology to prevent the release of fugitive matter to the ambient air required. Nuisance particulate fallout prohibited.	*Directly Enforceable* Upon receiving an air contaminant complaint from the NWCAA or the public addressing conditions other than odors, COP shall investigate the complaint and the operations of the refinery to determine whether refinery emissions have caused or are causing injury or damage to human health, plant or animal life or property, or unreasonably interfere with enjoyment of life or property. If COP determines that emissions from the refinery caused or are causing a nuisance condition, and if the identified problems cannot be repaired or corrected within four hours, action shall be taken to minimize emissions until repairs can be made
4.19 PM	WAC 173-400-040(2) (8/15/01) State Only	Fallout Nuisance Particulate fallout prohibited.	

Term	Citation	Description	Monitoring, Recordkeeping and Reporting
4.20 PM	WAC 173-400-040(3)(a) (8/20/93) WAC 173-400-040(3)(a) (8/15/01) State Only	Fugitive Emissions for Attainment Areas Take reasonable precautions to prevent release of air contaminants required.	and the NWCAA shall be notified within 12 hours with a description of the complaint. The results of the investigation, identification of any malfunctioning equipment or aberrant operation, and the date and time of repair or mitigation shall be recorded. A log of these records shall be maintained for inspection. Receipt of a nuisance complaint in itself shall not necessarily be a violation.
4.21 Dust	WAC 173-400-040(8)(a) (8/20/93) WAC 173-400-040(8)(a) (8/15/01) State Only	Fugitive Dust Sources Reasonable precautions to prevent release of fugitive dust required. Maintain and operate source to minimize emissions.	
4.22 Reports	WAC 173-401-615(3) (9/16/02)	Required monitoring report Submit reports of any required monitoring to the NWCAA at least once every six months. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with WAC 173-401-520.	Unless specifically required otherwise by a permit term, monthly reports shall cover a calendar month, quarterly reports shall cover a calendar quarter, six-month reports shall cover January through June and July through December, and annual reports shall cover a calendar year. The reports shall be submitted within 30 days (or 60 days for VOC reports) after the close of the period that the reports cover.

Term	Citation	Description	Monitoring, Recordkeeping and Reporting
4.23 VOC	NWCAA 580.24 (2/8/96)	Process Turnarounds Process units shall be depressurized to less than 5 psig (gauge) before venting to the atmosphere. During depressurization, VOCs shall be routed through a closed vent system to a flare or other appropriate disposal device.	Keep records of each process unit turnaround listing the date the unit was shut down. Report emissions from turnarounds in the annual emissions inventory. A specific record shall be kept for any turnaround during which a vessel containing VOC was vented to the atmosphere at a pressure at or above 5 psig.

SECTION 5 SPECIFICALLY APPLICABLE REQUIREMENTS

The cited requirements in the "Citation" column of these tables incorporated herein by reference are applicable only to the sources identified in the preceding table header. These requirements are federally enforceable unless identified as "state only". A requirement designated "state only" is enforceable only by the state, and not by the EPA or through citizen suits. The "Description" column of Table 5 is a brief description of the applicable requirements for informational purposes only and is not enforceable. Periodic or continuous monitoring requirements (including testing) are specified in the "Monitoring/Recordkeeping/Reporting" column, which identifies monitoring, record keeping and reporting (MR&R) obligations the source must perform as required by WAC 173-401-605(1) and 615(1) and (2) or the underlying requirements. The requirements in the MR&R column labeled "directly enforceable" are legally enforceable requirements added under the NWCAA's "gap-filling" authority. Other requirements not labeled "directly enforceable" are brief descriptions of the regulatory requirements for information purposes and are not enforceable, unless they are identical to the cited requirement. Unless the text of the MR&R column is specifically identified to be directly enforceable, the language of the cited regulation takes precedence over a paraphrased requirement.

The provisions of federally approved NWCAA Section 365, Section 366 and the "Guidelines for Industrial Monitoring Equipment and Data Handling" have been replaced in this section by NWCAA Section 367 and Appendix A – "Ambient Monitoring, Emission Testing and Continuous Emission and Opacity Monitoring". NWCAA Section 367 and Appendix A were adopted on July 14, 2005 with a provision that one year from the date of adoption would be allowed to achieve compliance with Appendix A. The new regulations are "State Only" until incorporated into the State Implementation Plan. Section 367 and Appendix A are not materially different from the previous rule and guideline, but have been updated to include current monitoring technology and methods.

5.1 Primary Crude Processing Area

Table 5-1 Primary Crude Oil Process Area

Permit Term	Citation	Description	Monitoring/Recordkeeping/Reporting
Individual Drain Systems subject to 40 CFR Part 61 Subpart FF and Part 63 Subpart CC			
Note: The Title 40 CFR Part 61 and Part 63 General Provisions in Sections 3.2 and 3.3 apply to the primary crude oil process area.			
5.1.1 HAP/ Benzene	40 CFR Part 63 Subpart CC 40 CFR Part 61 Subpart FF NWCAA 104.2 (6/10/10)	Individual Drain Systems Comply with the standards for individual drain systems for waste streams subject to Part 63 Subpart CC and Part 61 Subpart FF	Monitoring/Recordkeeping/Reporting (MR&R) requirements are included in Table 5-14
Equipment Components in HAP Service			

Permit Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.1.2 HAP	Subpart CC 63.648 (8/18/98)	Leak standards for equipment in organic HAP service in the primary crude oil process area.	Follow the MR&R requirements in terms 5.13.1 through 5.13.17.
Miscellaneous Process Vent HDF Stripper Offgas			
5.1.3 HAP	Subpart CC 63.643 (8/18/95) Subpart CC 63.640(d)(5) (5/25/01) NWCAA 104.2 (6/10/10)	Reduce emissions of organic HAP's with flare gas recovery or by using a flare that meets the requirements of 63.11(b) of subpart A of Part 63. If flare gas recovery is used to capture and a boiler or process heater is used to control organic HAPs, the vent stream shall be introduced into the flame zone of the device, or in a location such that the required percent reduction or concentration is achieved. Emissions routed to the fuel gas system are exempt from the requirements of Subpart CC.	MR&R requirements are included in Table 5-9.
Crude Heater 1F-1A			
Note: The Title 40 CFR Part 60 General Provisions in Section 3.1 apply to this source with the exception of notice requirements of 40 C.F.R. § 60.7(a) and the initial performance test requirement of 40 C.F.R. § 60.8(a)			
5.1.4 SO_2	OAC 49 (1/24/72)	The heater is to be operated on fuel gas or fuel oil. The heater's fuel gas will not contain more than 0.5 mole percent sulfur, primarily H_2S. The fuel oil shall not exceed more than 2% sulfur by weight.	Monitor hydrogen sulfide content of refinery fuel gas combusted in compliance with NWCAA Regulation 367 and Appendix A - "Ambient Monitoring, Emission Testing and Continuous Emission and Opacity Monitoring" (7/14/05) during periods of heater operation.

Permit Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.1.5 SO_2	OAC 733c Conditions 18, 20, 21, & 22 (7/29/2005)	Fuel combusted in Crude Heater 1F-1A shall be limited to refinery fuel gas containing less than 162 ppm hydrogen sulfide (3-hour average) or purchased natural gas.	Monitor hydrogen sulfide content of refinery fuel gas combusted in compliance with NWCAA Regulation 367 and Appendix A - "Ambient Monitoring, Emission Testing and Continuous Emission and Opacity Monitoring" (7/14/05), 40 CFR Part 60 Subpart J, Subpart A and Appendix F during periods of heater operation. Concentration measurements provided by the continuous emissions monitoring system (CEMS) required by 40 CFR Part 60 Subpart J shall be used to directly determine compliance with this term and Subpart J on a continuous basis. Report on a monthly basis, within 20 days of the end of the previous month, the dates, times, and causes of all periods that the monitoring system(s) did not function or operating parameters were outside of established ranges in the reporting month. Keep all raw data, calculation results, test results, and monitoring data on-site and available to NWCAA representatives for not less than five years. Submit a test plan to the NWCAA not less than 30 days before the scheduled test date and notify the NWCAA at least two weeks in advance of the exact test date. Test results shall be provided to the NWCAA not more than 45 days after completion of the sampling. All performance tests shall be conducted at or near maximum representative operating capacity for the process. All tests shall be conducted while operating the control device at conditions that represent normal operation.

Permit Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.1.6 SO_2	Subpart J 60.104(a)(1), 60.105(a)(4), and 60.105(e)(3)(ii) and 60.106(e)(1) (all 6/24/08) NWCAA 104.2 (6/10/10)	Fuel combusted in Crude Heater 1F-1A shall not contain hydrogen sulfide in excess of 230 mg/dscm (0.10 gr/dscf).	Install, calibrate, maintain, and operate an instrument for continuously monitoring and recording the concentration (dry basis) of H_2S in fuel gases before being burned in any fuel gas combustion device. Fuel gas streams that are inherently low in sulfur content as per 60.105(a)(4)(iv) are not required to comply with the monitoring requirements of 60.105(a)(4). The span value for this instrument is 425 mg/dscm H_2S. The performance evaluations for this H_2S monitor under 60.13(c) shall use Performance Specification 7. EPA Method 11, 15, 15A or 16 shall be used for conducting the relative accuracy evaluations. Periods of excess emissions that shall be determined and reported are defined as follows: All rolling 3-hr. periods during which the average concentration of H_2S as measured by the H_2S continuous monitoring system exceeds 230 mg/dscm (0.10 gr/dscf). In conducting the performance tests required in §60.8, determine compliance with the H_2S standard in 60.104(a)(1) as follows: EPA Method 11, 15, 15A, or 16 shall be used to determine the H_2S concentration. Methods shall be run as per 60.106(e)(1).

Permit Term	Citation	Description	Monitoring/Recordkeeping/Reporting
Crude heaters 1F-1, HDF Heaters 14F-1 and 14F-2			
Note: The Title 40 CFR Part 60 General Provisions in Section 3.1 apply to these sources with the exception of notice requirements of 40 C.F.R. § 60.7(a) and the initial performance test requirement of 40 C.F.R. § 60.8(a)			
5.1.7 SO_2	OAC 733c Conditions 18, 20, 21, & 22 (7/29/2005)	Fuel combusted in heaters 1F-1, 14F-1, and 14F-2 shall be limited to refinery fuel gas containing less than 162 ppm hydrogen sulfide (3-hour average) or purchased natural gas.	Monitor hydrogen sulfide content of refinery fuel gas combusted in compliance with NWCAA Regulation 367 and Appendix A - "Ambient Monitoring, Emission Testing and Continuous Emission and Opacity Monitoring" (7/14/05), 40 CFR Part 60 Subpart J, Subpart A and Appendix F during periods of heater operation. Concentration measurements provided by the continuous emissions monitoring system (CEMS) required by 40 CFR Part 60 Subpart J shall be used to directly determine compliance with this term and Subpart J on a continuous basis. Report on a monthly basis, within 20 days of the end of the previous month, the dates, times, and causes of all periods that the monitoring system(s) did not function or operating parameters were outside of established ranges in the reporting month. Keep all raw data, calculation results, test results, and monitoring data on-site and available to NWCAA representatives for not less than five years. Submit a test plan to the NWCAA not less than 30 days before the scheduled test date and notify the NWCAA at least two weeks in advance of the exact test date. Test results shall be provided to the NWCAA not more than 45 days after completion of the sampling. All performance tests shall be conducted at or near maximum representative operating capacity for the process. All tests shall be conducted while operating the control device at conditions that represent normal operation.

Permit Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.1.8 SO_2	Subpart J 60.104(a)(1), 60.105(a)(4),and 60.105(e)(3)(ii) and 60.106(e)(1) (6/24/08) NWCAA 104.2 (6/10/10)	Fuel combusted in Crude Heater 1F-1, 14F-1 and 14F-2 shall not contain hydrogen sulfide in excess of 230 mg/dscm (0.10 gr/dscf).	Install, calibrate, maintain, and operate an instrument for continuously monitoring and recording the concentration (dry basis) of H_2S in fuel gases before being burned in any fuel gas combustion device. Fuel gas streams that are inherently low in sulfur content as per 60.105(a) (4)(iv) are not required to comply with the monitoring requirements of 60.105(a)(4). The span value for this instrument is 425 mg/dscm H_2S. The performance evaluations for this H_2S monitor under 60.13c shall use Performance Specification 7. EPA Method 11, 15, 15A or 16 shall be used for conducting the relative accuracy evaluations. Periods of excess emissions that shall be determined and reported are defined as follows: All rolling 3-hr. periods during which the average concentration of H_2S as measured by the H_2S continuous monitoring system exceeds 230 mg/dscm (0.10 gr/dscf). In conducting the performance tests required in §60.8, determine compliance with the H2S standard in 60.104(a)(1) as follows: EPA Method 11, 15, 15A, or 16 shall be used to determine the H2S concentration. Methods shall be run as per 60.106(e)(1).
#2 Hydrofiner Individual Drain Systems Subject to 40 CFR Part 60 Subpart QQQ except streams subject to 40 CFR part 63 Subpart CC			
5.1.9 VOC/HAP	40 CFR Part 60 Subpart QQQ 60.690 (11/23/88) NWCAA 104.2 (6/10/10)	<u>Individual Drain Systems</u> Comply with 40 CFR Part 60 Subpart QQQ except for individual drain systems regulated under Part 63 Subpart CC	Monitoring/Recordkeeping/Reporting (MR&R) requirements are included in Table 5-15

5.2 Catalytic Cracking Process Area

Table 5-2 Catalytic Cracking Process Area

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
Individual Drain Systems subject to 40 CFR Part 61 Subpart FF and Part 63 Subpart CC			
Note: The Title 40 CFR Parts 60, 61, and Part 63 General Provisions in Section 3.1, 3.2 and 3.3 apply in the catalytic cracking process area.			
5.2.1 VOC/HAP	40 CFR Part 63 Subpart CC 40 CFR Part 61 Subpart FF NWCAA 104.2 (6/10/10)	Individual Drain Systems Comply with the standards for individual drain systems for waste streams subject to Part 63 Subpart CC and Part 61 Subpart FF	Monitoring/Recordkeeping/Reporting (MR&R) requirements are included in Table 5-14
5.2.2 VOC	40 CFR Part 60 Subpart QQQ NWCAA 104.2 (6/10/10)	Individual Drain Systems Comply with 40 CFR Part 60 Subpart QQQ except for individual drain systems regulated under Part 63 Subpart CC	Monitoring/Recordkeeping/Reporting (MR&R) requirements are included in Table 5-15
Vacuum Distillation and Unsaturated Gas Plant Process Units Components in VOC/HAP Service			
5.2.3 VOC/HAP	Subpart CC §63.648 (8/18/98) NWCAA 104.2 (6/10/10)	Petroleum Refinery MACT – Equipment Leak Standards	Follow the MR&R requirements in terms 5.13.1 through 5.13.17.
Catalytic Cracking Process Unit Components in VOC/HAP Service			
5.2.4 VOC/ HAP	OAC 733c Conditions 1, 2, 3 & 20 (7/29/05) which references 40 CFR part 63 subpart H and 40 CFR Part 63	Equipment Leaks Monitor components in HAP or VOC service for fugitive leaks, repair leaks in a timely manner and report monitoring results. For the purposes of implementation of this Order of Approval to Construct the term "in organic hazardous air pollutant service"	Follow the MR&R requirements in terms 5.13.18 through 5.13.29. A single or multiple point calibration drift assessment shall be conducted after each monitoring shift, and prior to all calibrations performed after the initial daily calibration, on all vapor analyzers used to perform required EPA Method 21 monitoring. The calibration drift test shall follow the

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	subpart CC. Also, 40 CFR subpart CC applies directly. NWCAA 104.2 (6/10/10)	shall be replaced with "in VOC service" as that term is defined in 40 CFR Part 60 Subpart VV.	procedures of EPA Method 21 (40 CFR Part 60 Appendix A) §3.2 and §4.4.2 and 40 CFR §60.485(b) (1). If any calibration drift assessment after the initial calibration shows a negative drift of more than 10%, then all components monitored since the last calibration shall be remonitored. Concentrations measured during performance of required vapor analyzer calibrations and EPA Method 21 monitoring shall be recorded. The date of each measurement and a unique identifier linking the item measured to each concentration datum shall be part of the record. The owner or operator shall keep all raw data, calculation results, test results, and monitoring data required on-site and available to NWCAA representatives for not less than five years.
FCCU Miscellaneous Process Vent 25FV-007 refinery fuel gas to flare			
5.2.5 VOC/HAP	40 CFR Subpart CC §63.643 (8/18/95) NWCAA 104.2 (6/10/10)	Provisions Reduce emissions of organic HAP's with flare gas recovery or by using a flare that meets the requirements of 63.11(b) of subpart A of Part 63. If flare gas recovery is used to capture and a boiler or process heater is used to control organic HAPs, the vent stream shall be introduced into the flame zone of the device, or in a location such that the required percent reduction or concentration is achieved.	Monitoring requirements are included in Table 5-9 (flare).
FCCU Regenerator, FCCU Combustion Air Heater, and CO Boiler			
Note: Compliance with the conditions for the Enhanced Selective Non-Catalytic Reduction system is required upon initial startup			
5.2.6 Opacity	NWCAA 451.1 (5/11/95), WAC 173-400-040(1) (8/20/93), and	Emission of Air Contaminant – Visual Standard Emissions from a catalytic cracking unit shall not exceed 40% opacity for more than an aggregate of 3 minutes	*Directly Enforceable* Monitor compliance via monitoring performed pursuant to permit term 5.2.46, the approved Alternative Monitoring Plan (December 7, 2009).

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	WAC 173-400-070(5)(a)(i) (9/15/01-state only) (3/22/91)	in any one-hour. Excess emissions as a result of soot blowing or grate cleaning shall not occur for more than 15 minutes in any 8-hour period, or another approved schedule.	
5.2.7 Opacity	OAC 733c Conditions 12 and 22 (7/29/05)	Visible Emissions Visible emissions discharged from the FCCU Combustion Air Heater, FCCU Regenerator, and the CO Boiler shall not exceed 20% opacity for more than six minutes in any hour as measured by EPA Method 9.	Monitor compliance via monitoring performed pursuant to permit term 5.2.46, the approved Alternative Monitoring Plan (December 7, 2009). Provide to the NWCAA the following information in a monthly report. The report shall be submitted within 20 days after the end of each month. For all monitoring systems required to be operated, including control device performance monitoring systems: the dates, times, and causes of all periods that the monitoring system(s) did not function or operating parameters were outside of established ranges in the reporting month. At the FCCU wet gas scrubber: the maximum and average operating parameter readings recorded in each reporting month from monitoring.
5.2.8 Opacity	40 CFR 60 Subpart J 60.102(a)(2) 60.105(a)(1) 60.105(e)(1) (all 6/24/08), and 60.11(c) (10/17/00) NWCAA 104.2 (6/10/10)	Visible Emissions Opacity shall not exceed 30%, except for one six-minute average opacity reading in any one hour period and periods of startup, shutdown, and malfunction.	Monitor compliance via monitoring performed pursuant to permit term 5.2.46, the approved Alternative Monitoring Plan (December 7, 2009).
5.2.9 PM/ PM_{10}	WDOE PSD-00-02, Amendment 5 Conditions, 7, 14, and 21 (10/21/08)	Particulate Emission Standards By no later than June 30, 2007, combined PM/PM_{10} emissions from the FCCU and CO boiler shall not exceed 0.50 lb/1000 lbs coke burn-off over a rolling three-hour average and 0.020 grains per dry standard cubic	Compliance will be demonstrated by annual source testing in accordance with 40 CFR 60 Appendix A Method 5B, as found in 40 CFR 60 Appendix A or an alternative approved method. Source testing shall be performed no sooner than 10-months after the previous test and no later than 13-months after the previous test. Source testing shall be

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	CAM	foot corrected to 7% oxygen over a rolling 3-hour average.	performed at maximum normal FCCU feed rates. Submit a report within 30 days of the end of each calendar month, or on another approved reporting schedule, and in the format approved by the department, including the following: • Calendar date, • Identification of times emission data are excluded from the calculated average emission rate and the reasons for excluding the data. Maintain monitoring records on site for at least five years and submit (1) excess emission reports to the department and the NWCAA, as appropriate, and (2) results of any compliance source tests. CAM Plan*:* Monitor compliance via monitoring performed pursuant to permit term 5.2.46, the approved Alternative Monitoring Plan (December 7, 2009).
5.2.10 PM/ as PM_{10}	WAC 173-400-070(5)(a)(ii) (9/15/01-state only) (3/22/91) CAM	<u>WAC Particulate Emission Standard</u> Emissions from the FCCU shall not exceed 0.20 grains/dscf.	*Directly Enforceable* Compliance will be demonstrated by annual source testing in accordance with 40 CFR 60 Appendix A Method 5B. Source testing shall be performed no sooner than 10-months after the previous test and no later than 13-months after the previous test. Source testing shall be performed at maximum normal FCCU feed rates. Maintain monitoring records on site for at least five years and submit (1) Excess emission reports to the department and the NWCAA, as appropriate, and (2) results of any compliance source tests. CAM Plan*:* Monitor compliance via monitoring performed pursuant to permit term 5.2.46, the approved Alternative Monitoring Plan (December 7, 2009).

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.2.11 PM/ as PM_{10}	40 CFR 60 Subpart J 60.102(a)(1), 60.105(c) and 60.106 (a) and (b) (all 6/24/08) NWCAA 104.2 (6/10/10) CAM	Subpart J FCCU Particulate Limit: PM from the FCCU regenerator shall not exceed 2.0 pounds/ton coke burn-off.	*Directly Enforceable* Compliance will be demonstrated by annual source testing in accordance with 40 CFR 60 Appendix A Method 5B. Source testing shall be performed no sooner than 10-months after the previous test and no later than 13-months after the previous test. Source testing shall be performed at maximum normal FCCU feed rates. Maintain monitoring records on site for at least five years and submit (1) Excess emission reports to the department and the NWCAA, as appropriate, and (2) results of any compliance source tests. The average coke burn-off rate (tons per hour) and hours of operation shall be recorded daily. Test methods and procedures shall be conducted as per the requirements in 40 CFR 60.106(a) and (b). CAM Plan*:* Monitor compliance via monitoring performed pursuant to permit term 5.2.46, the approved Alternative Monitoring Plan (December 7, 2009).
5.2.12 SO_2	OAC 733c Condition 10 and 22 (7/29/05)	Sulfur Dioxide Mass Emission Limit Sulfur dioxide discharged from the FCCU Combustion Air Heater, FCCU Regenerator, and the CO Boiler in combination shall not exceed 548.4 tons per rolling 12-month period.	Each calendar month the owner or operator shall use procedures approved by the NWCAA and data from the SO_2 CMS to calculate the mass of sulfur dioxide emitted over the preceding 12-month period. The results of this calculation shall be reported to the NWCAA each month. All data and supporting documentation used to make each calculation shall be kept on-site for at least five years.
5.2.13 SO_2	OAC 733c Condition 9, 20, 21 (7/29/05)	Sulfur Dioxide Abatement Efficiency Standard Discharge from the FCCU Combustion Air Heater, FCCU Regenerator, and the CO Boiler shall be continuously routed through a wet gas scrubber that reduces sulfur dioxide emissions to the atmosphere by at least 90% averaged over each rolling twenty-four hours of	Keep all raw data, calculation results, test results, and monitoring data required on-site and available to NWCAA representatives for not less than five years. Provide to the NWCAA the following information in a monthly report. The report shall be submitted within 20 days after the end of each month. For all monitoring systems required to be operated, including control device

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		FCCU operation and at least 95% over each rolling seven days of FCCU operation.	performance monitoring systems: the dates, times, and causes of all periods that the monitoring system(s) did not function or operating parameters were outside of established ranges in the reporting month.
5.2.14 SO_2	40 CFR 60 Subpart J 60.104(b) (1), (c) & (d), 60.105(a)(8), (11), (12), (13) 60.106 (a), (g), (h), (k) 60.107(a), (b), (c), (d), (e), (f) and 60.108 (all 6/24/08) NWCAA 104.2 (6/10/10)	<u>NSPS Sulfur Dioxide Abatement Standard</u> Reduce sulfur dioxide emissions to the atmosphere by 90 percent. Compliance is determined daily on a 7-day rolling average basis using the appropriate procedures outlined in § 60.106. A minimum of 22 valid days of data shall be obtained every 30 rolling successive calendar days.	Install and operate an instrument for continuously monitoring and recording concentrations of SO_2 in the gases at both the inlet and outlet of the SO_2 control device (wet gas scrubber). Inlet monitor span shall be 125 percent and outlet monitor span shall be 50 percent of the maximum estimated hourly potential SO_2 emission concentration entering the control devices. Use Performance Specification 2. Methods 6 or 6C and 3 or 3A shall be used for conducting the relative accuracy evaluations. Quarterly accuracy determinations and daily calibration drift tests shall follow Appendix F, Procedure 1. The CMS shall be operated and data recorded during all periods of operation including periods of startup, shutdown, or malfunction, except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments. When emission data are not obtained because of CMS breakdowns, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using one of the following methods to provide emission data for a minimum of 18 hours per day in at least 22 out of 30 rolling successive calendar days: (i) the test methods as described in §60.106(k); (ii) a spare continuous monitoring system, or (iii) other monitoring systems as approved by the EPA. Notify EPA and the NWCAA pursuant to §60.107(a) and §60.108(d) Test pursuant to §60.108(d) and (e) using applicable methods from §60.106. Record and maintain all data required pursuant to §60.107(b)(1) and each 7-day rolling average compliance determination.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
			Submit a semiannual report containing the information required pursuant to §60.107(c) postmarked by the 30th day following the end of each six-month period except as provided by §60.107(d). A signed statement certifying the accuracy and completeness of the information contained in the report shall be included. For any periods for which sulfur dioxide or oxides emissions data are not available, submit a signed statement indicating if any changes were made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit. Operations of the control system and affected facility during periods of data unavailability are to be compared with operation of the control system and affected facility before and following the period of data unavailability.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.2.15 SO_2	OAC 733c Condition 11 (7/29/05)	<u>Sulfur Dioxide Concentration Standard</u> Sulfur dioxide discharged from the FCCU Combustion Air Heater, FCCU Regenerator, and the CO Boiler in combination shall not exceed 25 ppmdv on a 365-day rolling average basis and 50 ppmdv on a 7-day rolling average basis, at 0 percent oxygen.	Compliance with these emission limits shall be demonstrated through the use of a CEMS. SO_2 emissions during periods of malfunction of the FCCU (defined as the fluidized catalytic cracking unit and its regenerator and associated boiler) and during periods of malfunction of the wet gas scrubber will not be used in determining compliance with the 50 ppmdv emission limit, provided that during such periods the owner or operator implements good air pollution control practices to minimize SO_2 emissions. "Malfunction" shall mean, as specified in 40 CFR Part 60.2, "any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions". Each calendar month the owner or operator shall use data from the SO_2 CEMS to calculate each of the 365-day and 7-day rolling average SO_2 concentrations for each day in the month. The results of this calculation shall be reported to the NWCAA each month. All data and supporting documentation used to make each calculation shall be kept on-site for at least five years.
5.2.16 CO	WDOE PSD-00-02, Amendment 5 Conditions 5, 12, and 21 (10/21/08)	<u>Carbon Monoxide Emission Limits</u> Combined carbon monoxide emissions from the FCCU and CO Boiler shall not exceed 500 ppmdv @ 0% O2 over a 1-hour averaging period and 100 ppmdv @ 0% O2 over a 365 day rolling average.	Carbon monoxide emissions shall be measured by a Continuous Emission Monitor (CEM) meeting the performance specifications of 40 CFR Part 60, Appendix B and the quality control/quality assurance requirements of 40 CFR Part 60, Appendix F. Submit a report within 30 days of the end of each calendar month, or on another approved reporting schedule, and in the format approved by the department, including the following: • Calendar date, • Identification of times emission data are excluded from the calculated average emission rate and the reasons for excluding the data.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
			Maintain monitoring records on site for at least five years and submit (1) excess emission reports to the department and the NWCAA, as appropriate, and (2) results of any compliance source tests.
5.2.17 CO	40 CFR 60 Subpart J 60.103(a) (10/2/90), 60.105(a)(2), and 60.105(e)(2) (6/24/08) NWCAA 104.2 (6/10/10)	Subpart J FCCU CO limit: Stack emissions shall not exceed 500 ppmdv CO @ 7% O_2 based on a 1-hour average.	Install, calibrate, maintain, and operate an instrument for continuously monitoring and recording the concentration by volume (dry basis) of CO emissions into the atmosphere. The span value for this instrument is 1,000 ppm CO. For the purpose of reports under §60.7(c), periods of excess emissions that shall be determined and reported are defined as follows: All 1-hour periods during which the average CO concentration as measured by the CO continuous monitoring system under §60.105(a)(2) exceeds 500 ppm.
5.2.18 NO_X	WDOE PSD-00-02, Amendment 5 Conditions, 2, 11, and 21 (10/21/08)	PSD NO_X limits Combined NO_X emissions from the FCCU and CO boiler shall not exceed 127 ppmdv at 7% O_2 over a 30-day rolling averaging period and 308.10 tons per year over a 12-month rolling total	Compliance will be monitored by a continuous emission monitor for NO_X meeting the performance specifications of 40 CFR Part 60, Appendix B and quality control/quality assurance requirements of 40 CFR Part 60, Appendix F. Submit a report within 30 days of the end of each calendar month, or on another approved reporting schedule, and in the format approved by the department, including the following: • calendar date, • average NO_X emission rates, • identification of any steam generating days for which NO_X data were not obtained, including reasons for not obtaining sufficient data and description of corrective actions taken, and • identification of times emission data are excluded from the calculated average emission rate and the reasons for excluding the data. Maintain monitoring records on site for at least five years and submit (1) excess emission reports to the NWCAA, and, (2) results of any compliance tests.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.2.19 NO_X	OAC 1047 Condition 2 (12/18/09)	ESNCR System Design The system shall be designed to reduce NO_X emissions as much as feasible during both partial burn and full burn operation. The ESNCR control system shall be operated during all periods that the FCC Unit is in operation.	*Directly Enforceable* Record any periods that the ESNCR control system is not in operation. Report those periods in the monthly report and state whether the FCC Unit was or was not in operation during that period.
5.2.20 VOC	OAC 1047 Condition 1 (12/18/09)	Leak Detection Perform a LDAR program that conforms with the requirements of 40 CFR 63 Subpart CC for existing sources on the new ESNCR components except: a. The leak definition for valves in gas/vapor or light liquid service shall be 500 ppm. b. The definition of "repair" includes remonitoring to verify that emissions are below the applicable leak definition. c. Use a calibration gas methane or n-hexane in air at a concentration no more than 2000 ppm greater than the leak definition concentration. d. A calibration drift assessment shall be performed, at a minimum, at the end of each monitoring day.	Follow the MR&R requirements in terms 5.13.1 through 5.13.17, with the exceptions as noted in Condition 1.
5.2.21 Ammonia	OAC 1047 Condition 3 (12/18/09)	Ammonia Emissions of ammonia from the Flue Gas Scrubber stack shall not exceed 10 (1.00×10^1) ppmdv corrected to 0% O_2 as a 24-hour average.	Conduct compliance tests for ammonia through an independent contractor initially within sixty days of startup and annually thereafter within one month of the anniversary of the previous test. Compliance shall be determined by Bay Area Air Quality Management District Source Test Procedure #1B (BAAQMD ST-1B) or EPA Method 320 (Vapor Phase Organic & Inorganic Emissions by Extractive FTIR), or other alternative method approved by the NWCAA. Results shall be the average of three 60-minute test runs at a 90%

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
			during partial burn operation at the FCC Unit. During any testing, the permittee shall record ammonia feed rate, NO_X emissions, fuel consumption, and other operating parameters. Operating parameters shall be included in the written test report.
5.2.22 Ammonia	OAC 1047 Condition 4 (12/18/09)	Ammonia Monitoring Develop and implement an Ammonia Emissions Monitoring Plan to establish a predictive relationship between the FCC Unit and ESNCR operating parameters and emissions of ammonia. Submit a draft plan to NWCAA at least 30 days prior to ESNCR startup and include specific operating parameters. A final plan shall be submitted to NWCAA within 180 days after conducting the initial ammonia compliance test and shall contain test results and the established relationship between the FCC unit and ESNCR operating parameters and ammonia emissions. This plan shall define QA/QC procedures and corrective actions when parameter monitoring indicates the emission limit may be exceeded.	*Directly Enforceable* Implement the Ammonia Emissions Monitoring Plan to predict emissions of ammonia based on heater and SCR parameters. Record predictive parameters at least hourly and report excursions that indicate an ammonia emissions exceedance to the NWCAA in the facility's monthly report for the month following the excursion. The acceptability of the plan will be assessed based on the initial and annual source test results and may be amended and improved accordingly. The Ammonia Emissions Monitoring Plan will be amended or improved within sixty days of an assessment and request by the NWCAA for amendment.
5.2.23 General	OAC 1047 Condition 5 (12/18/09)	Operation and Maintenance Maintain and operate the ESNCR system in accordance with good air pollution control practices and in a manner minimizing particulate, ammonia, and nitrogen oxide emissions from the FCC unit. The NWCAA shall be notified in writing of the completion of installation of the ESNCR system. T	The NWCAA shall be notified in writing of the completion of installation of the ESNCR system. The notification shall be postmarked no later than 15 days after the system's startup. *Directly Enforceable* Submit a monthly report, within 30 days of the end of the calendar month, or on another schedule agreed to by the NWCAA, with the following information: a. The maximum NO_X and ammonia slip emissions in the units of the standard for the month. b. Days, duration, and reasons for periods during which

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
			data were not collected for NO_X and ammonia slip. c. Excess emissions, including the time of occurrence, the magnitude of the emissions excess, the duration, the probable cause, and corrective actions taken or planned. The monthly report may be combined with any other monthly reports submitted to the NWCAA.
5.2.24 General	WDOE PSD-00-02 Amendment 5 Condition 22 (10/21/08)	Enforcement Any activity, which is undertaken by the company or others, in a manner, which is inconsistent with the application and this determination, shall be subject to enforcement under the applicable regulations.	None
5.2.25 General	WDOE PSD-00-02 Amendment 5 Condition 23 (10/21/08)	Access Access to the source by the EPA, state, and local regulatory personnel shall be permitted upon request for the purposes of compliance assurance inspections. Failure to allow such access is grounds for an enforcement action.	None
FCCU Regenerator Vent (exhausted through the CO Boiler)			
5.2.26 General	OAC 733c Condition 22(c) (7/29/05)	Combustion Mode Provide a report to the NWCAA within 20 days after the end of each month with the total number of hours the FCCU regenerator was operated in partial combustion mode and in full combustion mode in the reporting month.	None
5.2.27 HAP	40 CFR Subpart UUU §63.1564(a)(1), (b)(1), (c)(1) (2/9/05), 63.1570 (a, b, c,	Refinery MACT Phase II Metal HAP emission limitations and work practice standards Comply with the particulate matter requirements in 40 CFR §60.102: emissions shall not exceed 2.0 lb. per ton	*Directly Enforceable* Monitor compliance with the opacity limit via monitoring performed pursuant to permit term 5.2.46, the approved Alternative Monitoring Plan (December 7, 2009). Compliance with the particulate matter limit shall be

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	f) (4/20/06), 63.1571(b) (4/11/02), 63.1572(d) (2/9/05), 63.1574(a, d) (2/9/05), 63.1575 (4/11/02), and 63.1576 (2/9/05) NWCAA 104.2 (6/10/10)	of coke burn-off. Opacity must not exceed 30% except for one 6-minute average opacity reading in any one hour period.	demonstrated by annual source testing in accordance with 40 CFR 60 Appendix A Method 5B. Source testing shall be performed no sooner than 10-months after the previous test and no later than 13-months after the previous test. Source testing shall be performed at maximum normal FCCU feed rates. Maintain monitoring records on site for at least five years and submit (1) Excess emission reports to the department and the NWCAA, as appropriate, and (2) results of any compliance source tests. The average coke burn-off rate (tons per hour) and hours of operation shall be recorded daily. Test methods and procedures shall be conducted as per the requirements in 40 CFR 60.106(a) and (b). Submit Notifications of Compliance Status pursuant to §63.1574(a) (3) and §63.1574(d) not later than 60 days following completion of the relevant compliance demonstration activity. Provide semiannual compliance reports for the periods 1/1 through 6/30 and 7/1 through 12/31. The reports must be postmarked no later than 7/31 or 1/31. The compliance reports shall contain the following information: 1) Company name and address, 2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report, 3) Date of report and beginning and ending dates of the reporting period, 4) If there are no deviations from any subpart UUU emission limitation that applies and there are no deviations from the subpart UUU requirements for work practice standards, a statement that there were no deviations from the emission limitations or work practice standards during the reporting period and that no continuous emission monitoring system or continuous opacity monitoring system was inoperative, inactive, malfunctioning, out-of-control, repaired, or adjusted.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
			For each deviation the compliance report shall include the information from §63.1575(e) summarized as follows: the date and time that each malfunction and deviation started and stopped, the date and time each continuous monitoring system was inoperative or out of control, except for zero (low-level) and high-level checks, a breakdown of the total duration of the deviations into those due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes, a summary of the total duration of downtime for the continuous monitoring system, a breakdown of the total duration of downtime for the continuous monitoring system into periods that are due to monitoring equipment malfunctions, non-equipment malfunctions, QA/QC calibrations, other known and unknown causes, the monitoring equipment manufacturer(s) and model number(s), the date of the latest certification or audit for the continuous monitoring system, description of any change in the continuous monitoring system, processes, or controls since the last reporting period. Pursuant to §63.1575(f) the compliance report shall also include as applicable: complete reports of performance tests done during the reporting period on any affected unit. The report shall contain a brief process description; a simplified flow diagram; sampling site data; description of sampling and analysis procedures and any modifications to standard procedures; quality assurance procedures; record of operating conditions during the test; record of preparation of standards; record of calibrations; raw data sheets for field sampling; raw data sheets for field and laboratory analyses; documentation of calculations; and any other information required by the test method. Keep records readily accessible for 5 years as required pursuant to §63.1576(a) (b), and (d-i), summarized as follows: documentation of notifications, performance test data, CMS out of control periods, raw CMS (15-minute

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
			avg.) measurements, CMS adjustments and performance evaluations and performance evaluation plans, deviation periods, records of changes to control devices, and average coke burnoff rate and regenerator hours of operation.
5.2.28 HAP	40 CFR Subpart UUU §63.1565(a)(1), (b)(1, 6), (c)(1) (4/11/02), 63.1570(a, c, f) (4/20/06), 63.1572(a, d) (2/9/05), 63.1573 (2/9/05), 63.1574(a, (2/9/05), 63.1575 (4/11/02), 63.1576) (2/9/05) NWCAA 104.2 (6/10/10)	<u>Refinery MACT Phase II Organic HAP emission limitations and work practice standards</u> Comply with the carbon monoxide requirements in 40 CFR §60.103: emissions shall not exceed 500 ppmdv (hourly average).	Install, operate, and maintain a continuous monitoring system to measure and record the hourly average concentration by volume (dry basis) of CO emissions from each catalyst regenerator vent according to the requirements in §63.1572(a) and (d). Submit Notifications of Compliance Status pursuant to §63.1574(a)(3) and §63.1574(d) not later than 60 days following completion of the relevant compliance demonstration activity. Provide semiannual compliance reports for the periods 1/1 through 6/30 and 7/1 through 12/31. The reports must be postmarked no later than 7/31 or 1/31. The compliance reports shall contain the following information: 1) Company name and address, 2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report, 3) Date of report and beginning and ending dates of the reporting period, 4) If there are no deviations from any subpart UUU emission limitation that applies and there are no deviations from the subpart UUU requirements for work practice standards, a statement that there were no deviations from the emission limitations or work practice standards during the reporting period and that no continuous emission monitoring system or continuous opacity monitoring system was inoperative, inactive, malfunctioning, out-of-control, repaired, or adjusted. For each deviation the compliance report shall include the information from §63.1575(e) summarized as follows: the date and time that each malfunction and deviation started and stopped, the date and time each continuous monitoring system was inoperative or out of control, except for zero (low-level) and high-level checks, a breakdown of the total duration of the deviations into those due to startup,

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
			shutdown, control equipment problems, process problems, other known causes, and other unknown causes, a summary of the total duration of downtime for the continuous monitoring system, a breakdown of the total duration of downtime for the continuous monitoring system into periods that are due to monitoring equipment malfunctions, non-equipment malfunctions, QA/QC calibrations, other known and unknown causes, the monitoring equipment manufacturer(s) and model number(s), the date of the latest certification or audit for the continuous monitoring system, description of any change in the continuous monitoring system, processes, or controls since the last reporting period. Keep records readily accessible for 5 years as required pursuant to §63.576(a) (b), and (d-i), summarized as follows: documentation of notifications, performance test data, CMS out of control periods, raw CMS (15-minute avg.) measurements, CMS adjustments and performance evaluations and performance evaluation plans, deviation periods, records of changes to control devices, and hourly average CO emissions.
5.2.29 HAP	40 CFR Subpart UUU §63.1564(a)(3), (b)(6), (c)(2) (2/9/05), 63.1565(a)(3), (b)(5), (c)(2) (4/11/02), 63.1574(f) (2/9/05), 63.1570(f) (4/20/06), 63.1575 (b, c and d) (4/11/02), and	Refinery MACT Phase II Operation Maintenance and Monitoring Plan Prepare an operation, maintenance, and monitoring plan according to the requirements in § 63.1574(f) and operate at all times according to the procedures in the plan.	Prepare and implement an operation, maintenance, and monitoring plan for each affected source, control system, and continuous monitoring system. Submit the plan to the NWCAA for review and approval along with your notification of compliance status. Submit any changes for review and approval and comply with the plan until the change is approved. Keep a copy of the plan available for inspection and maintain records to document conformance with the procedures in your operation, maintenance, and monitoring plan. Each plan must include, at a minimum, the following: Process and control device parameters to be monitored for each affected source, along with established operating limits. Procedures for monitoring emissions and process and control device operating parameters for each affected

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	63.1576(e) (2/9/05) NWCAA 104.2 (6/10/10)		source. Procedures that you will use to determine the coke burn-rate, the volumetric flow rate (if you use process data rather than direct measurement). Monitoring schedule, including when you will monitor and when you will not monitor an affected source (e.g., during the coke burn-off, regeneration process). Quality control plan for each continuous opacity monitoring system and continuous emission monitoring system you use to meet an emission limit in this subpart. This plan must include procedures you will use for calibrations, accuracy audits, and adjustments to the system needed to meet applicable requirements for the system Maintenance schedule for each affected source, monitoring system, and control device that is generally consistent with the manufacturer's instructions for routine and long-term maintenance. Report in the compliance report prepared in accordance with §63.1575 each instance in which applicable work practices were not met.
5.2.30 HAP	40 CFR Subpart UUU §63.1570(c, d, g) (4/20/06), 63.1576(a)(2) (2/9/05) NWCAA 104.2 (6/10/10)	<u>Refinery MACT Phase II Startup, Shutdown and Malfunction Plan</u> Develop and implement a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in § 63.6(e)(3). The affected source must be operated and maintained, including air pollution control and monitoring equipment, according to the provisions in § 63.6(e)(1). Consistent with §§63.6(e) and 63.7(e) (1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating in	See permit term 3.3.6.3. Keep the records in § 63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		accordance with § 63.6(e)(1). The SSMP must include elements designed to minimize the frequency of such periods (i.e., root cause analysis). The Administrator will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations, according to the provisions in § 63.6(e).	
CO Boiler			
5.2.31 SO_2	40 CFR Subpart J 60.104(a)(1) , 60.105(a)(4), and 60.105(e)(3)(ii), 60.106(e)(1) and 60.107(e) (all 6/24/08) NWCAA 104.2 (6/10/10)	Sulfur Oxide Limitation When Burning Fuel Gas Do not burn fuel gas containing hydrogen sulfide in excess of 230 mg/dscm.	Install, calibrate, maintain, and operate an instrument for continuously monitoring and recording the concentration (dry basis) of H_2S in fuel gases before being burned in any fuel gas combustion device. Fuel gas streams that are inherently low in sulfur content as per 60.105(a)(4)(iv) are not required to comply with the monitoring requirements of 60.105(a)(4). The span value for this instrument is 425 mg/dscm H2S. The performance evaluations for this H_2S monitor under 60.13(c) shall use Performance Specification 7. EPA Method 11, 15, 15A or 16 shall be used for conducting the relative accuracy evaluations. Periods of excess emissions that shall be determined and reported are defined as follows: All rolling 3-hr. periods during which the average concentration of H_2S as measured by the H_2S continuous monitoring system exceeds 230 mg/dscm (0.10 gr/dscf). In conducting the performance tests required in §60.8, determine compliance with the H_2S standard in 60.104(a)(1) as follows: EPA Method 11, 15, 15A, or 16 shall be used to determine the H_2S concentration. Methods shall be run as per 60.106(e)(1). If an owner or operator determines that one of the exemptions listed in §60.105(a) (4) (iv) applies to that fuel gas stream, the owner or operator shall maintain records of

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
			the specific exemption chosen for each fuel gas stream. If the owner or operator applies for the exemption described in §60.105(a)(4)(iv)(D), the owner or operator must keep a copy of the application as well as the letter from the Administrator granting approval of the application.
5.2.32 HAP	OAC 733c Condition 13 (7/29/05) WDOE PSD-00-02 Amendment 5 Condition 20 (10/21/08)	<u>CO Boiler O & M</u> Within 90 days of initial start-up of the boiler, ConocoPhillips shall identify boiler operational parameters and practices that have been described as "good combustion practice." These operational parameters and practices shall be included in an operation and maintenance (O&M) manual for the boiler. The O&M manual shall also include a description of records that will be maintained to insure the continuous application of "good combustion practice." The O&M manual shall be maintained by ConocoPhillips and be available for review by state, federal, and local agencies. Emissions that result from a failure to follow the requirements of the O&M manual may be considered credible evidence that emission violations have occurred.	None

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.2.33 NO_X	WDOE PSD-00-02 Amendment 5 Condition 18(10/21/08) and OAC 733c Conditions 15, and 22	CO Boiler annual capacity factor The annual capacity factor for natural gas burned in the CO boiler shall not exceed ten percent of the total potential heat input to the CO boiler in each calendar year. Total potential heat input shall not include heat recovered from the FCCU regenerator, but shall include heat generated from the combustion of CO in the boiler. Use of natural gas shall be limited to 10% of fuel combusted in the CO boiler or 111,252 MMBtu/yr, over a calendar year averaging period.	The owner or operator shall continuously monitor the amount of purchased natural gas combusted in the CO boiler. The owner or operator shall provide to the NWCAA the following information in a monthly report. The report shall be submitted within 20 days after the end of each month. The quantity of natural gas combusted and the beginning and ending times and dates for all periods during which natural gas is combusted in the CO boiler in each reporting month.
5.2.34 NO_X	WDOE PSD-00-02 Amendment 5 Condition 19 (10/21/08)	CO Boiler Firing Rate Limits The maximum firing rates shall be limited as follows (MMBtu/hr): CO boiler: 109 (when firing auxiliary fuel gas)	*Directly Enforceable* Boiler firing rate shall be continuously recorded and the data kept on-site available to the NWCAA for not less than five years. The maximum boiler firing rate during the preceding month shall be provided to the NWCAA in each monthly report.
FCCU Combustion Air Heater			
5.2.35 NO_X	WDOE PSD-00-02 Amendment 5 Condition 19 (10/21/08)	Heater Firing Rate Limits The maximum firing rates shall be limited as follows (MMBtu/hr): FCC combustion air heater: 70	*Directly Enforceable* Heater firing rate shall be continuously recorded and the data kept on-site available to the NWCAA for not less than five years. The maximum heater firing rate during the preceding month shall be provided to the NWCAA in each monthly report.
5.2.36 General	OAC 733c Condition 14 & 22 (7/29/05)	Limits on Heater Operating Hours The FCCU Combustion Air Heater shall not be operated more than 240 hours in any 12-month period. This requirement becomes applicable 30 days after the initial startup date.	The owner or operator shall notify the NWCAA within 12 hours after each FCCU Combustion Air Heater startup. The owner or operator shall provide to the NWCAA the following information in a monthly report. The report shall be submitted within 20 days after the end of each month. The beginning and ending times and dates of all periods

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
			that the FCCU Combustion Air Heater was operated in the reporting month.
Vacuum Distillation Tower Vacuum System			
5.2.37 VOC	NWCAA 580.221 (9/3/93)	Vacuum Systems Noncondensible VOC shall be piped to an appropriate firebox, incinerator, or to a closed refinery system.	Maintain a written operating procedures document that is consistent with good air pollution control practices
4F-2 Vacuum Flasher Heater (formerly, the Tar Separator Heater)			
5.2.38 SO2	OAC 733c Conditions 18, 20, 21, & 22 (7/29/2005)	Fuel combusted by the Vacuum Flasher Heater 4F-2 shall be limited to refinery fuel gas containing less than 162 ppm hydrogen sulfide (3-hour average) or purchased natural gas.	Monitor hydrogen sulfide content of refinery fuel gas combusted in compliance with NWCAA Regulation 367 and Appendix A - "Ambient Monitoring, Emission Testing and Continuous Emission and Opacity Monitoring" (7/14/05), 40 CFR Part 60 Subpart J, Subpart A and Appendix F during periods of heater operation. Concentration measurements provided by the continuous emissions monitoring system (CEMS) required by 40 CFR Part 60 Subpart J shall be used to directly determine compliance with this term and Subpart J on a continuous basis. Report on a monthly basis, within 20 days of the end of the previous month, the dates, times, and causes of all periods that the monitoring system(s) did not function or operating parameters were outside of established ranges in the reporting month. Keep all raw data, calculation results, test results, and monitoring data on-site and available to NWCAA representatives for not less than five years. Submit a test plan to the NWCAA not less than 30 days before the scheduled test date and notify the NWCAA at least two weeks in advance of the exact test date. Test results shall be provided to the NWCAA not more than 45 days after completion of the sampling. All performance tests shall be conducted at or near maximum representative operating capacity for the process. All tests shall be conducted while operating the control device at

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
			conditions that represent normal operation.
5.2.39 SO_2	40 CFR 60 Subpart J 60.104(a)(1), 60.105(a)(4), and 60.105(e)(3)(ii) and 60.106(e)(1), and 60.107(e) (all 6/24/08) NWCAA 104.2 (6/10/10)	Fuel combusted in the Vacuum Flasher Heater 4F-2 shall not contain hydrogen sulfide in excess of 230 mg/dscm (0.10 gr/dscf).	Install, calibrate, maintain, and operate an instrument for continuously monitoring and recording the concentration (dry basis) of H2S in fuel gases before being burned in any fuel gas combustion device. Fuel gas streams that are inherently low in sulfur content as per 60.105(a) (4) (iv) are not required to comply with the monitoring requirements of 60.105(a) (4). The span value for this instrument is 425 mg/dscm H_2S. The performance evaluations for this H2S monitor under 60.13(c) shall use Performance Specification 7. EPA Method 11, 15, 15A or 16 shall be used for conducting the relative accuracy evaluations. Periods of excess emissions that shall be determined and reported are defined as follows: All rolling 3-hr. periods during which the average concentration of H_2S as measured by the H_2S continuous monitoring system exceeds 230 mg/dscm (0.10 gr/dscf). In conducting the performance tests required in § 60.8, determine compliance with the H_2S standard in 60.104(a)(1) as follows: EPA Method 11, 15, 15A or 16 shall be used to determine the H_2S concentration. Methods shall be run as per 60.106(e)(1). If an owner or operator determines that one of the exemptions listed in §60.105(a)(4)(iv) applies to that fuel gas stream, the owner or operator shall maintain records of the specific exemption chosen for each fuel gas stream. If the owner or operator applies for the exemption described in §60.105(a)(4)(iv)(D), the owner or operator must keep a copy of the application as well as the letter from the Administrator granting approval of the application.
5.2.40 General	OAC 1012b Condition 1 (4/27/09)	Fuel Use Fuel combusted in the Vacuum Flasher Heater 4F-2 shall be limited to refinery fuel gas.	*Directly Enforceable* Retain fuel records on-site and available to NWCAA representatives for not less than five years.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.2.41 Opacity	OAC 1012b Conditions 2 and 7 (04/27/09)	Visible Emissions visual emissions from the heater shall not exceed five percent (5%) opacity for more than three minutes in any one hour period.	*Directly Enforceable* Visually observe stacks monthly to qualitatively assess whether emissions are visible. The frequency may be reduced to annually if no visible emissions are observed for six consecutive months. The permittee shall revert to monthly observations of individual stacks if any visible emissions are noted during the observation. If visible emissions are observed, reduce to no visible emissions as soon as possible. If visible emissions cannot be reduced to zero, the permittee may monitor by State of Washington Department of Ecology Source Test Method 9A - Visual Determination of Opacity for a three Minute Standard (Revised July 12, 1990) no later than 24 hours after detection and daily thereafter until opacity is shown to be less than 5%. Otherwise visual emissions shall be considered in excess of the opacity standard. Record observation results for stacks with visible emissions and any related equipment or operational failure, the occurrence dates and times, actions taken, and the type of fuel burned. Record that an observation was performed, with date, time, background conditions, and identification of the observer. Keep records of all observations available for inspection.
5.2.42 NO_X	OAC 1012b Conditions 3 and 4 (04/27/09)	NO_X emissions NO_X Emissions shall not exceed the following emission limits: 80 (8.0×10^1) ppm NO_X by volume, dry basis, corrected to three percent oxygen, based on a twenty-four hour rolling average. 0.07 (7.0×10^{-2}) lb NO_X/MMBtu (HHV) on a 365-day rolling average basis. The 365-day rolling average shall mean the average emission rate during the preceding 365	Install NO_X and oxygen continuous emission monitors (CEMs) in the heater stack. The CEMs shall be calibrated, maintained and operated in accordance with NWCAA Appendix A: Ambient Monitoring, Emission Testing, and Continuous Emission and Opacity Monitoring and 40 CFR Part 60 Appendices B and F.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		days that the heater was operating.	
5.2.43 NH_3	OAC 1012b Conditions 5, 6, 7, 8 (04/27/09)	Ammonia Emissions of ammonia from the heater shall not exceed 10 (1.00×10^1) ppmdv corrected to 3% O_2 as a 24-hour average.	Conduct annual compliance tests for ammonia through an independent contractor within one month of the anniversary of the previous test. Compliance shall be determined by Bay Area Air Quality Management District Source Test Procedure #1B (BAAQMD ST-1B) or EPA Method 320 (Vapor Phase Organic & Inorganic Emissions by Extractive FTIR) by the average of three 60-minute test runs at a 90% or greater heater load or other alternative method approved by NWCAA. During any testing, the permittee shall record ammonia feed rate, NO_X emissions, fuel consumption, excess oxygen, and exhaust temperature.
5.2.44 NH_3	OAC 1012b Condition 9 (04/27/09)	Ammonia Monitoring Develop and implement an Ammonia Emissions Monitoring Plan to establish a predictive relationship between the heater and SCR parameters and emissions of ammonia.	*Directly Enforceable* Implement the Ammonia Emissions Monitoring Plan to predict emissions of ammonia based on heater and SCR parameters. Record predictive parameters at least hourly and report excursions that indicate an ammonia emissions exceedance to the NWCAA in the facility's monthly report for the month following the excursion. The Ammonia Emissions Monitoring Plan will be amended or improved within sixty days of an assessment and request by the NWCAA for amendment.
5.2.45 Reporting	OAC 1012b Condition 10 (04/27/09)	Monthly Report The following information shall be reported to the NWCAA on a calendar month basis. Monthly reports are due at the end of the month immediately following the previous reporting month. All emission information, including calculations, shall be kept on site for at least five years and made available to NWCAA personnel upon request: a. The duration and nature of any monitor downtime. b. All measurements or calculations	Report as required in monthly reports.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		indicating operation in excess of a standard with an explanation and the corrective actions taken or planned. c. The results of any source emission test, cylinder gas audits, and relative accuracy test audits if not otherwise provided to the NWCAA. d. The 12-month rolling average NO_X emissions total from the heater in lb NO_X/MMBtu. e. The maximum 24-hour rolling average NO_X emissions reading in ppmdv (corrected) and the maximum 24-hour average calculated ammonia slip.	

5.2.46 Fluidized Catalytic Cracking Unit (FCCU)/Wet Gas Scrubber Alternative Monitoring Plan (December 7, 2009)

ConocoPhillips submitted a request to the EPA for an Alternative Monitoring Plan (AMP) under 40 CFR Part 60.13(i) on February 24, 2003 for permission to monitor FCCU wet scrubber operating parameters and perform periodic particulate testing instead of operating a continuous opacity monitoring system (COM) as required by 40 CFR 60.105 (NSPS Subpart J). This request was made because the flue gas water is condensed in the FCCU stack; thereby making it impossible to properly operate a COM. EPA approved the AMP on April 4, 2003 with an additional requirement to monitor scrubber liquor solids content weekly.

The Refinery MACT Phase II (40 CFR part 63 subpart UUU) states that if an FCCU is equipped with a wet scrubber and an AMP has been approved under the NSPS, the owner or operator may request that the same AMP be approved to satisfy the opacity monitoring requirements for the FCCU in the MACT Subpart UUU. On May 15, 2003, ConocoPhillips submitted a request for approval of an identical AMP for opacity under MACT Subpart UUU. The EPA approved the request on August 8, 2003, with no additional provisions. ConocoPhillips submitted a request to the EPA on August 22, 2005 to modify the AMP for NSPS Subpart J and MACT Subpart UUU. Another request to modify the AMP was submitted from ConocoPhillips on November 1, 2005 and on August 27, 2009. The EPA approved the requests on March 31, 2006 and December 7, 2009, respectively.

ConocoPhillips is required to comply with the following AMP, dated December 7, 2009:

Approved AMP for FCCU, Wet Gas Scrubber, ConocoPhillips Ferndale Refinery

This alternative monitoring plan (AMP) is to be implemented in place of the requirement to install and operate a continuous opacity monitoring system (COMS) required by the NSPS Subpart J [40 CFR § 60.105(a)(1)] and by reference from MACT Subpart UUU (Table 2).

The ConocoPhillips Fluid Catalytic Cracking Unit (FCCU) Wet Gas Scrubber (WGS) is not a venturi scrubber so the requirements of Tables 2 and 3 of MACT Subpart UUU apply. Because a WGS is being used and as the result of the presence of condensed water in the stack, a COMS will not properly measure opacity. An appropriate continuous parameter monitoring system (CPMS) for the ConocoPhillips FCCU WGS includes monitoring the WGS liquid-to-gas ratio (L/G) and the weight percent solids in the scrubber recirculation liquid. The value for L will be determined by measuring the amperage to each WGS recirculation pump motor that is operating, calculating the power generated by the pump motor at the measured amperage using a standard equation from the Chemical Engineers Handbook, determining the liquid flow rate at the calculated power input from the pump manufacturer's Centrifugal Pump Characteristics Curve and summing the liquid flow rate from each operating pump. The value for G will be measured directly by a gas flow meter or calculated in accordance with 40 CFR § 63.1573(a)(2)(iii) using control room instrumentation for air flow into the regenerator, and continuous gas analyzers on the exhaust from the regenerator. As described in the guideline of 40 CFR § 63.1564(b)(2) and (3), the L/G ratio will be calculated and recorded at least once every operating hour. ConocoPhillips has established a minimum L/G ratio of 1.25 calculated on a three-hour block average based on performance testing.

The weight percent solids in the WGS liquid must be sampled and analyzed weekly. ConocoPhillips has established a maximum weight percent value of 1.0 based on data taken during performance testing.

ConocoPhillips has developed and must maintain a written monitoring plan which describes the specific CPMS for this AMP including the measurement equipment, equations, centrifugal pump characteristics curves or algorithms, sampling methods, analytical methods and operation and maintenance requirements. This monitoring plan must be reviewed annually and revised, if necessary, and made available to EPA and NWCAA upon request. This CPMS must meet the requirements of 40 CFR § 63.1572(c) and (d).

5.3 Alkylation Process Area

Table 5-3 Alkylation Process Area

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
Individual Drain Systems subject to 40 CFR Part 61 Subpart FF and Part 63 Subpart CC			
Note: The Title 40 CFR Part 61 and Part 63 General Provisions in Sections 3.2 and 3.3 apply to process wastewater systems in the alkylation process area with the exception of the Alky Debutanizer and Butane Isomerization units.			
5.3.1 VOC/HAP	40 CFR Part 63 Subpart CC 40 CFR Part 61 Subpart FF NWCAA 104.2 (6/10/10)	Comply with the standards for individual drain systems for waste streams subject to Part 63 Subpart CC and Part 61 Subpart FF	Monitoring/Recordkeeping/Reporting (MR&R) requirements are included in Table 5-14
Individual Drain Systems subject to 40 CFR Part 60 Subpart QQQ except streams subject to 40 CFR part 63 Subpart CC			
5.3.2 VOC	40 CFR Part 60 Subpart QQQ NWCAA 104.2 (6/10/10)	Individual Drain Systems Comply with 40 CFR Part 60 Subpart QQQ except for individual drain systems regulated under Part 63 Subpart CC	Monitoring/Recordkeeping/Reporting (MR&R) requirements are included in Table 5-15
Miscellaneous Process Vent: Olefin Feed Surge Drum Manual Vent to Flare (17HC-1717)			
5.3.3 HAP	40 CFR Subpart CC §63.643 (8/18/95) NWCAA 104.2 (6/10/10)	Provisions Reduce emissions of organic HAP's with flare gas recovery or by using a flare that meets the requirements of 63.11(b) of subpart A of Part 63. If flare gas recovery is used to capture and a boiler or process heater is used to control organic HAPs, the vent stream shall be introduced into the flame zone of the device, or in a location such that the required percent reduction or concentration is achieved.	Monitoring requirements are included in Table 5.9 (flares).

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
Equipment Components in VOC/HAP Service (LSR Splitter, Cat Gas Splitter and Saturated Gas Plant)			
5.3.4 VOC/HAP	NWCAA Section 580.8 (3/13/97) which references 40 CFR 60 Subpart GGG and VV (6/2/08) NWCAA 580.84 (12/13/89)40 CFR Subpart CC §63.648 (8/18/98) NWCAA 104.2 (6/10/10)	Equipment Leak Standards Monitor components in VOC service for fugitive leaks, repair leaks in a timely manner, and report results semi-annually in accordance with 40 CFR 60 Subparts GGG and VV.	*Directly Enforceable* Follow the MR&R requirements in terms 5.13.1 through 5.13.17. Visually inspect any relief valve within 24 hours after it has vented to atmosphere.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
Equipment Components in VOC Service (Including Organic HAP Service) Alkylation Unit (Non-Acid Section) and Alky Debutanizer Unit			
5.3.5 VOC/HAP	OAC 733c Conditions 1, 2, 3 & 20. (7/29/05) and OAC 795 Conditions 1-4 (2/4/02) which reference 40 CFR part 63 subpart H 40 CFR Subpart CC NWCAA 104.2 (6/10/10)	Equipment Leaks Monitor components in HAP or VOC service for fugitive leaks, repair leaks in a timely manner and report monitoring results. For the purposes of implementation of this Order of Approval to Construct the term "in organic hazardous air pollutant service" shall be replaced with "in VOC service" as that term is defined in 40 CFR Part 60 Subpart VV.	Follow the MR&R requirements in terms 5.13.18-5.13.29. A single or multiple point calibration drift assessment shall be conducted after each monitoring shift, and prior to all calibrations performed after the initial daily calibration, on all vapor analyzers used to perform required EPA Method 21 monitoring. The calibration drift test shall follow the procedures of EPA Method 21 (40 CFR Part 60 Appendix A) §3.2 and §4.4.2 and 40 CFR §60.485(b)(1). If any calibration drift assessment after the initial calibration shows a negative drift of more than 10%, then all components monitored since the last calibration shall be remonitored. Concentrations measured during performance of required vapor analyzer calibrations and EPA Method 21 monitoring shall be recorded. The date of each measurement and a unique identifier linking the item measured to each concentration datum shall be part of the record. The owner or operator shall keep all raw data, calculation results, test results, and monitoring data required on-site and available to NWCAA representatives for not less than five years.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.3.6 VOC/HAP	NWCAA Section 580.8 (3/13/97) which references 40 CFR 60 Subpart GGG and VV (6/2/08) NWCAA 580.84 (12/13/89) NWCAA 104.2 (6/10/10)	Equipment Leak Standards Monitor components in VOC service for fugitive leaks, repair leaks in a timely manner, and report results semi-annually in accordance with 40 CFR 60 Subparts GGG and VV.	*Directly Enforceable* Follow the MR&R requirements in terms 5.13.1 through 5.13.17. Visually inspect any relief valve within 24 hours after it has vented to atmosphere.
Equipment Components in VOC Service (Including Organic HAP Service) Alkylation Unit (Acid Section)			
5.3.7 VOC/HAP	NWCAA Section 580.8 (3/13/97) which references 40 CFR 60 Subpart GGG and VV (6/2/08) NWCAA 580.84 (12/13/89) NWCAA 104.2 (6/10/10)	Equipment Leak Standards Monitor components in VOC service for fugitive leaks, repair leaks in a timely manner, and report results semi-annually in accordance with 40 CFR 60 Subparts GGG and VV.	*Directly Enforceable* Follow the MR&R requirements in terms 5.13.1 through 5.13.17. Visually inspect any relief valve within 24 hours after it has vented to atmosphere.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.3.8 VOC/ HAP	OAC 733c Conditions 1, 2, 3 & 20 (7/29/05) and OAC 795 Conditions 1-4 (2/4/02) which reference 40 CFR part 63 subpart H 40 CFR Part 63 subpart CC. NWCAA 104.2 (6/10/10)	Equipment Leaks Monitor components in HAP or VOC service for fugitive leaks, repair leaks in a timely manner and report monitoring results. For the purposes of implementation of this Order of Approval to Construct the term "in organic hazardous air pollutant service" shall be replaced with "in VOC service" as that term is defined in 40 CFR Part 60 Subpart VV.	Follow the MR&R requirements in terms 5.13.18-5.13.29. A single or multiple point calibration drift assessment shall be conducted after each monitoring shift, and prior to all calibrations performed after the initial daily calibration, on all vapor analyzers used to perform required EPA Method 21 monitoring. The calibration drift test shall follow the procedures of EPA Method 21 (40 CFR Part 60 Appendix A) §3.2 and §4.4.2 and 40 CFR §60.485(b)(1). If any calibration drift assessment after the initial calibration shows a negative drift of more than 10%, then all components monitored since the last calibration shall be remonitored. Concentrations measured during performance of required vapor analyzer calibrations and EPA Method 21 monitoring shall be recorded. The date of each measurement and a unique identifier linking the item measured to each concentration datum shall be part of the record. The owner or operator shall keep all raw data, calculation results, test results, and monitoring data required on-site and available to NWCAA representatives for not less than five years.
5.3.9 VOC	40 CFR Subpart GGG §60.590 (6/2/08), 60.591, 60.592 and 60.593 (11/16/07) NWCAA 104.2 (6/10/10)	NSPS Subpart GGG – Comply with the requirements of 60.482.1 to 60.482-10 (NSPS Subpart VV), or, alternatively, 60.483.1 and 60.483-2 or the Phase III provisions in 40 CFR 63.168 (may choose 60.482-7(f) instead of 63.168 for valves designated as leakless). Also comply with the provisions of 60.485 (except as provided in 60.593), 60.486 and 60.487.	*Directly enforceable* Follow the MR&R requirements in terms 5.13.1 through 5.13.17.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
Alky Depropanizer Reboiler Heater 17F-1			
Note: The Title 40 CFR Part 60 General Provisions included in Section 3.1 apply to this affected source.			
5.3.10 SO_2	OAC 733c Conditions 18, 20, 21, & 22 (7/29/2005)	Fuel combusted in heater 17F-1 shall be limited to refinery fuel gas containing less than 162 ppm hydrogen sulfide (3-hour average) or purchased natural gas.	Monitor hydrogen sulfide content of refinery fuel gas combusted in compliance with NWCAA Regulation 367 and Appendix A - "Ambient Monitoring, Emission Testing and Continuous Emission and Opacity Monitoring" (7/14/05), 40 CFR Part 60 Subpart J, Subpart A and Appendix F during periods of heater operation. Concentration measurements provided by the continuous emissions monitoring system (CEMS) required by 40 CFR Part 60 Subpart J shall be used to directly determine compliance with this term and Subpart J on a continuous basis. Report on a monthly basis, within 20 days of the end of the previous month, the dates, times, and causes of all periods that the monitoring system(s) did not function or operating parameters were outside of established ranges in the reporting month. Keep all raw data, calculation results, test results, and monitoring data on-site and available to NWCAA representatives for not less than five years. Submit a test plan to the NWCAA not less than 30 days before the scheduled test date and notify the NWCAA at least two weeks in advance of the exact test date. Test results shall be provided to the NWCAA not more than 45 days after completion of the sampling. All performance tests shall be conducted at or near maximum representative operating capacity for the process. All tests shall be conducted while operating the control device at conditions that represent normal operation.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.3.11 SO_2	40 CFR Subpart J 60.104(a)(1) , 60.105(a)(4), and 60.105(e)(3)(ii), 60.106(e)(1), and 60.107(e) (6/24/08) NWCAA 104.2 (6/10/10)	Fuel combusted in Alky Depropanizer Heater 17F-1 shall not contain hydrogen sulfide in excess of 230 mg/dscm (0.10 gr/dscf).	Install, calibrate, maintain, and operate an instrument for continuously monitoring and recording the concentration (dry basis) of H2S in fuel gases before being burned in any fuel gas combustion device.. Fuel gas streams that are inherently low in sulfur content as per 60.105(a)(4)(iv) are not required to comply with the monitoring requirements of 60.105(a)(4). The span value for this instrument is 425 mg/dscm H_2S. The performance evaluations for this H2S monitor under 60.13c shall use Performance Specification 7. EPA Method 11, 15, 15A or 16 shall be used for conducting the relative accuracy evaluations. Periods of excess emissions that shall be determined and reported are defined as follows: All rolling 3-hr. periods during which the average concentration of H_2S as measured by the H_2S continuous monitoring system exceeds 230 mg/dscm (0.10 gr/dscf). In conducting the performance tests required in §60.8, determine compliance with the H_2S standard in 60.104(a)(1) as follows: EPA Method 11, 15, 15A, or 16 shall be used to determine the H_2S concentration. Methods shall be run as per 60.106(e)(1). If an owner or operator determines that one of the exemptions listed in §60.105(a)(4)(iv) applies to that fuel gas stream, the owner or operator shall maintain records of the specific exemption chosen for each fuel gas stream. If the owner or operator applies for the exemption described in §60.105(a)(4)(iv)(D), the owner or operator must keep a copy of the application as well as the letter from the Administrator granting approval of the application.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
Butane Isomerization Unit Equipment Components in VOC Service			
Note: The Title 40 CFR Part 60 General Provisions included in Section 3.1 apply to this affected source.			
5.3.12 VOC	NWCAA Section 580.8 (3/13/97) which references 40 CFR 60 Subpart GGG and VV (6/2/08) NWCAA 580.84 (12/13/89) NWCAA 104.2 (6/10/10)	Equipment Leak Standards Monitor components in VOC service for fugitive leaks, repair leaks in a timely manner, and report results semi-annually in accordance with 40 CFR 60 Subparts GGG and VV.	*Directly Enforceable* Follow the MR&R requirements in terms 5.13.1 through 5.13.17. Visually inspect any relief valve within 24 hours after it has vented to atmosphere.
5.3.13 VOC	40 CFR Subpart GGG §60.590 (6/2/08), 60.591, 60.592 and 60.593 (11/16/07) NWCAA 104.2 (6/10/10)	NSPS Subpart GGG – Comply with the requirements of 60.482.1 to 60.482-10 (NSPS Subpart VV), or, alternatively, 60.483.1 and 60.483-2 or the Phase III provisions in 40 CFR 63.168 (may choose 60.482-7(f) instead of 63.168 for valves designated as leakless). Also comply with the provisions of 60.485 (except as provided in 60.593), 60.486 and 60.487.	Follow the MR&R requirements in terms 5.13.1 through 5.13.17.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
Butane Isomerization Unit Equipment Components in Perchloroethylene Service			
5.3.14 VOC/HAP	OAC No. 564(a) Condition 1 (10/02/02)	Fugitive Leak Detection and Repair: Equipment in perchloroethylene service shall be subject to the equipment leak standards, monitoring, recordkeeping and reporting requirements in 40 CFR Part 63 Subpart CC National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries. Note: the Butane Isomerization Unit is not directly subject to Subpart CC because the equipment is not in "organic hazardous air pollutant service" as defined by this subpart.	Follow the MR&R requirements in terms 5.13.1 through 5.13.17.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
Catalytic Gasoline Desulfurization (CGD or S-Zorb Unit) Equipment in VOC/HAP Service			
Note: The Title 40 CFR Part 63 General Provisions included in Section 3.3 apply to this affected source.			
5.3.15 VOC/HAP	OAC 733c Conditions 1, 2, 3 & 20 (7/29/05) which references 40 CFR part 63 subpart H and 40 CFR Part 63 subpart CC. 40 CFR part 63 subpart CC applies directly. NWCAA 104.2 (6/10/10)	Equipment Leaks Monitor components in HAP or VOC service for fugitive leaks, repair leaks in a timely manner and report monitoring results. For the purposes of implementation of this Order of Approval to Construct the term "in organic hazardous air pollutant service" shall be replaced with "in VOC service" as that term is defined in 40 CFR Part 60 Subpart VV.	Follow the MR&R requirements in terms 5.13.18 through 5.13.29. A single or multiple point calibration drift assessment shall be conducted after each monitoring shift, and prior to all calibrations performed after the initial daily calibration, on all vapor analyzers used to perform required EPA Method 21 monitoring. The calibration drift test shall follow the procedures of EPA Method 21 (40 CFR Part 60 Appendix A) §3.2 and §4.4.2 and 40 CFR §60.485(b) (1). If any calibration drift assessment after the initial calibration shows a negative drift of more than 10%, then all components monitored since the last calibration shall be remonitored. Concentrations measured during performance of required vapor analyzer calibrations and EPA Method 21 monitoring shall be recorded. The date of each measurement and a unique identifier linking the item measured to each concentration datum shall be part of the record. The owner or operator shall keep all raw data, calculation results, test results, and monitoring data required on-site and available to NWCAA representatives for not less than five years.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
Cat Gasoline Desulfurizer (CGD) Feed Heater (S-Zorb Unit)			
Note: The Title 40 CFR Part 60 General Provisions included in Section 3.1 apply to this affected source.			
5.3.16 SO_2	OAC 733c Conditions 8, 20, 22a (7/29/05)	CGD Heater SO_2 Limit Fuel combusted in the heater, rated at 40 MMBtu/hr, shall be limited to refinery fuel gas containing less than 50 ppm hydrogen sulfide (rolling 24-hour average) or purchased natural gas. Written operating procedures to assure compliance with this term shall be provided to the NWCAA on request and shall be available to the heater operators at all times.	Monitor hydrogen sulfide content of refinery fuel gas combusted in Continuously monitor hydrogen sulfide content of refinery fuel gas combusted in compliance with 40 CFR Part 60 Subpart J, Subpart A and Appendix F during periods of heater operation. Concentration measurements provided by the continuous emissions monitoring system (CEMS) required by 40 CFR Part 60 Subpart J shall be used to directly determine compliance with this term and Subpart J on a continuous basis. Conduct testing, recordkeeping, and reporting in accordance with the relevant sections of 40 CFR Part 60 Subpart J. The emission limits specified in this term shall be included in the basis for recordkeeping and reporting. Keep all raw data, calculation results, test results, and monitoring data on-site and available to NWCAA representatives for not less than five years. The owner or operator shall provide to the NWCAA the following information in a monthly report. The report shall be submitted within 20 days after the end of each month. The dates, times, and causes of all periods that the monitoring system(s) did not function or operating parameters were outside of established ranges in the reporting month.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.3.17 H_2S	40 CFR Subpart J 60.104(a)(1) , 60.105(a)(4), and 60.105(e)(3)(ii), 60.106(e)(1), and 60.107(e) (all 6/24/08) NWCAA 104.2 (6/10/10)	Fuel combusted in the CGD Feed Heater shall not contain hydrogen sulfide in excess of 230 mg/dscm (0.10 gr/dscf)	Install, calibrate, maintain, and operate an instrument for continuously monitoring and recording the concentration (dry basis) of H_2S in fuel gases before being burned in any fuel gas combustion device. Fuel gas streams that are inherently low in sulfur content as per 60.105(a)(4)(iv) are not required to comply with the monitoring requirements of 60.105(a)(4). The span value for this instrument is 425 mg/dscm H_2S. The performance evaluations for this H_2S monitor under 60.13(c) shall use Performance Specification 7. EPA Method 11, 15, 15A or 16 shall be used for conducting the relative accuracy evaluations. Periods of excess emissions that shall be determined and reported are defined as follows: All rolling 3-hr. periods during which the average concentration of H_2S as measured by the H_2S continuous monitoring system exceeds 230 mg/dscm (0.10 gr/dscf). In conducting the performance tests required in §60.8, determine compliance with the H_2S standard in 60.104(a)(1) as follows: EPA Method 11, 15, 15A, or 16 shall be used to determine the H_2S concentration. Methods shall be run as per 60.106(e)(1). If an owner or operator determines that one of the exemptions listed in §60.105(a) (4)(iv) applies to that fuel gas stream, the owner or operator shall maintain records of the specific exemption chosen for each fuel gas stream. If the owner or operator applies for the exemption described in §60.105(a)(4)(iv)(D), the owner or operator must keep a copy of the application as well as the letter from the Administrator granting approval of the application.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.3.18 CO	WDOE PSD-00-02 Amendment 5 Conditions 4, 13, and 21(d) (10/21/08)	CGD Heater CO Limit Emissions of carbon monoxide from the CGD Feed Heater shall not exceed 0.0824 lb/MMBtu over a 1-hour averaging period and 14.4 tons per year over a 12-month rolling total.	Compliance will be demonstrated by yearly source testing in accordance with EPA Reference Method 10, as found in 40 CFR. Part 60, Appendix A or an alternative approved method. ConocoPhillips will identify a surrogate parameter (such as fuel usage) and multiply it by the emission factor derived during the previous source test. Source testing shall be performed no sooner than 10-months after the previous test and no later than 13-months after the previous test. Maintain monitoring records on site for at least five years and submit (1) excess emission reports to the NWCAA, and (2) results of any compliance source tests.
5.3.19 Firing Rate	WDOE PSD-00-02 Amendment 5 Condition 19 (10/21/08)	CGD Heater Firing Rate Restriction The maximum firing rate of the cat gasoline desulfurizer feed heater shall be limited to no greater than 40 MMBtu/hr.	Heater firing rate shall be continuously recorded and the data kept on-site available to the NWCAA for five years. The maximum heater firing rate during the preceding month shall be provided to the NWCAA in each monthly report. Directly Enforceable.
5.3.20 NO_X	WDOE PSD-00-02 Amendment 5 Conditions 1, 10, 21(d) (10/21/08)	CGD Heater NO_X Limit Emissions of NO_X from the cat gasoline desulfurizer feed heater shall not exceed 17 ppmdv at 7% O_2 over a 1-hour averaging period and 5.1 tons over a 12-month rolling total.	Compliance will be demonstrated by yearly source testing in accordance with EPA Reference Method 7E, as found in 40 CFR Part 60, Appendix A or an alternative approved method. Source testing shall be performed no sooner than 10-months after the previous test and no later than 13-months after the previous test. Maintain monitoring records on site for at least five years and submit (1) excess emission reports to the NWCAA, and (2) results of any compliance source tests.
5.3.21 General	WDOE PSD-00-02 Amendment 5 Condition 22 (10/21/08)	Enforcement Any activity, which is undertaken by the company or others, in a manner, which is inconsistent with the application and this determination, shall be subject to enforcement under the applicable regulations.	None

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.3.22 General	WDOE PSD-00-02 Amendment 5 Condition 23(10/21/08)	Access Access to the source by the EPA, state, and local regulatory personnel shall be permitted upon request for the purposes of compliance assurance inspections. Failure to allow such access is grounds for an enforcement action.	None
5.3.23 TAP	OAC 733c Conditions 17, 20 (7/29/05)	Ambient Toxics Impacts Combined total emissions from the FCCU and Gasoline Desulfurizer units and emissions increases resulting from modifications to the SRU and Alkylation units shall not cause exceedance of acceptable source impact levels specified in WAC 173-460-150 and -160 as determined by methods specified in WAC 173-460-080.	Keep all raw data, calculation results, test results, and monitoring data required on-site and available to NWCAA representatives for not less than five years.

5.4 Reformer/DHT Process Area

Table 5-4 Reformer/DHT Process Area

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
Individual Drain Systems serving 40 CFR part 61 subpart FF and Part 63 Subpart CC			
Note: The Title 40 CFR Part 61 and Part 63 General Provisions included in Sections 3.2 and 3.3 apply to process wastewater systems in the reformer/DHT process area.			
5.4.1 VOC/ HAP	40 CFR Subpart CC 40 CFR Part 61 Subpart FF (10/17/00) NWCAA 104.2 (6/10/10)	Comply with the standards for individual drain systems for waste streams subject to Part 63 Subpart CC and Part 61 Subpart FF	Monitoring/Recordkeeping/Reporting (MR&R) requirements are included in Table 5-14

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
DHT Individual drain systems in VOC (non HAP) service			
Note: The Title 40 CFR Part 60 General Provisions included in Section 3.1 apply to this affected source.			
5.4.2 VOC	40 CFR Part 60 Subpart QQQ NWCAA 104.2 (6/10/10)	Individual Drain Systems Comply with 40 CFR Part 60 Subpart QQQ except for individual drain systems regulated under Part 63 Subpart CC	Monitoring/Recordkeeping/Reporting (MR&R) requirements are included in Table 5-15
Catalytic Reformer/DHT Process Area Components in VOC/HAP Service			
Note: The Title 40 CFR Parts 60 and 63 General Provisions included in Sections 3.1 and 3.3 apply to this affected source.			
5.4.3 VOC/ HAP	40 CFR Subpart CC §63.648 (8/18/98) NWCAA 104.2 (6/10/10)	Petroleum Refinery MACT – Equipment Leak Standards	Follow the MR&R requirements in terms 5.13.1 through 5.13.17.
DHT Process Unit Components in VOC (non-HAP) Service			
Note: The Title 40 CFR Part 60 General Provisions included in Section 3.1 apply to this affected source.			
5.4.4 VOC	40 CFR Subpart GGG §60.590 (6/2/08), 60.591, 60.592 and 60.593 (11/16/07) NWCAA 104.2 (6/10/10) OAC No. 868 Condition 1 (3/3/05)	NSPS Subpart GGG – Comply with the requirements of 60.482.1 to 60.482-10 (NSPS Subpart VV), or, alternatively, 60.483.1 and 60.483-2 or the Phase III provisions in 40 CFR 63.168 (may choose 60.482-7(f) instead of 63.168 for valves designated as leakless). Also comply with the provisions of 60.485 (except as provided in 60.593), 60.486 and 60.487.	Follow the MR&R requirements in terms 5.13.1 through 5.13.17.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
Reformer and DHT Miscellaneous Process Vents: Reformer RBV body vents, Reformer reactor shroud vents, Reformer reactor dump nozzle, DHT sour water drain drum 33C-40 flash gas vent to flare			
Note: The Title 40 CFR Part 63 General Provisions included in Section 3.3 apply to this affected source.			
5.4.5 HAP	40 CFR Subpart CC §63.643 (8/18/95) NWCAA 104.2 (6/10/10)	Provisions Reduce emissions of organic HAP's using flare gas recovery and/or a flare that meets the requirements of 63.11(b) of subpart A of Part 63. If flare gas recovery is used to capture and a boiler or process heater is used to control organic HAPs, the vent stream shall be introduced into the flame zone of the device, or in a location such that the required percent reduction or concentration is achieved.	Monitoring requirements are included in Table 5.9 (flare).
#3 Reformer Catalyst Regeneration Vents			
Note: The Title 40 CFR Part 63 General Provisions included in Section 3.3 apply to this affected source.			
5.4.6 Organic HAP	40 CFR Subpart UUU 63.1566(a)(1)(i), (3), and (4) and Table 15, Option 1 and Table 16, Option 1 63.1566(c)(1) and Table 20, Option 1 and Table 21, Option 1 (02/09/05) NWCAA 104.2 (6/10/10)	Total Organic Compound Emission Limitation During initial catalyst depressuring and catalyst purging operations that occur prior to the coke burn-off cycle (except when the reactor vent pressure is 5 psig or less) vent emissions of total organic compounds (TOC) to a flare that meets the control device requirements in §63.11(b) of subpart A of Part 63. Visible emissions from a flare must not exceed a total of 5 minutes during any 2-hour operating period. The flare pilot light must be present at all times and the flare must be operating at all times that emissions may be vented to it.	Demonstrate continuous compliance by maintaining visible emissions from a flare below a total of 5 minutes during any 2 consecutive hours. Collect flare monitoring data according to §63.1572; and record for each 1-hour period whether the monitor was continuously operating and the pilot light was continuously present during each 1-hour period.
5.4.7 O&M Plan	40 CFR Subpart UUU 63.1566(a)(5)	Operation, Maintenance, and Monitoring Plan Prepare an operation, maintenance and monitoring plan according to the requirements	Demonstrate continuous compliance with the requirement by complying with the procedures in the plan.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	, (b)(5), (b)(7), and (b)(8) and (c)(2) and 63.1567(a)(3) and (b)(6) and (c)(2) and 63.1576(e) (02/09/05) NWCAA 104.2 (6/10/10)	in 63.1574(f) and operate at all times according to the procedures in the plan. Comply with the procedures in the operation, maintenance, and monitoring plan.	Demonstrate continuous compliance with this requirement by maintaining records to document conformance with the procedures in the operation, maintenance and monitoring plan. Keep a current copy of the operation, maintenance, and monitoring plan onsite and available for inspection. Keep records to show continuous compliance with the procedure in the operation, maintenance, and monitoring plan.
5.4.8 O&M Plan	40 CFR Subpart UUU 63.1574(f)(1) and (2)(i) through (xi) (02/09/05) NWCAA 104.2 (6/10/10)	<u>Operation, Maintenance, Monitoring Plan</u> Prepare and implement an operation, maintenance, and monitoring plan for each control system and continuous monitoring system for each affected source. The plan shall include (i) process and control device monitoring parameters, including established operating limits; (ii) procedures for monitoring emissions and process and control device operating parameters; (vi) procedures to determine the HCl concentration of gases from a catalytic reforming unit when a colormetric tube sampling system is used, including procedures for correcting for pressure (if applicable to the sampling equipment) and the sampling locations that will be used for compliance monitoring purposes; (viii) monitoring schedule, including when you will monitor and when you will not monitor (e.g., during the coke burn-off, regeneration process); (x) maintenance schedule for each monitoring system and control device for each affected source that is generally consistent with the manufacturer's instructions for routine and long-term maintenance and (xi) corrective	Submit the plan to the NWCAA for review and approval along with the Notification of Compliance Status. Submit any changes to the NWCAA for review and approval and comply with the plan until the change is approved.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		action procedures if the HCl concentration measured at the selected compliance monitoring sampling location within the bed exceeds the operating limit.	
5.4.9 SSMP Plan	40 CFR Subpart UUU 63.1570(d) and (e) (4/20/06) NWCAA 104.2 (6/10/10)	Startup, Shutdown, Malfunction Plan Develop and implement a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in 63.6(e)(3).	None

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.4.10 O&M Plan	40 CFR Subpart UUU 63.1574(f)(2)(xi) (02/09/05) NWCAA 104.2 (6/10/10)	Corrective Action Procedures Implement corrective action procedures if the HCl concentration measured at the selected compliance monitoring sampling location within the bed exceeds the operating limit. These procedures must require, at minimum, repeat measurement and recording of the HCl concentration in the adsorption system exhaust gases and at the selected compliance monitoring sampling location within the bed. If the HCl concentration at the selected compliance monitoring location within the bed is above the operating limit during the repeat measurement while the HCl concentration in the adsorption system exhaust gases remains below the operating limit, the adsorption bed must be replaced as soon as practicable. The procedures must specify the sampling frequency that will be used to monitor the HCl concentration in the adsorption system exhaust gases subsequent to the repeat measurement and prior to replacement of the sorbent material (but not less frequent than once every four hours during coke burn-off). If the HCl concentration of the adsorption system exhaust gases is above the operating limit when measured at any time, the adsorption bed must be replaced within 24 hours or before the next regeneration cycle, whichever is longer. The corrective action procedures must be included in the O&M plan.	Submit the plan to the NWCAA for review and approval along with the notification of compliance status. Submit any changes to the NWCAA for review and approval and comply with the plan until the change is approved.
5.4.11 O&M	40 CFR Subpart UUU 63.1570(c) and	Operation and Maintenance Always operate and maintain the affected source, including air pollution control and monitoring equipment, according to the provisions in 63.6(e)(1)(i).	None

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	63.6(e)(1)(i) (04/20/06) NWCAA 104.2 (6/10/10)	These provisions are: At all times, including periods of startup, shutdown, and malfunction, the owner or operator must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions to the levels required by the relevant standards, i.e., meet the emission standard or comply with the startup, shutdown, and malfunction plan.	
5.4.12 Inorganic HAP(HCl)	40 CFR Subpart UUU 63.1567(a)(1)(ii) and Table 22 Row 2, and 63.1567(b)(5) and Table 26 Row 2, and (c)(1) and Table 27 Row 2 (02/09/05) NWCAA 104.2 (6/10/10)	Inorganic HAP Emission Limitation During coke burn-off and catalyst rejuvenation operations, reduce uncontrolled emissions of hydrogen chloride (HCl) to a concentration of 10 ppmv (dry basis) corrected to 3 percent oxygen. You have demonstrated initial compliance if the average emissions of HCl measured using Method 26 or 26a, as applicable, over the period of the performance test, are reduced to a concentration less than or equal to 10 ppmv (dry basis) corrected to 3% O_2.	Demonstrate continuous compliance during coke burn-off and catalyst rejuvenation by maintaining an HCl concentration of no more than 10 ppmv (dry basis), corrected to 3% O2.
5.4.13 In organic HAP(HCl)	40 CFR Subpart UUU 63.1567(a)(2) and Table 23 Row 4, (b)(1) and Tables 24 Row 4 and 41 Row 2, and (c)(1) and Table 28 Row 4 (2/09/05)	Operating Limits During coke burn-off and catalyst rejuvenation, the daily average temperature of the gas entering or exiting the adsorption system must not exceed the limit established during the performance test; and the HCl concentration in the adsorption system exhaust gas must not exceed the limit established during the performance test.	Install, operate and maintain each continuous parameter monitoring system in a manner consistent with the manufacturer's specifications or other written procedures that provide adequate assurance that the equipment will monitor accurately. Install and operate a continuous parameter monitoring system to measure and record the temperature of the gas entering or exiting the adsorption system during coke burn-off and catalyst rejuvenation; and colormetric tube sampling system to measure the gaseous HCl concentration in the system exhaust and at a point within the absorbent bed not

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	63.1572(c)(1) (02/09/05) NWCAA 104.2 (6/10/10)	The limits established in the 6/16/05 performance test are 75.3 degrees F and 9 ppm HCl.	to exceed 90% of the total length of the absorbent bed during coke burn-off and catalyst rejuvenation. Use a colormetric tube sampling system with a printed numerical scale in ppmv, a standard measurement range of 1 to 10 ppmv, and a standard deviation for measured values of no more than ± 15%. The system must include a gas detection pump and hot air probe if needed for the measurement range.
5.4.14 In organic HAP(HCl)	40 CFR Subpart UUU Table 24 and 63.1567(c)(2), (3), (c)(4), and (c)(5) and Table 28 Row 4 (02/09/05) NWCAA 104.2 (6/10/10)		Demonstrate continuous compliance with the daily average temperature operating limit by collecting the hourly and daily average temperature monitoring data according to 63.1572; and maintaining the daily average temperature below the operating limit established during the performance test. Demonstrate continuous compliance with the exhaust gas HCl concentration by measuring and recording the concentration of HCl weekly using a colormetric tube sampling system at a point within the adsorbent bed not to exceed 90% of the total length of the adsorption bed during coke burn off and catalyst rejuvenation; implementing procedures in the operating and maintenance plan if the HCl concentration at the sampling location within the adsorption bed exceeds the operating limit; and maintain the HCl concentration in the gas from the adsorption system below the applicable operating limit. From 63.1572, the temperature monitoring system must complete a minimum of one cycle of operation for each successive 15-minute period. You must have a minimum of four successive cycles of operation to have a valid hour of data (or at least two if a calibration check is performed during that hour or if the continuous parameter monitoring system is out-of-control). The temperature monitoring system must determine and record the hourly average of all recorded readings and if applicable, the daily average of all recorded readings for each operating day. The daily

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
			average must cover a 24-hour period if operation is continuous or the number of hours of operation per day if operation is not continuous. The temperature monitoring system must record the results of each inspection, calibration and validation check.
5.4.15	40 CFR Subpart UUU 63.1572(d) (4/11/02) NWCAA 104.2 (6/10/10)	Data Collection Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities, conduct all monitoring in continuous operation (or collect data at all required intervals) at all times the affected source is operating. Do not use date recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities for purposes of this regulation, including data averages and calculations, for fulfilling a minimum data availability requirement, if applicable. You must use all the data collected during all other periods in assessing the operation of the control device and associated control systems.	None
5.4.16	40 CFR Subpart UUU 63.1571(e) (04/11/02) NWCAA 104.2 (6/10/10)	Changing Operating Limit The established operating limit can be changed by doing an additional performance test, a performance test in conjunction with an engineering assessment, or an engineering assessment to verify that, at the new operating limit, you are in compliance with the applicable emission limitation. A revised operating limit must be established if you make any change in process or operating conditions that could affect control system performance or you change designated conditions after the last performance or compliance tests were done.	None

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.4.17	40 CFR Subpart UUU 63.1573 (04/11/02) NWCAA 104.2 (6/10/10) and OAC No. 864 Condition 2 (10/27/04)	Alternative Monitoring Alternative monitoring systems are subject to approval under the conditions of 63.1573(c), (d), and (e).	If a hydrogen chloride (HCl) alternative monitoring plan is requested and approved, monitoring will begin upon startup of the dry chloride scrubber.
5.4.18	40 CFR Subpart UUU 63.1570(f) and (g) (04/10/06) NWCAA 104.2 (6/10/10)	Deviations Report each instance in which you did not meet each emission limitation and each operating limit. This includes periods of startup, shutdown, and malfunction. Report each instance in which you did not meet the work practice standards. These instances are deviations from the emission limitations and work practice standards in the subpart. These deviations must be reported according to the requirements in 63.1575. Consistent with 63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the NWCAA's satisfaction that you were operating in accordance with the SSMP. The SSMP must include elements designed to minimize the frequency of such periods (i.e., root cause analysis). The NWCAA will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations, according to the provisions in 63.6(e).	Submit compliance reports covering the semiannual reporting period from January 1 through June 30 or the period from July 1 through December 31. The reports must be postmarked or delivered no later than July 31 or January 31, whichever date is the first after the end of the period. The compliance report must contain (1) the company name and address, (2) a statement by a responsible official, with the official's name, title, and signature, certifying the accuracy of the content of the report, (3) the date of the report and the beginning and ending dates of the reporting period, and (4) if there are no deviations, a statement that there were no deviations from the emission limitations or work practice standards during the reporting period and that no continuous emission monitoring system was inoperative, inactive, malfunctioning, out-of-control, repaired, or adjusted. If there were deviations during the reporting period, the report must contain the information in §63.1575(d) or (e). Include a copy of any performance test done during the reporting period as per §63.1575(f)

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
DHT Heater 33F-1			
Note: The Title 40 CFR Part 60 General Provisions included in Section 3.1 apply to this affected source.			
5.4.19 H_2S	OAC 733c Conditions 18, 20, 21, & 22 (7/29/2005)	Fuel combusted in DHT Heater 33F-1 shall be limited to refinery fuel gas containing less than 162 ppm hydrogen sulfide (3-hour average) or purchased natural gas.	Monitor hydrogen sulfide content of refinery fuel gas combusted in compliance with NWCAA Regulation 367 and Appendix A - "Ambient Monitoring, Emission Testing and Continuous Emission and Opacity Monitoring" (7/14/05), 40 CFR Part 60 Subpart J, Subpart A and Appendix F during periods of heater operation. Concentration measurements provided by the continuous emissions monitoring system (CEMS) required by 40 CFR Part 60 Subpart J shall be used to directly determine compliance with this term and Subpart J on a continuous basis. Report on a monthly basis, within 20 days of the end of the previous month, the dates, times, and causes of all periods that the monitoring system(s) did not function or operating parameters were outside of established ranges in the reporting month. Keep all raw data, calculation results, test results, and monitoring data on-site and available to NWCAA representatives for not less than five years. Submit a test plan to the NWCAA not less than 30 days before the scheduled test date and notify the NWCAA at least two weeks in advance of the exact test date. Test results shall be provided to the NWCAA not more than 45 days after completion of the sampling. All performance tests shall be conducted at or near maximum representative operating capacity for the process. All tests shall be conducted while operating the control device at conditions that represent normal operation.
5.4.20 SO_2	40 CFR Subpart J 60.104(a)(1) , 60.105(a)(4), and	Fuel combusted in DHT Heater 33F-1 shall not contain hydrogen sulfide in excess of 230 mg/dscm (0.10 gr/dscf)	Install, calibrate, maintain, and operate an instrument for continuously monitoring and recording the concentration (dry basis) of H_2S in fuel gases before being burned in any fuel gas combustion device. Fuel gas streams that are inherently low in sulfur content as per 60.105(a)(4)(iv) are

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	60.105(e)(3)(ii), 60.106(e)(1), and 60.107(e) (all 6/24/08) NWCAA 104.2 (6/10/10)		not required to comply with the monitoring requirements of 60.105(a)(4). The span value for this instrument is 425 mg/dscm H2S. The performance evaluations for this H2S monitor under 60.13(c) shall use Performance Specification 7. EPA Method 11, 15, 15A or 16 shall be used for conducting the relative accuracy evaluations. Periods of excess emissions that shall be determined and reported are defined as follows: All rolling 3-hr. periods during which the average concentration of H_2S as measured by the H_2S continuous monitoring system exceeds 230 mg/dscm (0.10 gr/dscf). In conducting the performance tests required in §60.8, determine compliance with the H_2S standard in 60.104(a)(1) as follows: EPA Method 11, 15, 15A, or 16 shall be used to determine the H_2S concentration. Methods shall be run as per 60.106(e)(1). If an owner or operator determines that one of the exemptions listed in §60.105(a) (4)(iv) applies to that fuel gas stream, the owner or operator shall maintain records of the specific exemption chosen for each fuel gas stream. If the owner or operator applies for the exemption described in §60.105(a)(4)(iv)(D), the owner or operator must keep a copy of the application as well as the letter from the Administrator granting approval of the application.
5.4.21 SO_2	OAC 780 Condition 1 (7/26/01)	<u>OAC #780 DHT Heater Fuel Limitations</u> Fuel combusted in the DHT Heater 33F-1 shall be limited to refinery fuel gas containing less than 50 ppm hydrogen sulfide (rolling 24-hour average) or purchased pipeline-grade natural gas. Written operating procedures to assure compliance with this term shall be provided to the NWCAA on request and shall be available to the heater operators at all times.	The hydrogen sulfide content of refinery fuel gas combusted in DHT Heater 33F-1 shall be continuously monitored in compliance with 40 CFR Part 60 Subpart J, Subpart A, and Appendix F during periods of heater operation. Concentration measurements provided by the continuous emissions monitoring system required by 40 CFR Part 60 Subpart J shall be used to directly determine compliance with this term and Subpart J on a continuous basis. The owner or operator shall conduct testing, recordkeeping, and reporting in accordance with the relevant sections of 40

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
			CFR Part 60 Subpart J. The emission limits specified in this term shall be included in the basis for recordkeeping and reporting.
5.4.22 NO_X	OAC 780 Condition 2 (7/26/01)	DHT Heater NO_X Limits Emissions of nitrogen oxides from the DHT Heater 33F-1 shall not exceed 0.05 lb. NO_X per MMBtu heat input (higher heating value) over any three hour period.	NO_X emissions shall be tested in accordance with EPA Reference Method 7, 7A, or 7E within 180 days after the heater firing rate exceeds 42 MMBtu/hr. The tests shall be conducted at the maximum firing rate achievable at the time of the test.
5.4.23	OAC 780 Condition 3 (7/26/01)	DHT Heater Firing Rate The heater firing rate shall not exceed 48 MMBtu/hr.	*Directly Enforceable* Heater firing rate shall be continuously recorded and the data kept on-site available to the NWCAA for five years. The maximum heater firing rate during the preceding month shall be provided to the NWCAA in each monthly report.
5.4.24 Opacity	OAC 780 Condition 4 (7/26/01)	DHT Heater Visible Emissions Visible emissions from the heater stack shall not exceed five (5) percent opacity for more than six minutes in any one hour as determined by Title 40 CFR Appendix A Method 9.	*Directly Enforceable* Visually observe stack monthly to qualitatively assess whether emissions are visible. The frequency may be reduced to quarterly if no visible emissions are observed for six consecutive months. The permittee shall revert to monthly observations of individual stacks if any visible emissions are noted during the observation. If visible emissions are observed, reduce to no visible emissions as soon as possible. If visible emissions cannot be reduced to zero, the permittee may monitor by Ecology Method 9 no later than 24 hours after detection and daily thereafter until opacity is shown to be less than the applicable opacity standard. Otherwise visual emissions shall be considered in excess of the opacity standard. Record observation results for stacks with visible emissions and any related equipment or operational failure, the occurrence dates and times, actions taken, and the type of fuel burned. Record that an observation was performed, with date, time, background conditions, and identification of the observer. Keep records of all observations available for inspection.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.4.25 HAP	OAC 780 Condition 5 (7/26/01)	DHT Unit Toxics Ambient Impact Combined total emissions from the DHT Heater and the DHT unit shall not cause exceedance of acceptable source impact levels specified in WAC 173-460-150 and -160 as determined by methods specified in WAC 173-460-080. The owner or operator shall assess compliance with this term on request by the NWCAA.	none
#3 Reformer Heaters 18F-21, 22, 23 & 24; #3 Reformer Pretreat Heater 18F-1; #3 Reformer Regen. Heater 18F-26			
Note: The Title 40 CFR Part 60 General Provisions included in Section 3.1 apply to this affected source.			
5.4.26 SO_2	OAC 733c Conditions 18, 20, 21, & 22 (7/29/2005) Letter dated 1/14/72	Fuel combusted in heaters 18F-21, 22, 23, 24, and #3 Reformer Pretreat heater 18F-1 and #3 Reformer Regen. Heater 18F-26 shall be limited to refinery fuel gas containing less than 162 ppm hydrogen sulfide (3-hour average) or purchased natural gas.	Monitor hydrogen sulfide content of refinery fuel gas combusted in compliance with NWCAA Regulation 367 and Appendix A - "Ambient Monitoring, Emission Testing and Continuous Emission and Opacity Monitoring" (7/14/05), 40 CFR Part 60 Subpart J, Subpart A and Appendix F during periods of heater operation. Concentration measurements provided by the continuous emissions monitoring system (CEMS) required by 40 CFR Part 60 Subpart J shall be used to directly determine compliance with this term and Subpart J on a continuous basis. Report on a monthly basis, within 20 days of the end of the previous month, the dates, times, and causes of all periods that the monitoring system(s) did not function or operating parameters were outside of established ranges in the reporting month. Keep all raw data, calculation results, test results, and monitoring data on-site and available to NWCAA representatives for not less than five years. Submit a test plan to the NWCAA not less than 30 days before the scheduled test date and notify the NWCAA at least two weeks in advance of the exact test date. Test results shall be provided to the NWCAA not more than 45 days after completion of the sampling. All performance tests shall be conducted at or near maximum representative

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
			operating capacity for the process. All tests shall be conducted while operating the control device at conditions that represent normal operation.
5.4.27 SO_2	40 CFR Subpart J 60.104(a)(1) , 60.105(a)(4), and 60.105(e)(3)(ii), 60.106(e)(1), and 60.107(e) (all 6/24/08) NWCAA 104.2 (6/10/10)	Fuel combusted in the reformer heaters 18F-21, 22, 23, 24, 18F-1 and18F-26 shall not contain hydrogen sulfide in excess of 230 mg/dscm (0.10 gr/dscf)	Install, calibrate, maintain, and operate an instrument for continuously monitoring and recording the concentration (dry basis) of H_2S in fuel gases before being burned in any fuel gas combustion device. Fuel gas streams that are inherently low in sulfur content as per 60.105(a)(4)(iv) are not required to comply with the monitoring requirements of 60.105(a)(4). The span value for this instrument is 425 mg/dscm H2S. The performance evaluations for this H2S monitor under 60.13(c) shall use Performance Specification 7. EPA Method 11, 15, 15A or 16 shall be used for conducting the relative accuracy evaluations. Periods of excess emissions that shall be determined and reported are defined as follows: All rolling 3-hr. periods during which the average concentration of H_2S as measured by the H_2S continuous monitoring system exceeds 230 mg/dscm (0.10 gr/dscf). In conducting the performance tests required in §60.8, determine compliance with the H2S standard in 60.104(a)(1) as follows: EPA Method 11, 15, 15A, or 16 shall be used to determine the H_2S concentration. Methods shall be run as per 60.106(e)(1). If an owner or operator determines that one of the exemptions listed in §60.105(a) (4)(iv) applies to that fuel gas stream, the owner or operator shall maintain records of the specific exemption chosen for each fuel gas stream. If the owner or operator applies for the exemption described in §60.105(a) (4)(iv)(D), the owner or operator must keep a copy of the application as well as the letter from the Administrator granting approval of the application.

5.5 Sulfur Plant/Treaters Process Area

Table 5-5 Sulfur Plant/Treaters Process Area

Term	Citation	Description	Monitoring, Recordkeeping and Reporting
Individual Drain Systems subject to 40 CFR Part 61 Subpart FF and Part 63 Subpart CC			
Note: The Title 40 CFR Part 61 and Part 63 General Provisions in Sections 3.2 and 3.3 apply to process wastewater systems in the sulfur plant/treaters process area.			
5.5.1 VOC/HAP	40 CFR Part 63 Subpart CC 40 CFR Part 61 Subpart FF NWCAA 104.2 (6/10/10)	Comply with the standards for individual drain systems for waste streams subject to Part 63 Subpart CC and Part 61 Subpart FF	Monitoring/Recordkeeping/Reporting (MR&R) requirements are included in Table 5-14
Sulfur Plant/Treaters Process Area Individual Drain Systems subject to 40 CFR Part 60 Subpart QQQ			
Note: The Title 40 CFR Part 60 General Provisions included in Section 3.1 apply to this affected source.			
5.5.2 VOC/HAP	40 CFR Part 60 Subpart QQQ NWCAA 104.2 (6/10/10)	Individual Drain Systems Comply with 40 CFR Part 60 Subpart QQQ except for individual drain systems regulated under Part 63 Subpart CC	Monitoring/Recordkeeping/Reporting (MR&R) requirements are included in Table 5-15
Sulfur Recovery Unit #1, Amine Treaters, and Sour Water Stripper Equipment in Organic HAP Service			
Note: The Title 40 CFR Part 63 General Provisions included in Section 3.3 apply to this affected source.			
5.5.3 HAP	40 CFR 63 Subpart CC 63.648 (8/18/98) NWCAA 104.2 (6/10/10)	Refinery MACT Equipment Leaks Monitor components in HAP service for fugitive leaks, repair leaks in a timely manner and report monitoring results.	Follow the MR&R requirements in terms 5.13.1 through 5.13.17.
MEROX Extraction Unit Equipment Components in VOC/HAP Service			
Note: The Title 40 CFR Part 63 General Provisions included in Section 3.3 apply to this affected source.			
5.5.4 HAP	OAC 727 Conditions 1, 2 &	Monitor components in HAP or VOC service for fugitive leaks, repair leaks in a timely	Follow the MR&R requirements in terms 5.13.18 through 5.13.29.

Term	Citation	Description	Monitoring, Recordkeeping and Reporting
	3 (5/31/00) which references 40 CFR Subpart H 40 CFR Subpart CC	manner and report monitoring results. For the purposes of implementation of this Order of Approval to Construct the term "in organic hazardous air pollutant service" shall be replaced with "in VOC service" as that term is defined in 40 CFR Part 60 Subpart VV.	
MEROX Extraction Unit			
5.5.5 Toxics	OAC 727 Condition 4 (5/31/00)	MEROX Unit Toxics Ambient Impact Emissions from the Merox Unit shall not cause exceedance of acceptable source impact levels specified in WAC 173-460-150 and -160 as determined by methods specified in WAC 173-460-080. The owner or operator shall demonstrate compliance with this term upon request by the NWCAA.	None
Sulfur Recovery Unit #1 (Claus Sulfur Recovery Unit and SCOT Tail Gas Unit)			
Note: The Title 40 CFR Part 60 and Part 63 General Provisions included in Sections 3.1 and 3.3 apply to this affected source.			
5.5.6 NO_X	WDOE PSD-00-02 Amendment 5 Conditions 3,10, and 21(d) (10/21/08)	SRU #1 NO_X Emission Limits Emissions of NO_X from the sulfur recovery unit shall not exceed 42.2 ppmdv at 7% O_2 over a 1-hour averaging period and 9.9 tons per year.	Compliance will be monitored by yearly source testing in accordance with EPA Reference Method 7E as found in 40 CFR Part 60, Appendix A or an alternative approved method. Source testing shall be performed no sooner than 10-months after the previous test and no later than 13-months after the previous test. Maintain monitoring records on site for at least five years and submit (1) excess emission reports to the NWCAA, and (2) results of any compliance source tests.
5.5.7 Fuel Use	WDOE PSD-00-02 Amendment 5 Condition 19 (10/21/08)	TGU Incinerator Firing Rate Restriction The maximum firing rate of the sulfur recovery tail gas unit incinerator (19F-21) shall be limited to no greater than 23 MMBtu/hr.	*Directly Enforceable* Incinerator firing rate shall be continuously recorded and the data kept on-site available to the NWCAA for five years. The maximum firing rate during the preceding month shall be provided to the NWCAA in each monthly report.

Term	Citation	Description	Monitoring, Recordkeeping and Reporting
5.5.8 Opacity	OAC 733c Condition 5 (7/29/05)	TGU Incinerator Visible Emissions Visible emissions from the SRU tail gas incinerator stack shall not exceed 10 percent opacity for more than three minutes in any one-hour period as measured by Ecology Method 9A.	*Directly Enforceable* Visually observe stacks monthly to qualitatively assess whether emissions are visible. The frequency may be reduced to quarterly if no visible emissions are observed for six consecutive months. The permittee shall revert to monthly observations of individual stacks if any visible emissions are noted during the observation. If visible emissions are observed, reduce to no visible emissions as soon as possible. If visible emissions cannot be reduced to zero, the permittee may monitor by Ecology Method 9A no later than 24 hours after detection and daily thereafter until opacity is shown to be less than the applicable opacity standard. Otherwise visual emissions shall be considered in excess of the opacity standard. Record observation results for stacks with visible emissions and any related equipment or operational failure, the occurrence dates and times, actions taken, and the type of fuel burned. Record that an observation was performed, with date, time, background conditions, and identification of the observer. Keep records of all observations available for inspection. Keep all raw data, calculation results, test results, and monitoring data required on-site and available to NWCAA representatives for not less than five years.
5.5.9 HAP	40 CFR Subpart UUU 63.1568 (a)(1) (4/11/2002) Table 29 item 1 (2/9/05) 40 CFR 63.1568 (c)(1) (4/11/2002) Table 34 item 1	SO_2 emissions from the Claus sulfur recovery unit (incinerator stack) shall not exceed an average of 250 ppmdv corrected to 0% excess air (12-hour rolling average).	Install and operate a continuous emissions monitoring system (CEMS) for the measurement of SO_2 and O_2. The CEMS must meet 40 CFR Part 60 Appendix B Performance specification 2 with a span value of 500 ppm SO_2; use 40 CFR Part 60 Appendix A Method 6 or 6c and Appendix F. The CEMs must include an O_2 monitor certified according to and 40 CFR Part 60 Appendix F and Appendix A Method 3a or 3b. Relative accuracy test audits (RATAs) are required once per every four calendar quarters. Collect hourly average SO_2 (dry basis) and percent excess

Term	Citation	Description	Monitoring, Recordkeeping and Reporting
	(2/9/05) 40 CFR 63.1568 (b)(1) Table 31 item 1(2/9/05) 40 CFR 63.1572 (a)(1) Table 40 item 4 (2/9/2005) NWCAA 104.2 (6/10/10)		air data; determining and recording each 12-hour rolling average concentration of SO_2; maintaining each 12-hour rolling average concentration of SO_2 at or below the limit; and reporting any emissions greater than the limit according to 63.1575
5.5.10 SO_2	OAC 733c Conditions 4, 20, 22a and e(7/29/05)	SRU SO_2 Emission Limits Sulfur dioxide emissions from the sulfur recovery unit shall not exceed 250 ppm by volume, dry basis, corrected to zero percent excess air, averaged over each 12-hour period of operation. Sulfur dioxide emissions from the sulfur recovery unit shall not exceed 150 ppm by volume, dry basis, corrected to zero percent excess air, averaged over each rolling 720-hour period of operation. Emissions from the sulfur pit will either be eliminated, controlled, and/or included and monitored as part of the SRU emissions under 40 CFR 60.104(a) (2).	Sulfur dioxide and oxygen concentration in the discharge from the SRU shall be monitored in compliance with 40 CFR Part 60 subpart J, subpart A and Appendix F. The CEMS shall comply with the appropriate quality assurance requirements of 40 CFR part 60 appendix F. Concentration measurements provided by the continuous emissions monitoring system (CEMS) shall be used to directly determine compliance with Condition 4 and 40 CFR Part 60.104(a)(2)(i)on a continuous basis. The owner or operator shall conduct testing, recordkeeping, and reporting in accordance with the relevant sections of 40 CFR Part 60 Subpart J. The emission limits specified in Condition 4 shall be included in the basis for recordkeeping and reporting. Keep all raw data, calculation results, test results, and monitoring data available to NWCAA representatives for not less than five years. The owner or operator shall provide to the NWCAA the following information in a monthly report. The report shall be submitted within 20 days after the end of each month. -The dates, times, and causes of all periods that the monitoring system(s) did not function or operating parameters were outside of established ranges in the reporting month.

Term	Citation	Description	Monitoring, Recordkeeping and Reporting
			-A summary providing the range and average of the rolling 12-hour average and 720-hour average SRU mass and concentration emission calculations made in each reporting month.
5.5.11 SO_2	40 CFR 60 Subpart J: 40 CFR 60.104(a)(2)(i), 60.105(a)(5), 60.105(e)(4)(i) and 60.106(f) and 60.107(d), (f), and (g) (all 6/24/08) NWCAA 104.2 (6/10/10)	NSPS Subpart J SRU SO_2 Emission Limits Sulfur dioxide emissions from the sulfur recovery unit shall not exceed 250 ppm by volume, dry basis, corrected to zero percent excess air, averaged over each 12-hour period of operation.	Continuously monitor and record the concentration (dry basis, zero percent excess air) of SO2 emissions into the atmosphere. The monitor shall include an oxygen monitor for correcting the data for excess air. The span values are 500 ppm SO2 and 25% O2. The performance evaluations for the SO2 monitor under §60.13(c) shall use Performance Specification 2. Methods 6 or 6C and 3 or 3A shall be used for conducting the relative accuracy evaluations. The CEM shall meet the requirements of 40 CFR 60 Appendix B Performance Specifications No. 2 for SO2 and No. 3 for O2 and be operated in accordance with 40 CFR 60 Appendix F and NWCAA 367 and Appendix A. Periods of excess emissions that shall be determined and reported are defined as all 12-hour periods during which the average concentration of SO2 exceeds 250 ppm (dry basis, zero percent excess air). For any periods for which sulfur dioxide or oxides emissions data are not available, the permittee shall submit a signed statement indicating if any changes were made in operation of the emission control system during the period of data. Reports shall be submitted semiannually, postmarked by the 30th day following the end of each six-month period. The reports shall be submitted with a signed statement by the owner or operator certifying the accuracy and completeness of the information contained in the report.
5.5.12	WDOE PSD-00-	SRU CO Emission Limits Emissions of	Compliance will be demonstrated by yearly source testing in

Term	Citation	Description	Monitoring, Recordkeeping and Reporting
CO	02 Amendment 5 Conditions 6,13, and 21(d) (10/21/08)	carbon monoxide from the Sulfur Recovery Unit shall not exceed 57.1 ppmdv @7% O2 over a 1-hour averaging period and 8.30 tons per year over a 12-month rolling total.	accordance with EPA Reference Method 10, as found in 40 CFR Part 60, Appendix A or an alternative approved method. ConocoPhillips will identify a surrogate parameter (such as fuel usage) and multiply it by the emission factor derived during the previous source test. Source testing shall be performed no sooner than 10-months after the previous test and no later than 13-months after the previous test. Maintain monitoring records on site for at least five years and submit (1) excess emission reports to the NWCAA, and (2) results of any compliance source tests.
5.5.13 SO_2	OAC 733c Condition 7 (7/29/05)	SRU O & M The owner or operator shall prepare, maintain on-site, and make available to NWCAA personnel upon request an operation and maintenance manual that identifies good air pollution control practices for minimizing emissions pursuant to 40 CFR §60.11(d) for the SRU including air pollution compliance monitoring and plantwide sulfur dioxide emissions abatement during upset conditions.	None
5.5.14 General	40 CFR Subpart UUU 63.1568(a)(3) and (c)(1) (4/11/02) and 63.1574(f), and 63.1576(f)(2/9/05) NWCAA 104.2 (6/10/10)	Operation, Maintenance and Monitoring Plan: Prepare and implement an operations, maintenance and monitoring plan (OMMP) for each control system and continuous monitoring system. Demonstrate continuous compliance with this standard by complying with the procedures in the OMMP.	Prepare and submit the OMMP to the NWCAA for review and approval along with the notification of compliance status. Submit any changes to the NWCAA for review and approval and comply with the plan until the change is approved. The plan must include, at a minimum, the information specified in paragraphs (f) (2)(i) through (xii). Keep a current copy of the OMMP onsite and available for inspection. Also keep records to show continuous compliance with the procedures in the OMMP.
5.5.15 Fuel	OAC 733c Condition 6 (7/29/05)	TGU Incinerator Fuel Restriction Supplemental fuel combusted in the SRU incinerator (19F-21) shall be limited to purchased natural gas.	None

Term	Citation	Description	Monitoring, Recordkeeping and Reporting
5.5.16 HAP	OAC 733c Condition 17, 20 (7/29/05)	Ambient Toxics Impacts Combined total emissions from the FCCU and Gasoline Desulfurizer units and emissions increases resulting from modifications to the SRU and Alkylation units shall not cause exceedance of acceptable source impact levels specified in WAC 173-460-150 and -160 as determined by methods specified in WAC 173-460-080.	Keep all raw data, calculation results, test results, and monitoring data required on-site and available to NWCAA representatives for not less than five years.
5.5.17 HAP	40 CFR Subpart UUU 63.1569 (a)(1)(ii) Table 36 Option 2 (2/9/05) and (b)(2) Table 38 (2/9/05) and (c)(1) Table 39 items 2 and 5 (2/9/05) NWCAA 104.2 (6/10/10)	Bypass Lines: Install a car-seal or lock-and-key device on the mechanism by which the bypass device flow position is controlled when the bypass device is in the closed position such that the bypass line valve cannot be opened without breaking the seal or removing the device.	Submit the notification of compliance status report. As part of the notification of compliance status, certify that the equipment was installed, that it was operational by the compliance date and identify which equipment was installed. Visually inspect the seal or closure mechanism at least once every month; and record whether the bypass line valve is maintained in the closed position and whether flow is present in the line. Record and report the time and duration of any bypass.
5.5.18	40 CFR Subpart UUU 63.1569(a)(1)(i) Table 37 (2/9/05) and Table 38 Option 1 (2/9/05) and Table 39 Option 1 (2/9/05) NWCAA 104.2 (6/10/10)	Bypass Lines: Install and operate a device (including a flow indicator, level recorder, or electronic valve position monitor) to demonstrate, either continuously or at least every hour, whether flow is present in the by bypass line. Install the device at or as near as practical to the entrance to any bypass line that could divert the vent stream away from the control device to the atmosphere.	Submit the notification of compliance status report. As part of the notification of compliance status, certify that the equipment was installed, that it was operational by the compliance date and identify which equipment was installed. Monitor and record on a continuous basis or at least every hour whether flow is present in the bypass line; visually inspect the device at least once every hour if the device is not equipped with a recording system that provides a continuous record; and record whether the device is operating properly and whether flow is present in the bypass line.

Term	Citation	Description	Monitoring, Recordkeeping and Reporting
			Record and report the time and duration of any bypass.
5.5.19 General	40 CFR Subpart UUU 63.1570(f) (4/20/06) and 40 CFR 63.1575(a)-(f)(4/11/02) and Table 43 (2/9/05) NWCAA 104.2 (6/10/10)	Deviations; Report each instance in which each emissions limit and each operating limit was not met. This includes periods of startup, shutdown, and malfunction. Also, report each instance in which the work practice standards that apply were not met. These instances are deviations from the emission limitations and work practices.	Submit compliance reports covering the semiannual reporting period from January 1 through June 30 or the period from July 1 through December 31. The reports must be postmarked or delivered no later than July 31 or January 31, whichever date is the first after the end of the period. The compliance report must contain (1) the company name and address, (2) a statement by a responsible official, with the official's name, title, and signature, certifying the accuracy of the content of the report, (3) the date of the report and the beginning and ending dates of the reporting period, and (4) if there are no deviations, a statement that there were no deviations from the emission limitations or work practice standards during the reporting period and that no continuous emission monitoring system was inoperative, inactive, malfunctioning, out-of-control, repaired, or adjusted. If there were deviations during the reporting period, the report must contain the information in §63.1575(d) or (e). Include a copy of any performance test done during the reporting period as per §63.1575(f)
5.5.20 General	40 CFR Subpart UUU 63.1575(g) (4/11/02) NWCAA 104.2 (6/10/10)	Startup, Shutdown, and Malfunction Reporting Requirements: When actions taken to respond are consistent with the SSMP, the permittee is not required to report these events in the semiannual compliance report. In this case, the reporting requirements in §§63.6(e)(3)(iii) and 63.10(d)(5) – in Section 3 of this permit – do not apply. When actions are not consistent with the SSMP, report the events and the response taken in the semiannual compliance report. In this case, the reporting requirements in	Submit in semiannual report.

Term	Citation	Description	Monitoring, Recordkeeping and Reporting
		§§63.6(e)(3)(iv) and 63.10(d)(5) – in Section 3 of this permit – do not apply	
5.5.21	WDOE PSD-00-02 Amendment 5 Condition 22 (10/21/08)	Enforcement Any activity, which is undertaken by the company or others, in a manner, which is inconsistent with the application and this determination, shall be subject to enforcement under the applicable regulations.	None
5.5.22 NO_X	WDOE PSD-00-02 Amendment 5 Condition 23 (10/21/08)	Access Access to the source by the EPA, state, and local regulatory personnel shall be permitted upon request for the purposes of compliance assurance inspections. Failure to allow such access is grounds for an enforcement action.	None
Sulfur Recovery Unit #2 (Claus Sulfur Recovery Unit and SCOT Tail Gas Unit)			
Note: The Title 40 CFR Part 60 and Part 63 General Provisions included in Sections 3.1 and 3.3 apply to this affected source.			
5.5.23 NO_X	WDOE PSD-05-01 Conditions 1,3, 5 and 7 (11/14/05) WAC 173-401-615(3)(b)	SRU #2 NO_X Emission Limits Emissions of NO_X from the sulfur recovery unit shall not exceed 42.2 ppmdv at 7% O_2 over a 1-hour averaging period. NO_X emissions shall not exceed 2.3 lbs/hr.	Compliance will be monitored by annual source testing in accordance with EPA Reference Method 7E as found in 40 CFR Part 60, Appendix A or an equivalent method approved in advance by Ecology. Prompt reporting of deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. For deviations which represent a potential threat to human health or safety, "prompt" means as soon as possible, but in no case later than twelve hours after the deviation is discovered. The source shall maintain a contemporaneous record of all deviations. Other deviations shall be reported no later than thirty days after the end of the month during which the deviation is discovered.
5.5.24	OAC 908a	TGU Incinerator Visible Emissions Visual	*Directly Enforceable*

Term	Citation	Description	Monitoring, Recordkeeping and Reporting
Opacity	Condition 2 (11/6/06)	emissions from the TGU2 stack shall not exceed 10 percent opacity for more than three minutes in any one-hour period as measured by Ecology Method 9A.	Visually observe stacks monthly to qualitatively assess whether emissions are visible. The frequency may be reduced to quarterly if no visible emissions are observed for six consecutive months. The permittee shall revert to monthly observations of individual stacks if any visible emissions are noted during the observation. If visible emissions are observed, reduce to no visible emissions as soon as possible. If visible emissions cannot be reduced to zero, the permittee may monitor by Ecology Method 9A no later than 24 hours after detection and daily thereafter until opacity is shown to be less than the applicable opacity standard. Otherwise visual emissions shall be considered in excess of the opacity standard. Record observation results for stacks with visible emissions and any related equipment or operational failure, the occurrence dates and times, actions taken, and the type of fuel burned. Record that an observation was performed, with date, time, background conditions, and identification of the observer. Keep records of all observations available for inspection. Keep all raw data, calculation results, test results, and monitoring data required on-site and available to NWCAA representatives for not less than five years.
5.5.25 HAP	40 CFR Subpart UUU 63.1568 (a)(1) (4/11/2002) Table 29 item 1 (2/9/05) 40 CFR 63.1568 (c)(1) (4/11/2002) Table 34 item 1 (2/9/05) 40 CFR 63.1568	SO_2 emissions from the Claus sulfur recovery unit (incinerator stack) shall not exceed an average of 250 ppmdv corrected to 0% excess air (12-hour rolling average).	Install and operate a continuous emissions monitoring system (CEMS) for the measurement of SO_2 and O_2. The CEMS must meet 40 CFR Part 60 Appendix B Performance specification 2 with a span value of 500 ppm SO_2; use 40 CFR Part 60 Appendix A Method 6 or 6c and Appendix F. The CEMs must include an O_2 monitor certified according to and 40 CFR Part 60 Appendix F and Appendix A Method 3a or 3b. Relative accuracy test audits (RATAs) are required once per every four calendar quarters. Collect hourly average SO_2 (dry basis) and percent excess air data; determining and recording each 12-hour rolling

Term	Citation	Description	Monitoring, Recordkeeping and Reporting
	(b)(1) Table 31 item 1 (2/9/05) 40 CFR 63.1572 (a)(1) Table 40 item 4 (2/9/2005) NWCAA 104.2 (6/10/10)		average concentration of SO_2; maintaining each 12-hour rolling average concentration of SO_2 at or below the limit; and reporting any emissions greater than the limit according to 63.1575
5.5.26 SO_2	OAC 908a Conditions 2, 4, and 7 (11/6/06)	<u>SRU SO_2 Emission Limits</u> Sulfur dioxide emissions from the TGU2 stack shall not exceed any of the following emission limits: (a) 250 (2.5×10^2) ppm by volume, dry basis, corrected to zero percent oxygen, based on a 12-hour rolling average. (b) 150 (1.50×10^2) ppm by volume, dry basis, corrected to zero percent oxygen, based on a 720-hour rolling average. (c) 22.3 tons annually, based on a consecutive 12-month rolling period. During normal SRU2 operation, sweep gas from the sulfur collection header shall be controlled by routing through a closed vent system directly to the new incinerator. During SRU2 operation, vented gases from the sulfur storage tank vent shall be routed to the front end of SRU2. When SRU2 is not operating, the sulfur storage tank vent shall be diverted to the SRU1 incinerator.	Compliance with this condition shall be determined by a continuous emission monitor (CEM) installed, calibrated, maintained, and operated to measure sulfur dioxide and oxygen. The monitor shall meet the monitoring requirements of 40 CFR Part 60 Subpart J, the appropriate specifications of 40 CFR Part 60 Appendices B and F, NWCAA Regulation Section 367 and Appendix A. The permittee shall provide to the NWCAA the following information in a monthly report. The report shall be submitted within 20 days after the end of each month. a. For the CEM, the dates, times, and causes of all periods that the monitoring system did not function or operating parameters were outside of established ranges in the reporting month. b. A summary providing the range and average of the rolling 12-hour average and 720-hour averages, and the 12-month rolling total.
5.5.27 SO_2	40 CFR 60 Subpart J: 40 CFR 60.104(a)(2)(i), 60.105(a)(5),	<u>NSPS Subpart J SRU SO_2 Emission Limits</u> Sulfur dioxide emissions from the sulfur recovery unit shall not exceed 250 ppm by volume, dry basis, corrected to zero percent excess air, averaged over each 12-	Continuously monitor and record the concentration (dry basis, zero percent excess air) of SO2 emissions into the atmosphere. The monitor shall include an oxygen monitor for correcting the data for excess air. The span values are 500 ppm SO_2

Term	Citation	Description	Monitoring, Recordkeeping and Reporting
	60.105(e)(4)(i) and 60.106(f) and 60.107(d), (f), and (g) (all 6/24/08) NWCAA 104.2 (6/10/10)	hour period of operation.	and 25% O_2. The performance evaluations for the SO_2 monitor under §60.13(c) shall use Performance Specification 2. Methods 6 or 6C and 3 or 3A shall be used for conducting the relative accuracy evaluations. The CEM shall meet the requirements of 40 CFR 60 Appendix B Performance Specifications No. 2 for SO_2 and No. 3 for O_2 and be operated in accordance with 40 CFR 60 Appendix F and NWCAA 367 and Appendix A. Periods of excess emissions that shall be determined and reported are defined as all 12-hour periods during which the average concentration of SO_2 exceeds 250 ppm (dry basis, zero percent excess air). For any periods for which sulfur dioxide or oxides emissions data are not available, the permittee shall submit a signed statement indicating if any changes were made in operation of the emission control system during the period of data. Reports shall be submitted semiannually, postmarked by the 30th day following the end of each six-month period. The reports shall be submitted with a signed statement by the owner or operator certifying the accuracy and completeness of the information contained in the report.
5.5.28 CO	WDOE PSD-05-01 Conditions 2,4, 6 and 7 (11/14/05) WAC 173-401-615(3)(b)	SRU #2 CO Emission Limits Emissions of CO from the sulfur recovery unit shall not exceed 57.1 ppmdv at 7% O_2 over a 1-hour averaging period. CO emissions shall not exceed 1.9 lbs/hr.	Compliance will be monitored by annual source testing in accordance with EPA Reference Method 7E as found in 40 CFR Part 60, Appendix A or an equivalent method approved in advance by Ecology. Prompt reporting of deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. For deviations which represent a potential threat to human health or safety, "prompt" means as soon as possible, but in no case later than twelve hours after the deviation is discovered. The source shall maintain a contemporaneous record of all deviations. Other deviations shall be reported no later than thirty days after the end of the month during

Term	Citation	Description	Monitoring, Recordkeeping and Reporting
			which the deviation is discovered.
5.5.29 General	40 CFR Subpart UUU63.1568(a)(3) and (c)(1) (4/11/02) and 63.1574(f), and 63.1576(f)(2/9/05) NWCAA 104.2 (6/10/10)	Operation, Maintenance and Monitoring Plan: Prepare and implement an operations, maintenance and monitoring plan (OMMP) for each control system and continuous monitoring system. Demonstrate continuous compliance with this standard by complying with the procedures in the OMMP.	Prepare and submit the OMMP to the NWCAA for review and approval along with the notification of compliance status. Submit any changes to the NWCAA for review and approval and comply with the plan until the change is approved. The plan must include, at a minimum, the information specified in paragraphs (f)(2)(i) through (xii). Keep a current copy of the OMMP onsite and available for inspection. Also keep records to show continuous compliance with the procedures in the OMMP.
5.5.30 FUEL	OAC 908a Condition 1 (11/06/06)	TGU Incinerator Fuel Restriction Supplemental fuel combusted in the SRU2 incinerator (19F-21) shall be limited to purchased natural gas.	None
5.5.31 HAP	40 CFR Subpart UUU 63.1569(a)(1)(ii) Table 36 Option 2 (2/9/05) and (b)(2) Table 38 (2/9/05) and (c)(1) Table 39 items 2 and 5 (2/9/05) NWCAA 104.2 (6/10/10)	Bypass Lines: Install a car-seal or lock-and-key device on the mechanism by which the bypass device flow position is controlled when the bypass device is in the closed position such that the bypass line valve cannot be opened without breaking the seal or removing the device.	Submit the notification of compliance status report. As part of the notification of compliance status, certify that the equipment was installed, that it was operational by the compliance date and identify which equipment was installed. Visually inspect the seal or closure mechanism at least once every month; and record whether the bypass line valve is maintained in the closed position and whether flow is present in the line. Record and report the time and duration of any bypass.
5.5.32 HAP	40 CFR Subpart UUU 63.1569(a)(1)(i) Table 37 (2/9/05) and Table 38 Option 1 (2/9/05) and Table 39	Bypass Lines: Install and operate a device (including a flow indicator, level recorder, or electronic valve position monitor) to demonstrate, either continuously or at least every hour, whether flow is present in the by bypass line. Install the device at or as near as practical to the entrance to any bypass line that could divert the vent	Submit the notification of compliance status report. As part of the notification of compliance status, certify that the equipment was installed, that it was operational by the compliance date and identify which equipment was installed. Monitor and record on a continuous basis or at least every

Term	Citation	Description	Monitoring, Recordkeeping and Reporting
	Option 1 (2/9/05) NWCAA 104.2 (6/10/10)	stream away from the control device to the atmosphere.	hour whether flow is present in the bypass line; visually inspect the device at least once every hour if the device is not equipped with a recording system that provides a continuous record; and record whether the device is operating properly and whether flow is present in the bypass line. Record and report the time and duration of any bypass.
5.5.33 HAP	OAC 908a Condition 6 (11/06/06)	Bypass Lines: Any lines that allow a bypass of sulfur bearing compounds normally emitted from the TGU2 shall be continuously monitored for the presence of flow.	The permittee shall report to the NWCAA any time that flow is detected in a bypass line. This reportable event shall be considered a startup, shutdown or upset condition and reported in accordance with NWCAA Section 340 or 341.
5.5.34 General	40 CFR Subpart UUU 63.1570(f) (4/20/06) and 40 CFR 63.1575(a)-(f)(4/11/02) and Table 43 (2/9/05) NWCAA 104.2 (6/10/10)	Deviations; Report each instance in which each emissions limit and each operating limit was not met. This includes periods of startup, shutdown, and malfunction. Also, report each instance in which the work practice standards that apply were not met. These instances are deviations from the emission limitations and work practices.	Submit compliance reports covering the semiannual reporting period from January 1 through June 30 or the period from July 1 through December 31. The reports must be postmarked or delivered no later than July 31 or January 31, whichever date is the first after the end of the period. The compliance report must contain (1) the company name and address, (2) a statement by a responsible official, with the official's name, title, and signature, certifying the accuracy of the content of the report, (3) the date of the report and the beginning and ending dates of the reporting period, and (4) if there are no deviations, a statement that there were no deviations from the emission limitations or work practice standards during the reporting period and that no continuous emission monitoring system was inoperative, inactive, malfunctioning, out-of-control, repaired, or adjusted. If there were deviations during the reporting period, the report must contain the information in §63.1575(d) or (e). Include a copy of any performance test done during the reporting period as per §63.1575(f)
5.5.35	40 CFR Subpart	Startup, Shutdown, and Malfunction	Submit in semiannual report.

Term	Citation	Description	Monitoring, Recordkeeping and Reporting
General	UUU 63.1575(g) (4/11/02) NWCAA 104.2 (6/10/10)	Reporting Requirements: When actions taken to respond are consistent with the SSMP, the permittee is not required to report these events in the semiannual compliance report. In this case, the reporting requirements in §§63.6(e) (3)(iii) and 63.10(d)(5) – in Section 3 of this permit – do not apply. When actions are not consistent with the SSMP, report the events and the response taken in the semiannual compliance report. In this case, the reporting requirements in §§63.6(e)(3)(iv) and 63.10(d)(5) – in Section 3 of this permit – do not apply	
5.5.36 HAP	WDOE PSD-05-01 Condition 8 (11/14/05)	Proper Operational Practices: Within 90 days of start-up, ConocoPhillips shall identify operational parameters and practices that will constitute "proper operational practices" of the operation of the new SRU relative to compliance with the conditions of the permit. These operational parameters and practices shall be included in an O&M manual for the facility. The O&M manual shall be maintained and followed by ConocoPhillips and shall be available for review by Ecology, NWCAA, or EPA. Emissions that result from a failure to follow the requirements of the O&M manual relative to compliance with the conditions of this permit may be considered credible evidence that emission violations have occurred.	None
5.5.37	WDOE PSD-05-01 Condition	Access Access to the source by Ecology, NWCAA, or the EPA, shall be permitted upon	None

Term	Citation	Description	Monitoring, Recordkeeping and Reporting
	9(11/14/05)	request. Failure to allow such access is grounds for an enforcement action under the federal Clean Air Act or the Washington State Clean Air Act.	

5.6 Utilities Plant

Table 5-6 Utilities Plant

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
Individual Drain Systems serving 40 CFR Part 61 Subpart FF and Part 63 Subpart CC			
Note: The Title 40 CFR Part 61 and Part 63 General Provisions in Sections 3.2 and 3.3 apply to process wastewater systems in the utility plant process area.			
5.6.1 VOC/HAP	40 CFR Part 63 Subpart CC 40 CFR Part 61 Subpart FF NWCAA 104.2 (6/10/10)	Comply with the standards for individual drain systems for waste streams subject to Part 63 Subpart CC and Part 61 Subpart FF	Monitoring/Recordkeeping/Reporting (MR&R) requirements are included in Table 5-14
#1 Boiler (22F-1C)			
Note: The Title 40 CFR Part 60 General Provisions included in Section 3.1 apply to this affected source.			
5.6.2 Opacity	OAC 578a Condition 3 (8/13/08)	Opacity Limitation Visual opacity from the boiler stack shall not exceed five % for more than six minutes in any hour, except that soot blowing/grate cleaning is allowed pursuant to WAC 173-400(1)(a).	*Directly Enforceable* Visually observe the stack on a monthly basis (for days with operation) to qualitatively assess whether emissions are visible. The frequency may be reduced to quarterly if no visible emissions are observed for six consecutive months of operation. The permittee shall revert to daily observations (for days with operation) if any visible emissions are noted during the observation. If visible emissions are observed, reduce to no visible emissions as soon as possible. If visible emissions cannot

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
			be reduced to zero, the source may monitor by EPA Appendix A Method 9 no later than 24 hours after detection and daily thereafter until visible emission return to 5% or less, otherwise the visible emissions shall be considered in excess of the standard. Record observation results for observations with visible emissions and any related equipment or operational failure, the occurrence dates and times, actions taken, and the type of fuel burned. Record that an observation was performed, with date, time, background conditions and identification of the observer. Keep records of all observations available for inspection.
5.6.3 Fuel	OAC 578a Condition 2 (08/13/08)	Gaseous Fuel Limitation The boiler shall burn only pipeline grade natural gas or refinery fuel gas	*Directly Enforceable* Retain records of fuel use and certify semiannually that only natural gas or refinery fuel gas was combusted in the boiler during the reporting period.
5.6.4 SO_2	OAC 733c Conditions 18, 20, 21, & 22 (7/29/2005)	Fuel combusted in the #1 boiler (22F-1C) shall be limited to refinery fuel gas containing less than 162 ppm hydrogen sulfide (3-hour average) or purchased natural gas.	Monitor hydrogen sulfide content of refinery fuel gas combusted in compliance with NWCAA Regulation 367 and Appendix A - "Ambient Monitoring, Emission Testing and Continuous Emission and Opacity Monitoring" (7/14/05), 40 CFR Part 60 Subpart J, Subpart A and Appendix F during periods of heater operation. Concentration measurements provided by the continuous emissions monitoring system (CEMS) required by 40 CFR Part 60 Subpart J shall be used to directly determine compliance with this term and Subpart J on a continuous basis. Report on a monthly basis, within 20 days of the end of the previous month, the dates, times, and causes of all periods that the monitoring system(s) did not function or operating parameters were outside of established ranges in the reporting month. Keep all raw data, calculation results, test results, and monitoring data on-site and available to NWCAA representatives for not less than five years.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
			Submit a test plan to the NWCAA not less than 30 days before the scheduled test date and notify the NWCAA at least two weeks in advance of the exact test date. Test results shall be provided to the NWCAA not more than 45 days after completion of the sampling. All performance tests shall be conducted at or near maximum representative operating capacity for the process. All tests shall be conducted while operating the control device at conditions that represent normal operation.
5.6.5 SO2	40 CFR Subpart J 60.104(a)(1), 60.105(a)(4), and 60.105(e)(3)(ii), 60.106(e)(1), and 60.107(e) (all 6/24/08) NWCAA 104.2 (6/10/10)	Fuel combusted in #1 Boiler (22F-1C) shall not contain hydrogen sulfide in excess of 230 mg/dscm (0.10 gr/dscf), 3 hour rolling average.	Install, calibrate, maintain, and operate an instrument for continuously monitoring and recording the concentration (dry basis) of H_2S in fuel gases before being burned in any fuel gas combustion device. Fuel gas streams that are inherently low in sulfur content as per 60.105(a) (4)(iv) are not required to comply with the monitoring requirements of 60.105(a)(4). The span value for this instrument is 425 mg/dscm H2S. The performance evaluations for this H2S monitor under 60.13(c) shall use Performance Specification 7. EPA Method 11, 15, 15A or 16 shall be used for conducting the relative accuracy evaluations. Periods of excess emissions that shall be determined and reported are defined as follows: All rolling 3-hr. periods during which the average concentration of H_2S as measured by the H_2S continuous monitoring system exceeds 230 mg/dscm (0.10 gr/dscf). In conducting the performance tests required in §60.8, determine compliance with the H2S standard in 60.104(a)(1) as follows: EPA Method 11, 15, 15A, or 16 shall be used to determine the H_2S concentration. Methods shall be run as per 60.106(e) (1). If an owner or operator determines that one of the exemptions listed in §60.105(a) (4)(iv) applies to that fuel gas stream, the owner or operator shall maintain records of the specific exemption chosen for each fuel gas stream. If

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
			the owner or operator applies for the exemption described in §60.105(a) (4)(iv)(D), the owner or operator must keep a copy of the application as well as the letter from the Administrator granting approval of the application.
5.6.6 NO_X	OAC 578a Conditions 1, 4, 5, and 6 (08/13/08)	BACT Nitrogen Oxide Limitation NO_X emissions shall not exceed 0.040 lb/MMBtu (HHV) on a 365-day rolling average, when burning natural gas or refinery fuel gas.	Continuous compliance shall be monitored by a CEM for NO_X and O_2. The CEMs shall be calibrated, maintained, and operated in accordance with NWCAA Regulation Section 367; NWCAA Regulation Appendix A: Ambient Monitoring, Emission Testing, and Continuous Emission and Opacity Monitoring; and 40 CFR Part 60 Appendices B and F. Emissions testing shall conform to 40 CFR 60, Appendix A. Plans for all emission testing shall be submitted to the NWCAA at least 30 days prior to the test date. The NWCAA shall be notified at least 15 days in advance of the actual test date. Submit a monthly report, within 30 days of the end of the calendar month, or on another schedule agreed to by the NWCAA, with the following information: d. The maximum NO_X emissions in the units of the standard for the month. e. Days, duration, and reasons for periods during which data were not collected. f. Excess emissions, including the time of occurrence, the magnitude of the emissions excess, the duration, the probable cause, and corrective actions taken or planned. The monthly report may be combined with any other monthly reports submitted to the NWCAA.
5.6.7 NO_X	Title 40 CFR Subpart Db 60.44b (a, h, and i) (1/28/09) 60.46b(a) , (e)(1/28/09/01)	NSPS Nitrogen Oxide Limitation NO_X emissions shall not exceed 0.20 lb/MMBtu, 30-day rolling average, when burning natural gas or refinery fuel gas. The standard shall apply at all times including during periods of startup, shutdown, or	Install, calibrate, maintain, and operate CEMS for measuring NO_X and O_2 (or CO_2) emissions discharged to the atmosphere, and record the output of the system. The CEMS shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	60.48b(b)1, (c), (d), (e)2, (f) (4/10/01) 60.49b (g) (d, h, i, v , w) & (o) (1/28/09) NWCAA 104.2 (6/10/10)	malfunction.	checks, and zero and span adjustments. Maintain annual capacity factor records in accordance with §60.49b (d). For each unit operating day, record (1) the date, (2) the average hourly NO_X emission rate in lb/MMBtu, (3) the 30-day average NO_X emission rate, (4) the days when the 30-day average exceeded the standard, reasons for excess emissions and corrective actions taken, (5) the days for which data was not obtained, reasons, and corrective action taken, (6) identification of any time when data was excluded from the calculation of average NO_X emission rates and the reasons, and (7) identification of the "F" factor used, method of determination, and type of fuel combusted, (8) the times when the NO_X concentration exceeded full span of the continuous monitoring system (9) modifications to the CEMS, and (10) daily drift test and quarterly accuracy assessment results. Submit this information to the NWCAA every 6 months, postmarked by the 30th day following the six-month period. In the event of excess NO_X emissions, submit an Excess Emissions Report, to the NWCAA by the 30th day following the six-month reporting period. For periods of no monitoring due to breakdowns, repairs, calibration checks, and zero and span adjustments, provide emission data for at least 75% of the operating hours in each steam generating operating day, in at least 22 of 30 successive steam generating unit operating days. Electronic quarterly reports (with certification) may be submitted in lieu of the written report. Maintain all records for two years following the date of the record. Note: WAC 173-401-615(2) requires retention ≥ 5 years.
#2 Boiler (22F-1A) and #3 Boiler (22F-1B)			
5.6.8	OAC 733c	Fuel combusted in the #2 (22F-1A) and #3	Monitor hydrogen sulfide content of refinery fuel gas

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
H_2S	Conditions 18, 20, 21, & 22 (7/29/2005)	boilers (22F-1B) shall be limited to refinery fuel gas containing less than 162 ppm hydrogen sulfide (3-hour rolling average) or purchased natural gas.	combusted in compliance with NWCAA Regulation 367 and Appendix A - "Ambient Monitoring, Emission Testing and Continuous Emission and Opacity Monitoring" (7/14/05), 40 CFR Part 60 Subpart J, Subpart A and Appendix F during periods of heater operation. Concentration measurements provided by the continuous emissions monitoring system (CEMS) required by 40 CFR Part 60 Subpart J shall be used to directly determine compliance with this term and Subpart J on a continuous basis. Report on a monthly basis, within 20 days of the end of the previous month, the dates, times, and causes of all periods that the monitoring system(s) did not function or operating parameters were outside of established ranges in the reporting month. Keep all raw data, calculation results, test results, and monitoring data on-site and available to NWCAA representatives for not less than five years. Submit a test plan to the NWCAA not less than 30 days before the scheduled test date and notify the NWCAA at least two weeks in advance of the exact test date. Test results shall be provided to the NWCAA not more than 45 days after completion of the sampling. All performance tests shall be conducted at or near maximum representative operating capacity for the process. All tests shall be conducted while operating the control device at conditions that represent normal operation.
5.6.9 H_2S	40 CFR Subpart J 60.104(a)(1), 60.105(a)(4), and 60.105(e)(3)(ii), 60.106(e)(1), and 60.107(e) (all 6/24/08) NWCAA 104.2 (6/10/10)	Fuel combusted in the #2 (22F-1A) and #3 boilers (22F-1B) shall not contain hydrogen sulfide in excess of 230 mg/dscm (0.10 gr/dscf), 3 hour rolling average.	Install, calibrate, maintain, and operate an instrument for continuously monitoring and recording the concentration (dry basis) of H_2S in fuel gases before being burned in any fuel gas combustion device. Fuel gas streams that are inherently low in sulfur content as per 60.105(a) (4)(iv) are not required to comply with the monitoring requirements of 60.105(a)(4). The span value for this instrument is 425 mg/dscm H_2S. The performance evaluations for this H2S monitor under

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
			60.13(c) shall use Performance Specification 7. EPA Method 11, 15, 15A or 16 shall be used for conducting the relative accuracy evaluations. Periods of excess emissions that shall be determined and reported are defined as follows: All rolling 3-hr. periods during which the average concentration of H_2S as measured by the H_2S continuous monitoring system exceeds 230 mg/dscm (0.10 gr/dscf). In conducting the performance tests required in §60.8, determine compliance with the H2S standard in 60.104(a)(1) as follows: EPA Method 11, 15, 15A, or 16 shall be used to determine the H_2S concentration. Methods shall be run as per 60.106(e)(1). If an owner or operator determines that one of the exemptions listed in §60.105(a) (4)(iv) applies to that fuel gas stream, the owner or operator shall maintain records of the specific exemption chosen for each fuel gas stream. If the owner or operator applies for the exemption described in §60.105(a) (4)(iv)(D), the owner or operator must keep a copy of the application as well as the letter from the Administrator granting approval of the application.
#4 Boiler (22F-1E)			
5.6.10 Fuel	OAC 877a Condition 1 (9/15/08)	Gaseous Fuel Limitation The boiler shall burn only one or a combination of the following two fuels: pipeline-quality natural gas or refinery fuel gas.	*Directly Enforceable* Retain records of fuel use and certify semiannually that only natural gas and/or refinery fuel gas was combusted in the boiler during the reporting period.
5.6.11 Opacity	OAC 877a Conditions 2 and 10 (9/15/08)	Opacity Limitation Visual emissions from the boiler stack shall not exceed 5 percent for more than six minutes in any hour.	*Directly Enforceable* Visually observe the stack on a monthly basis (for days with operation) to qualitatively assess whether emissions are visible. The frequency may be reduced to quarterly if no visible emissions are observed for six consecutive months of operation. The permittee shall revert to daily observations (for days with operation) if any visible emissions are noted during the observation.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
			If visible emissions are observed, reduce to no visible emissions as soon as possible. If visible emissions cannot be reduced to zero, the source may monitor by EPA Appendix A Method 9 no later than 24 hours after detection and daily thereafter until visible emission return to 5% or less, otherwise the visible emissions shall be considered in excess of the standard. Test for opacity by EPA Appendix A Method 9 annually. The annual source test shall occur no sooner than 10 months after the previous test and no later than 13 months after the previous test. Testing shall be conducted at greater than or equal to 80% of peak load while firing the unit with refinery fuel gas. Record observation results for observations with visible emissions and any related equipment or operational failure, the occurrence dates and times, actions taken, and the type of fuel burned. Record that an observation was performed, with date, time, background conditions and identification of the observer. Keep records of all observations available for inspection.
5.6.12 NO_X	OAC 877a Conditions 3, 5,11, and 13 (9/15/08)	BACT Nitrogen Oxide Limitation NO_X emissions shall not exceed 15 ppmdv@ 3% O_2 and 0.018 lb./MMBtu (HHV), both on a 24-hour average basis.	Continuous compliance shall be monitored by a CEM for NO_X and O_2. The CEMs shall be calibrated, maintained, and operated in accordance with NWCAA Regulation Section 367; NWCAA Regulation Appendix A: Ambient Monitoring, Emission Testing, and Continuous Emission and Opacity Monitoring; and 40 CFR Part 60 Appendices B and F. Emissions testing shall conform to 40 CFR 60, Appendix A. Plans for all emission testing shall be submitted to the NWCAA at least 30 days prior to the test date. Submit a monthly report, within 30 days of the end of the calendar month, or on another schedule agreed to by the NWCAA, with the following information: a. The maximum NO_X emissions in the units of the standard for the month. b. Days, duration, and reasons for periods during which

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
			data were not collected. c. Excess emissions, including the time of occurrence, the magnitude of the emissions excess, the duration, the probable cause, and corrective actions taken or planned. The monthly report may be combined with any other monthly reports submitted to the NWCAA.
5.6.13 NO_X	Subpart Db 60.44b (a, h, and i) (1/28/09) 60.46b(a) , (e)(1/28/09) 60.48b(b)1, (c), (d), (e)2, (f) (4/10/01) 60.49b (g) (d, h, i, v , w) & (o) (1/28/09) NWCAA 104.2 (6/10/10)	NSPS Nitrogen Oxide Limitation NO_X emissions shall not exceed 0.20 lb/MMBtu, 30-day rolling average, when burning natural gas or refinery fuel gas. The standard shall apply at all times including during periods of startup, shutdown, or malfunction.	Install, calibrate, maintain, and operate CEMS for measuring NO_X and O_2 (or CO_2) emissions discharged to the atmosphere, and record the output of the system. The CEMS shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments. Maintain annual capacity factor records in accordance with §60.49b(d) For each unit operating day, record (1) the date, (2) the average hourly NO_X emission rate in lb/MMBtu, (3) the 30-day average NO_X emission rate, (4) the days when the 30-day average exceeded the standard, reasons for excess emissions and corrective actions taken, (5) the days for which data was not obtained, reasons, and corrective action taken, (6) identification of any time when data was excluded from the calculation of average NO_X emission rates and the reasons, (7) identification of the "F" factor used, method of determination, and type of fuel combusted, (8) the times when the NO_X concentration exceeded full span of the continuous monitoring system (9) modifications to the CEMS, and (10) daily drift test and quarterly accuracy assessment results. Submit this information to the NWCAA every 6 months, postmarked by the 30th day following the six-month period. In the event of excess NO_X emissions, submit an Excess Emissions Report, to the NWCAA by the 30th day following the six-month reporting period.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
			For periods of no monitoring due to breakdowns, repairs, calibration checks, and zero and span adjustments, provide emission data for at least 75% of the operating hours in each steam generating unit operating day, in at least 22 of 30 successive steam generating unit operating days. Electronic quarterly reports (with certification) may be submitted in lieu of the written report. Maintain all records for two years following the date of the record. Note: WAC 173-401-615(2) requires retention ≥ 5 years.
5.6.14 H_2S	OAC 877a Condition 6 (9/15/08)	Fuel combusted in the #4 Boiler shall not contain H_2S in excess of 50 ppm on a 24-hour rolling average basis and 162 ppm on a 3-hour rolling average basis.	During periods of operation, the H_2S content of refinery fuel gas combusted shall be continuously monitored in accordance with 40 CFR Subpart J, Subpart A and Appendix F.
5.6.15 H_2S	40 CFR Subpart J 60.104(a)(1), 60.105(a)(4), and 60.105(e)(3)(ii), 60.106(e)(1), and 60.107(e) (all 6/24/08) NWCAA 104.2 (6/10/10)	Fuel combusted in #4 Boiler (22F-1E) shall not contain hydrogen sulfide in excess of 230 mg/dscm (0.10 gr/dscf), 3-hour rolling average.	Install, calibrate, maintain, and operate an instrument for continuously monitoring and recording the concentration (dry basis) of H_2S in fuel gases before being burned in any fuel gas combustion device. Fuel gas streams that are inherently low in sulfur content as per 60.105(a) (4) (iv) are not required to comply with the monitoring requirements of 60.105(a) (4). The span value for this instrument is 425 mg/dscm H_2S. The performance evaluations for this H2S monitor under 60.13(c) shall use Performance Specification 7. EPA Method 11, 15, 15A or 16 shall be used for conducting the relative accuracy evaluations. Periods of excess emissions that shall be determined and reported are defined as follows: All rolling 3-hr. periods during which the average concentration of H_2S as measured by the H_2S continuous monitoring system exceeds 230 mg/dscm (0.10 gr/dscf). In conducting the performance tests required in §60.8, determine compliance with the H2S standard in 60.104(a)(1) as follows: EPA Method 11, 15, 15A, or 16 shall be used to determine the H_2S concentration. Methods shall be run

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
			as per 60.106(e) (1). If an owner or operator determines that one of the exemptions listed in §60.105(a) (4)(iv) applies to that fuel gas stream, the owner or operator shall maintain records of the specific exemption chosen for each fuel gas stream. If the owner or operator applies for the exemption described in §60.105(a) (4)(iv)(D), the owner or operator must keep a copy of the application as well as the letter from the Administrator granting approval of the application.
5.6.16 CO	OAC 877a Conditions 7, 9, and 13 (9/15/08)	Carbon Monoxide Emission Limitation CO from the #4 Boiler shall not exceed 70 ppmvd at 7% O_2 or 18.1 pounds per hour, both averaged over 24 hours.	Continuous compliance shall be monitored by a CEM for CO and O_2. The CEMs shall be calibrated, maintained and operated in accordance with NWCAA Appendix A: Ambient Monitoring, Emission Testing, and Continuous Emissions and Opacity Monitoring and 40 CFR Part 60 Appendices B and F. Submit a monthly report, within 30 days of the end of the calendar month, or on another schedule agreed to by the NWCAA, with the following information: a. The maximum CO emissions in the units of the standard for the month. b. Days, duration, and reasons for periods during which data were not collected. c. Excess emissions, including the time of occurrence, the magnitude of the emissions excess, the duration, the probable cause, and corrective actions taken or planned. The monthly report may be combined with any other monthly reports submitted to the NWCAA.
Cooling Towers 1 & 2			
Note: The Title 40 CFR Part 63 General Provisions included in Section 3.3 apply to this affected source.			
5.6.17 HAP	Subpart Q, §§ 63.402 (9/8/94) NWCAA	Do not use chromium-based water treatment chemicals in any affected industrial process cooling tower.	None

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	104.2 (6/10/10)		

5.7 Effluent Treatment Plant

Table 5-7 Effluent Treatment Plant

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
Individual Drain Systems (including Phenolic/oily water sewer lift station) serving 40 CFR Part 61 subpart FF and Part 63 subpart CC			
Note: The Title 40 CFR Part 61 and Part 63 General Provisions included in Sections 3.2 and 3.3 apply to the wastewater at the effluent plant.			
5.7.1	40 CFR Part 63 Subpart CC 40 CFR Part 61 Subpart FF NWCAA 104.2 (6/10/10)	Comply with the standards for individual drain systems for waste streams subject to Part 63 Subpart CC and Part 61 Subpart FF	Monitoring/Recordkeeping/Reporting (MR&R) requirements are included in Table 5-14
12S-204 Induced Air Flotation Unit (IAF)			
Note: The Title 40 CFR Part 61 and Part 63 General Provisions included in Sections 3.2 and 3.3 apply to this affected source.			
5.7.2 HAP	40 CFR Subpart CC §63.647 (8/18/95) 40 CFR Subpart FF §61.343 (12/4/03), 61.350(3/7/90), and 61.355(h) (10/17/00) Subpart CC 63.655(a) (6/30/10), 40	Tanks Install, operate, and maintain a fixed-roof and closed-vent system that routes all organic vapors vented from the tank to a control device. The cover and all openings shall be designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background. Maintain each opening in a closed, sealed position except during waste sampling or removal, equipment inspection, maintenance, or repair. Except where repair is technically impossible without a complete or partial facility or unit	Annually, monitor using an Organic Vapor Analyzer. Calibration gases shall be zero air (less than 10 ppm of hydrocarbon in air); and a mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane. Maintain records for each test of no detectable emissions. Quarterly, perform a visual inspection of each cover seal, access hatch, and all other openings to ensure there are no cracks or gaps and openings are closed and gasketed properly. Quarterly, certify to the NWCAA that the required inspections were carried out.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	CFR Subpart FF §61.356(d), (g), and (h) (11/12/02), and 61.357(d)(6) and (d)(8) (10/17/00). NWCAA 104.2 (6/10/10)	shutdown, when a broken seal, gasket, or other problem is identified, make a first effort at repair as soon as practicable, but not later than 45 calendar days after identification. When repair is delayed for a shutdown, repair such equipment before the end of the next facility or unit shutdown.	Annually, submit a report summarizing all inspections during which detectable emissions were measured or a problem (such as a broken seal, gap, or other problem) that could result in benzene emissions was identified, including the repairs or corrective action taken. Maintain engineering design documentation for the life of the control equipment. Maintain records for each visual inspection that identifies a problem that could result in benzene emissions. The record shall include the date of the inspection, waste management unit and control equipment location where the problem is identified, a description of the problem, a description of the corrective action taken, and the date the corrective action was completed. Maintain records for each test of no detectable emissions. The record shall include the test date, background level measured during test, and maximum concentration. If detectable emissions are measured at a leak interface, the record shall also include the waste management unit, control equipment, and leak interface location where detectable emissions were measured, a description of the problem, a description of the corrective action taken, and the date the corrective action was completed.
5.7.3 HAP	40 CFR Part 63 Subpart CC 40 CFR Part 61 Subpart FF NWCAA 104.2 (6/10/10)	Treatment Processes Comply with the standards for treatment processes subject to Part 63 Subpart CC and Part 61 Subpart FF	Monitoring/Recordkeeping/Reporting (MR&R) requirements are included in Table 5-14
12S-2 API Separator (WWTP)			
Note: The Title 40 CFR Part 61 and Part 63 General Provisions included in Sections 3.2 and 3.3 apply to this affected source.			
5.7.4 HAP	40 CFR 63 Subpart CC	Oil Water Separators - Fixed Roof With the exception of bays equipped with	Perform quarterly visual inspections of each cover seal, access hatch, and all other openings to ensure there are

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	63.647 (8/18/95) 40 CFR Part 61 Subpart FF 61.347 (1/7/93), 61.350 (3/7/90) and 61.355(h) (10/17/00) 40 CFR 63 Subpart CC 63.655(6/30/10), 40 CFR Part 61 Subpart FF 61.356(d), (g) and (h) (10/17/00) and 61.357(d)(6) and (d)(8) (10/17/00) OAC 559 Conditions 3 and 5 (8/2/95) NWCAA 104.2 (6/10/10)	floating roof covers, each oil water separator system shall have a fixed-roof and closed-vent system that routes all organic vapors to a control device. The system shall operate with no detectable emissions equal to or greater than 500 ppm above background as measured by EPA Method 21. Each opening is to remain closed or sealed except during waste sampling, inspection or maintenance. Except where repair is technically impossible without a unit shutdown, a first attempt at repair shall be made as soon as practicable, but not later than 15 calendar days after identifying a problem with a seal or gasket or when a leak is detected using EPA Method 21. When repair is delayed for a shutdown, repair shall be made before end of the next unit shutdown.	no cracks or gaps and that openings are properly closed and gasketed. If defects are found they shall be repaired as soon as practical and in no case later than within 15 days of discovery unless repair requires a unit shutdown. Submit quarterly reports to the NWCAA certifying that required inspections have been completed. Annually, monitor for leaks using EPA Method 21. Instrument calibration gases shall be zero air (<10 ppm HC) and approximately, but not greater than, 10,000 ppm methane or n-hexane. Submit an annual report that includes results of inspections and leak tests which indicates a 500 ppm leak above background or where a problem such as a broken seal, gap, or other problem occurred. The report shall include a description of action taken to correct each problem and the date the action was complete. Maintain engineering design documentation for the life of the control equipment. Maintain records for each visual inspection that identifies a problem that could result in benzene emissions. The record shall include the date of the inspection, waste management unit and control equipment location where the problem is identified, a description of the problem, a description of the corrective action taken, and the date the corrective action was completed. Maintain records for each test of no detectable emissions. The record shall include the test date, background level measured during test, and maximum concentration. If detectable emissions are measured at a leak interface, the record shall also include the waste management unit, control equipment, and leak interface location where detectable emissions were measured, a description of the problem, a description of the corrective action taken, and the date the corrective action was completed.
5.7.5 HAP	40 CFR 63 Subpart CC 63.647 (8/18/95)	<u>Oil Water Separators - Floating Roof</u> The floating roof shall have primary and	Measure the secondary seal gaps annually and measure the primary seal gaps at least once every five years.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	40 CFR Part 61 Subpart FF 61.356(l) (11/12/02), 61.357(g) (10/17/00) and 61.352 (3/7/90) which references 60.693-2(a) (8/18/95), 60.692-6 (11/23/88), and 60.696(d) (11/23/88) OAC 559 Conditions 3 and 5 (8/2/95) NWCAA 104.2 (6/10/10)	secondary seals. Primary seal gaps shall not to exceed 1.5 inches at any one point or 3.2 square inches per foot of total gap area. Secondary seal gaps shall not exceed 0.5 inches at any one point or 0.32 square inches per foot of total gap area. Access doors and other openings shall have proper gaskets and sealing. Emergency roof drain fabric shall cover 90% of the drain area. Defects in gaps or seals shall be repaired within 30 days of discovery, unless a delay of repair is used in accordance with 60.692-6.	Gaps shall be measured using various sized probes at all points where a 1/8" diameter probe passes freely between the roof seal and separator wall. Gap areas shall be calculated by adding the gap surface area of each gap location for the primary seal and the secondary seal individually and dividing the sum for each seal by the nominal perimeter of the separator basin. Conduct quarterly visual inspections of access doors, emergency roof drains and other openings. Defects in gaps, hatch covers, gaskets, seals or other openings shall be repaired within 30 days of discovery unless repair is technically impossible without a complete or partial refinery or process unit shutdown. If a delay of repair is utilized, repair shall be made before the end of the next refinery or process unit shutdown. Maintain records of the date, location, and corrective action for each visual inspection during which a broken seal, gap, or other problem is identified that could result in benzene emissions. Maintain results of the seal gap measurements. Submit quarterly reports that identify all seal gap measurements that are found to exceed the prescribed limits.
5.7.6 HAP	40 CFR Part 63 Subpart CC 40 CFR Part 61 Subpart FF NWCAA 104.2 (6/10/10)	Treatment Processes Comply with the standards for treatment processes subject to Part 63 Subpart CC and Part 61 Subpart FF	Monitoring/Recordkeeping/Reporting (MR&R) requirements are included in Table 5-14

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
Closed-vent Systems and Control Devices			
Note: The Title 40 CFR Part 61 and Part 63 General Provisions included in Section 3.2 and 3.3 apply to this affected source.			
5.7.7 HAP	40 CFR Part 63 Subpart CC 40 CFR Part 61 Subpart FF NWCAA 104.2 (6/10/10)	Comply with the standards for closed vent systems and control devices subject to Part 63 Subpart CC and Part 61 Subpart FF	Monitoring/Recordkeeping/Reporting (MR&R) requirements are included in Table 5-14
Vacuum Trucks			
Note: The Title 40 CFR Part 61 and Part 63 General Provisions included in Sections 3.2 and 3.3 apply to this affected source.			
5.7.8 HAP	40 CFR 61 Subpart FF 61.345(a), (b), and (c) (12/4/03), 61.350 (3/7/90) and 61.355(h) (10/17/00), and 61.356 (g) and (h) (11/12/02), and 61.357(d)(6) and (d)(8) (10/17/00) NWCAA 104.2 (6/10/10)	Containers Install, operate, and maintain a cover on each container used to handle, transfer, or store waste. The cover and all openings shall be designed to operate with no detectable emissions as indicated by less than 500 ppmv above background. Maintain each opening in a closed, sealed position (e.g. covered by a lid that is gasketed and latched) at all times when waste is in the container, except when loading, removing, sampling, or inspecting wastes. When waste is transferred by pumping, the fill pipe should be submerged. During loading, the cover shall remain in place and all openings shall be closed and sealed, except for those openings required for the submerged fill pipe, those openings required for venting to prevent physical damage or permanent deformation of the container or cover. Except where repair is technically impossible without a complete or partial facility or unit shutdown, if a broken seal or	Annually, monitor using an Organic Vapor Analyzer. Calibration gases shall be zero air (less than 10 ppm of hydrocarbon in air); and a mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane. Quarterly, visually inspect each cover and all openings to ensure that they are closed and gasketed properly. Quarterly, certify to the NWCAA that the required inspections were carried out. Annually, submit a report summarizing all inspections during which detectable emissions were measured or a problem (such as a broken seal, gap, or other problem) that could result in benzene emissions was identified, including the repairs or corrective action taken. Maintain records for each visual inspection that identifies a problem that could result in benzene emissions. The record shall include the date of the inspection, waste management unit and control equipment location where the problem is identified, a description of the problem, a description of the corrective action taken, and the date the corrective action was completed. Maintain records for each test of no detectable emissions.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		gasket or other problem is identified, first efforts at repair shall be made as soon as practicable, but not later than 15 calendar days after identification. If repair must be delayed, the repair shall occur before the end of the next facility or unit shutdown.	The record shall include the test date, background level measured during test, and maximum concentration. If detectable emissions are measured at a leak interface, the record shall also include the waste management unit, control equipment, and leak interface location where detectable emissions were measured, a description of the problem, a description of the corrective action taken, and the date the corrective action was completed.
5.7.9 HAP	40 CFR Part 63 Subpart CC 40 CFR Part 61 Subpart FF NWCAA 104.2 (6/10/10)	Treatment Processes Comply with the standards for treatment processes subject to Part 63 Subpart CC and Part 61 Subpart FF	Monitoring/Recordkeeping/Reporting (MR&R) requirements are included in Table 5-14

5.8 Storage Vessels

Table 5-8 Storage Vessels (tanks)

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
Individual Drain Systems serving 40 CFR Part 61 Subpart FF and Part 63 Subpart CC			
Note: The Title 40 CFR Part 61 and Part 63 General Provisions in Sections 3.2 and 3.3 apply to process wastewater systems in the storage vessel area.			
5.8.1 VOC/HAP	40 CFR Part 63 Subpart CC 40 CFR Part 61 Subpart FF NWCAA 104.2 (6/10/10)	Comply with the standards for individual drain systems for waste streams subject to Part 63 Subpart CC and Part 61 Subpart FF	Monitoring/Recordkeeping/Reporting (MR&R) requirements are included in Table 5-14
Storage Vessel Process Area Individual Drain Systems subject to 40 CFR Part 60 Subpart QQQ			
Note: The Title 40 CFR Part 60 General Provisions included in Section 3.1 apply to this affected source.			
5.8.2 VOC/HAP	40 CFR Part 60 Subpart QQQ NWCAA 104.2 (6/10/10)	Individual Drain Systems Comply with 40 CFR Part 60 Subpart QQQ except for individual drain systems regulated under Part 63 Subpart CC	Monitoring/Recordkeeping/Reporting (MR&R) requirements are included in Table 5-15
Equipment Components in HAP Service			
5.8.3 HAP	Title 40 CFR Subpart CC §63.648 (8/18/98) NWCAA 104.2 (6/10/10)	Petroleum Refinery MACT – Equipment Leak Standards	Follow the MR&R requirements in terms 5.13.1 through 5.13.17.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
External Floating Roof Tanks: **Tank Group 1:** 1340X110, 1340X112, 1340X113, 1340X115, 1340X116, 1340X117, 300X43, 300X45, 550X101, 6000X1, 800X141, 800X142, 800X143, 800X144, 800X145, 800X151, 1340X111, 1340X114, 3000X1, 300X41, 300X42, 550X102, 550X106,			
Note: The Title 40 CFR Part 63 General Provisions included in Section 3.3 apply to this affected source.			
5.8.4 VOC	NWCAA Section 560 (4/14/93)	<u>Storage of Organic Liquid</u> Design and equip the storage vessel with the following vapor loss control device, properly installed, in good working order and in operation: A floating roof, consisting of a pontoon type or double-deck type roof, resting on the surface of the liquid contents and equipped with a closure seal, or seals, to close the space between the roof edge and tank wall. The control equipment provided for in this paragraph shall not be used if the gasoline or petroleum distillate has a True Vapor Pressure of 11.1 pounds per square inch or greater under actual storage conditions. All tank gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place.	*Directly Enforceable* Perform all Monitoring, Recordkeeping, and Reporting required in the rest of this table for the subject vessels. Maintain records demonstrating that the stored material has a TVP less than 11.1 pounds per square inch. Notify the NWCAA within 12 hours of discovering an exceedance of the 11.1 pounds per square inch TVP limit.
5.8.5 VOC	NWCAA Section 580.32 (11/12/98 – same as 12/13/89) which references: 40 CFR Subpart Kb 60.112b(a)(2)(i) 10/8/97), 60.113b(b)(1),(2), (4)(i) and (4)(ii) and (5)(8/11/89) NWCAA 104.2	<u>External Floating Roof Seal Coverage</u> Except as provided in §60.113b(b)(4), the primary seal shall completely cover the annular space between the edge of the floating roof and the tank wall. The secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion except as allowed in §60.113b (b)(4). Section §60.113b(b)(4) requires necessary repairs or emptying the storage vessel within 45 days of identification in any inspection for seals not meeting the following requirements:	Measure gaps between the vessel wall and the primary seal initially and at least once every 5 years thereafter. Gap measurement between the vessel wall and the secondary seal shall be performed initially and at least once per year thereafter. Seal gaps shall be measured at one or more floating roof levels when the roof is floating off the roof leg supports. Measure around the entire tank circumference in each place where a 0.32-cm diameter uniform probe passes freely between the seal and the vessel wall. Measure the circumferential distance of each such location. The total surface area of each gap shall be determined by using probes of various widths to measure accurately the actual

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	(6/10/10)	For the primary seal, the accumulated area of gaps shall not exceed 212 cm^2 per meter of tank diameter, and the width of any portion of any gap shall not exceed 3.81 cm. For the primary seal, one end of the mechanical shoe should extend into the stored liquid and the other end should be at least 61 cm above the liquid surface. There are to be no holes, tears, or other openings in the shoe seal fabric, or the seal envelope. The secondary seal is to be installed above the primary seal so that it completely covers the space between the roof edge and the tank wall except as provided in paragraph (b)(2)(iii) of this section. For the secondary seal, the accumulated area of gaps shall not exceed 21.2 cm^2 per meter of tank diameter and the width of any portion of any gap shall not exceed 1.27 cm. There are to be no holes, tears, or other openings in the seal or seal fabric.	distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance. Notify the NWCAA 30 calendar days prior to gap testing.
5.8.6 HAP	40 CFR Subpart CC §63.646 (2/21/97) which references 63.119(c)(1)(iii) (12/21/06) and 63.120(b)(1-6), (b)(9) (all 1/17/97) and 63.655 (h)(2)(ii) (6/30/10), and	<u>External Floating Roof Seal Coverage</u> Except during inspections, both the primary and secondary seals shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion. There shall be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope of the primary seal, and no holes, tears, or other openings in the seal or seal fabric.	Except when unsafe (as addressed in 63.120(b) (7), determine the gap areas and maximum gap widths between the primary seal and the wall of the storage vessel at least once every 5 years following the initial gap measurement. Except when unsafe, measure gaps between the vessel wall and the secondary seal at least once per year following the initial measurement. Seal gaps shall be measured at one or more floating roof levels when the roof is not resting on the leg supports. Measure around the entire circumference in each place

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	63.123(d)(2/23/04) NWCAA 104.2 (6/10/10)	For the primary seal, one end of the mechanical shoe should extend into the stored liquid and the other end should be at least 61 cm above the liquid surface. The accumulated area of gaps between the vessel wall and the primary seal shall not exceed 212 square cm/meter of vessel diameter and the width of any gap shall not exceed 3.81 cm (1.5 inches). The accumulated area of gaps between the vessel wall and the secondary seal shall not exceed 21.2 square cm/meter of vessel diameter and the width of any portion of any gap shall not exceed 1.27 cm (0.5 inch). These seal gap requirements may be exceeded during the measurement of primary seal gaps.	where a 0.32-cm (1/8-inch) diameter uniform probe passes freely between the seal and the wall of the storage vessel. Measure the circumferential distance of each location. Measure the total surface area of each gap. Add the gap surface area of each gap location for the primary seal and divide the sum by the nominal diameter of the vessel. Add the gap surface area of each gap location for the secondary seal and divide the sum by the nominal diameter of the vessel. Notify the NWCAA in writing 30 calendar days in advance of any gap measurements. Keep records describing the results of each seal gap measurement. Include the date of each measurement, the raw data obtained, and the calculations.
5.8.7 VOC	NWCAA Section 580.32 (11/12/98 – same as 12/13/89) which references: Title 40 CFR Subpart Kb 60.113b(b)(4) and (b)(4)(iii) (8/11/89)	<u>External Floating Roof Gap Test Discrepancies</u> Repair conditions not meeting the gap allowances, or empty the storage vessel within 45 days of identification of failures found in any inspection. If a failure is detected that cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested in the inspection report.	*Directly Enforceable* Submit in the Periodic Report documentation of each seal gap measurement made in which the seal and seal gap requirements of this part are not met. The documentation shall include the information specified in paragraphs 63.655 (g) (3) (i) (A) through (g) (3) (i) (D). Documentation of a decision to use an extension shall include a failure description, documentation that alternate storage capacity is unavailable, and an action schedule that will ensure that the control equipment will be repaired or the vessel will be emptied as soon as possible.
5.8.8 HAP	40 CFR Subpart CC §63.646 (2/21/97), which references 63.120(b)(8) (1/17/97), 63.123(g)	<u>External Floating Roof Gap Test Discrepancies</u> Repair conditions that do not meet the gap allowances no later than 45 calendar days after identification, or empty and remove the storage vessel from service no later than 45 calendar days after identification. If a failure is detected that	Submit in the Periodic Report documentation of each seal gap measurement made in which the seal and seal gap requirements of this part are not met. The documentation shall include the information specified in paragraphs 63.655(g)(3)(i)(A) through (g)(3) (i)(D). Documentation of a decision to use an extension shall include a failure description, documentation that alternate

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	(12/23/04), and 63.655(g)(3) (6/30/10) NWCAA 104.2 (6/10/10)	cannot be repaired within 45 calendar days and if the vessel cannot be emptied within 45 calendar days, 2 extensions of up to 30 additional days each can be utilized.	storage capacity is unavailable, and an action schedule that will ensure that the control equipment will be repaired or the vessel will be emptied as soon as possible. Keep this documentation in a readily accessible location.
5.8.9 VOC	NWCAA Section 580.32 (11/12/98 – same as 12/13/89) which references 40 CFR Subpart Kb 60.113b(b)(6) (8/11/89)	External Floating Roof Visual Inspection After Degassing Visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed. If inspection shows that the external floating roof has defects; the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, repair the items as necessary so that none of the conditions specified in this paragraph exist before filling or refilling the storage vessel with VOL.	Following an inspection after degassing, notify the NWCAA in writing at least 30 days prior to the filling or refilling of each storage vessel. If the inspection is unplanned and could not have been known 30 days prior to refilling, notify the NWCAA at least 7 days prior to refilling. Notification may be made by telephone, followed by written documentation demonstrating why the inspection was unplanned.
5.8.10 HAP	40 CFR Subpart CC §63.646(6/21/97) , which references 63.120(b)(10)(i), (ii), and (iii)(1/17/97), 63.655(g)(3)(iii) and 63.655(h)(2) (6/30/10) NWCAA 104.2 (6/10/10)	External Floating Roof Visual Inspection Discrepancies After Degassing Visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed. If inspection shows that the external floating roof has defects; the primary seal has holes, tears, or other openings in the seal or the seal fabric; or the secondary seal has holes, tears, or other openings in the seal or fabric; the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before filling or refilling the storage vessel with	Following an inspection after degassing, notify the NWCAA in writing at least 30 days prior to the filling or refilling of each storage vessel. If the inspection is unplanned and could not have been known 30 days prior to refilling, notify the NWCAA at least 7 days prior to refilling. Notification may be made by telephone, followed by written documentation demonstrating why the inspection was unplanned. Submit in the Periodic Report documentation of any failure identified during the visual inspection. Include the date of the inspection, identification of each storage vessel in which a failure was detected, and a description of the failure. Also describe the nature of and date the repair was made.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		organic HAP.	
5.8.11 HAP	40 CFR Subpart CC §63.646 (2/21/97), which references 63.119(c)(3) and (4) (11/21/06) and 63.646(f)(3) (2/21/97) NWCAA 104.2 (6/10/10)	External Floating Roof on Surface The external floating roof shall be floating on the liquid surface at all times except when it must be supported by the leg supports during (i) the initial fill, (ii) after the vessel has been completely emptied and degassed, and (iii) when the vessel is completely emptied before being subsequently refilled. When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as soon as possible. Automatic bleeder vents are to be closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the roof leg supports.	*Directly Enforceable* Keep records of periods when the tank is resting on the leg supports.
5.8.12 VOC	NWCAA Section 580.32 (11/12/98 – same as 12/13/89) which references: 40 CFR Subpart Kb 60.112b(a)(2)(iii) (10/8/97)	External Floating Roof on Surface The roof shall be floating on the liquid at all times (i.e., off the roof leg supports) except during initial fill until the roof is lifted off leg supports and when the tank is completely emptied and subsequently refilled. The process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.	*Directly Enforceable* Keep records of periods when the tank is resting on the leg supports.
5.8.13 VOC	NWCAA Section 580.33(11/12/98 – same as 12/13/89)	Seal Condition All seals are to be maintained in good operating condition and the seal fabric shall contain no visible holes, tears, or other openings.	*Directly Enforceable* Semiannually, visually inspect the secondary seal. If the secondary seal has holes, tears, or other openings in the seal or fabric, repair the items as necessary. Maintain records of the types of petroleum liquids stored, the maximum true vapor pressure of the liquid as stored, and the results of any inspections performed for a period

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
			of two years after the date on which the record was made. Note: Under WAC 173-401-615(2), records must be retained for five years.
5.8.14 VOC	NWCAA Sections 580.93, 580.94,and 580.99(all 12/13/89)	Volatile Organic Compound in External Floating Roof Tanks Store volatile organic compounds in vessels subject to this section that have been fitted with a rim-mounted secondary seal. All of these seals or closure devices shall meet the following requirements: There must be no visible holes, tears, or other openings in the seal or seal fabric; The seal shall be intact and uniformly in place around the circumference of the floating roof between the roof and the tank wall.	*Directly Enforceable* Semiannually, visually inspect the secondary seal. If the secondary seal has holes, tears, or other openings in the seal or fabric, repair the items as necessary. Maintain records of the types of petroleum liquids stored, the maximum true vapor pressure of the liquid as stored, and the results of any inspections performed for a period of two years after the date on which the record was made. Note: Under WAC 173-401-615(2), records must be retained for five years.
5.8.15 VOC	NWCAA Section 580.95 (12/13/89)	Openings All openings in the external floating roof, except for automatic bleeder vents, rim space vents, and leg sleeves shall be equipped with covers, seals, or lids in the closed position except when the openings are in actual use; and equipped with projections into the tank which remain below the liquid surface at all times.	*Directly Enforceable* Visually inspect the vessel openings quarterly. If inspection shows that openings not related to safety are not sealed, close the opening. Document inspection results and any action taken to seal openings.
5.8.16 HAP	40 CFR Subpart CC §63.646(f)(1) (2/21/97) NWCAA 104.2 (6/10/10)	Cover or Lid If a cover or lid is installed on an opening on a floating roof, the cover or lid shall remain closed except when the cover or lid must be open for access.	
5.8.17 VOC	NWCAA Section 580.34 (11/12/98 – same as 12/13/89)	Openings All openings not related to safety are to be sealed with suitable closures.	

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.8.18 VOC	NWCAA Section 580.96 (12/13/89)	Automatic Bleeder Vents Keep closed at all times except when the roof is floated off or landed on the roof leg supports.	
5.8.19 VOC	NWCAA Section 580.97 (12/13/89)	Rim Vents Shall be set to open when the roof is being floated off the leg supports or at the manufacturer's recommended setting.	*Directly Enforceable* Visually inspect annually for damage and pressure setting.
5.8.20 HAP	40 CFR Subpart CC §63.646(f)(2) (2/21/97) NWCAA 104.2 (6/10/10)	Rim Space Vents Rim space vents are to be set to open only when the floating roof is not floating or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting.	
5.8.21 VOC	NWCAA Section 580.98 (12/13/89)	Emergency Roof Drains Provide roof drains with slotted membrane fabric covers or equivalent, which cover at least ninety percent of the area of the opening.	*Directly Enforceable* Visually inspect the emergency roof drain's fabric covers annually. If inspection shows that the roof drain cover is damaged, fix or replace them.
5.8.22 VOC	NWCAA Section 580.32 (11/12/98 – same as 12/13/89) which references: Title 40 CFR Subpart Kb 60.112b(a)(2)(ii) (10/8/97)	Roof Openings Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is to be equipped with a gasketed cover, seal, or lid that is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Automatic bleeder vents are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. Rim vents are to be set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting. Automatic bleeder vents and rim space vents are to be gasketed. Each emergency roof drain is to be provided with a slotted membrane fabric cover that covers at least	*Directly Enforceable* Visually inspect the vessel openings and bleeder vents quarterly. If inspection shows that openings not related to safety are not sealed, close the opening. Document inspection results and any action taken to seal openings. Visually inspect the emergency roof drain's fabric covers annually. If inspection shows that the roof drain cover is damaged, fix or replace it.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		90 percent of the area of the opening.	
Tank Group 3: External Floating Roof Tank 300X44			
Note: The Title 40 CFR Part 60 General Provisions included in Section 3.1 apply to this affected facility.			
5.8.23 VOC	NWCAA Section 560 (4/14/93)	Storage of Organic Liquid Design and equip the storage vessel with the following vapor loss control device, properly installed, in good working order and in operation: A floating roof, consisting of a pontoon type or double-deck type roof, resting on the surface of the liquid contents and equipped with a closure seal, or seals, to close the space between the roof edge and tank wall. The control equipment provided for in this paragraph shall not be used if the gasoline or petroleum distillate has a True Vapor Pressure of 11.1 pounds per square inch or greater under actual storage conditions. All tank gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place.	*Directly enforceable* Perform all Monitoring, Recordkeeping, and Reporting required in the rest of this table for the subject vessels. Maintain records demonstrating that the stored material has a TVP less than 11.1 pounds per square inch. Notify the NWCAA within 12 hours of discovering an exceedance of the 11.1 pounds per square inch TVP limit.
5.8.24 VOC	Title 40 CFR Subpart Kb 60.112b(a)(2)(i) 10/8/97), 60.113b(b)(1), (2), (4)(i) and (4)(ii) and (5)(8/11/89), and 60.115b(b)(2) and (3)(4/8/87) Also, NWCAA Section 580.32 (11/12/98 – same as 12/13/89)	External Floating Roof Seal Coverage Except as provided in §60.113b (b) (4), the primary seal shall completely cover the annular space between the edge of the floating roof and the tank wall. The secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion except as allowed in §60.113b (b) (4). Section §60.113b(b)(4) requires necessary repairs or emptying the storage vessel within 45 days of identification in any inspection for seals not meeting the following requirements:	Measure gaps between the vessel wall and the primary seal initially and at least once every 5 years thereafter. Gap measurement between the vessel wall and the secondary seal shall be performed initially and at least once per year thereafter. Seal gaps shall be measured at one or more floating roof levels when the roof is floating off the roof leg supports. Measure around the entire tank circumference in each place where a 0.32-cm diameter uniform probe passes freely between the seal and the vessel wall. Measure the circumferential distance of each such location. The total surface area of each gap shall be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	NWCAA 104.2 (6/10/10)	For the primary seal, the accumulated area of gaps shall not exceed 212 cm^2 per meter of tank diameter, and the width of any portion of any gap shall not exceed 3.81 cm. For the primary seal, one end of the mechanical shoe should extend into the stored liquid and the other end should be at least 61 cm above the liquid surface. There are to be no holes, tears, or other openings in the shoe, seal fabric, or the seal envelope. The secondary seal is to be installed above the primary seal so that it completely covers the space between the roof edge and the tank wall except as provided in paragraph (b)(2)(iii) of this section. For the secondary seal, the accumulated area of gaps shall not exceed 21.2 cm2 per meter of tank diameter and the width of any portion of any gap shall not exceed 1.27 cm. There are to be no holes, tears, or other openings in the seal or seal fabric.	each such width by its respective circumferential distance. Notify the NWCAA 30 calendar days prior to gap testing. Within 60 days of performing seal gap measurements, submit a report to the NWCAA containing the date of measurement, the raw data obtained, and the calculations of gap width and accumulated area (if gaps were found). Keep records of the result of each seal gap measurement. Include the date of each measurement, the raw data obtained, and the calculations.
5.8.25 VOC	Title 40 CFR Subpart Kb 60.112b(a)(2)(ii) (10/8/97) Also, NWCAA Section 580.32 (11/12/98 same as 12/13/89) NWCAA 104.2 (6/10/10)	Roof Openings Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is to be equipped with a gasketed cover, seal, or lid that is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Automatic bleeder vents are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. Rim	*Directly enforceable* Visually inspect the vessel openings and bleeder vents quarterly. If inspection shows that openings not related to safety are not sealed, close the opening. Document inspection results and any action taken to seal openings. Visually inspect the emergency roof drain's fabric covers annually. If inspection shows that the roof drain cover is damaged, fix or replace them.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		vents are to be set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting. Automatic bleeder vents and rim space vents are to be gasketed. Each emergency roof drain is to be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.	
5.8.26 VOC	NWCAA Section 580.98 (12/13/89)	Emergency Roof Drains Provide roof drains with slotted membrane fabric covers or equivalent, which cover at least ninety percent of the area of the opening.	
5.8.27 VOC	Title 40 CFR Subpart Kb 60.112b(a)(2)(iii) (10/8/97) Also, NWCAA Section 580.32 (11/12/98 – same as 12/13/89) NWCAA 104.2 (6/10/10)	External Floating Roof on Surface The roof shall be floating on the liquid at all times (i.e., off the roof leg supports) except during initial fill until the roof is lifted off leg supports and when the tank is completely emptied and subsequently refilled. The process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.	*Directly enforceable* Keep records of periods when the tank is resting on the leg supports.
5.8.28 VOC	Title 40 CFR Subpart Kb 60.113b(b)(4) and (b)(4)(iii) (8/11/89) and 60.115b(b)(4) (4/8/87) NWCAA 104.2 (6/10/10) Also, NWCAA Section 580.32 (11/12/98 –	External Floating Roof Gap Test Discrepancies Repair conditions not meeting the gap allowances, or empty the storage vessel within 45 days of identification of failures found in any inspection. If a failure is detected that cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested in the inspection report.	Report to the NWCAA within 30 days of the inspection if a gap was found exceeding the limitations. The report shall identify the vessel, the date of measurement, the raw data obtained, and the calculations of gap width and accumulation, as well as the date the vessel was emptied or the repairs made and date of repair. An extension request must include a demonstration of unavailability of alternate storage capacity and a specification of a schedule that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	Same as 12/13/89)		
5.8.29 VOC	Title 40 CFR Subpart Kb 60.113b(b)(6)(i) and (ii) (8/11/89) Also, NWCAA Section 580.32 (11/12/98 – Same as 12/13/89) NWCAA 104.2 (6/10/10)	External Floating Roof Visual Inspection After Degassing Visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed. If inspection shows that the external floating roof has defects; the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, repair the items as necessary so that none of the conditions specified in this paragraph exist before filling or refilling the storage vessel with VOL.	Following an inspection after degassing, notify the NWCAA in writing at least 30 days prior to the filling or refilling of each storage vessel. If the inspection is unplanned and could not have been known 30 days prior to refilling, notify the NWCAA at least 7 days prior to refilling. Notification may be made by telephone, followed by written documentation demonstrating why the inspection was unplanned.
5.8.30	Title 40 CFR Subpart Kb 60.116b(b) (10/15/03) NWCAA 104.2 (6/10/10)	Dimensions and Capacities Keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.	None
5.8.31	Title 40 CFR Subpart Kb 60.116b(c) and (e) (10/15/03) NWCAA 104.2 (6/10/10)	Maximum True Vapor Pressure Maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.	*Directly enforceable* Calculate the maximum true vapor pressure on a daily basis using known Reid Vapor Pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product. Maintain records at the facility with this information.
5.8.32 VOC	NWCAA Section 580.33(11/12/98 – same as 12/13/89)	Seal Condition All seals are to be maintained in good operating condition and the seal fabric shall contain no visible holes, tears, or other openings.	*Directly Enforceable* Semiannually, visually inspect the secondary seal. If the secondary seal has holes, tears, or other openings in the

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
			seal or fabric, repair the items as necessary. Maintain records of the types of petroleum liquids stored, the maximum true vapor pressure of the liquid as stored, and the results of any inspections performed for a period of two years after the date on which the record was made. Note: Under WAC 173-401-615(2), records must be retained for five years.
5.8.33 VOC	NWCAA Sections 580.93, 580.94,and 580.99(all 12/13/89)	Volatile Organic Compound in External Floating Roof Tanks Store volatile organic compounds in vessels subject to this section that have been fitted with a rim-mounted secondary seal. All of these seals or closure devices shall meet the following requirements: There must be no visible holes, tears, or other openings in the seal or seal fabric; The seal shall be intact and uniformly in place around the circumference of the floating roof between the roof and the tank wall.	*Directly enforceable* Semiannually, visually inspect the secondary seal. If the secondary seal has holes, tears, or other openings in the seal or fabric, repair the items as necessary. Maintain records of the types of petroleum liquids stored, the maximum true vapor pressure of the liquid as stored, and the results of any inspections performed for a period of two years after the date on which the record was made. Note: Under WAC 173-401-615(2), records must be retained for five years.
5.8.34 VOC	NWCAA Section 580.95 (12/13/89)	Openings All openings in the external floating roof, except for automatic bleeder vents, rim space vents, and leg sleeves shall be equipped with covers, seals, or lids in the closed position except when the openings are in actual use; and equipped with projections into the tank which remain below the liquid surface at all times.	*Directly enforceable* Visually inspect the vessel openings and bleeder vents quarterly. If inspection shows that openings not related to safety are not sealed, close the opening. Document inspection results and any action taken to seal openings.
5.8.35 VOC	NWCAA Section 580.34 (11/12/98 – Same as 12/13/89)	Openings All openings not related to safety are to be sealed with suitable closures.	
5.8.36	NWCAA Section	Automatic Bleeder Vents Keep closed at all	

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
VOC	580.96 (12/13/89)	times except when the roof is floated off or landed on the roof leg supports.	
5.8.37 VOC	NWCAA Section 580.97 (12/13/89)	Rim Vents Shall be set to open when the roof is being floated off the leg supports or at the manufacturer's recommended setting.	*Directly enforceable* Visually inspect annually for damage and pressure setting.
Tank Group 4: External Floating Roof Tank 100X92			
Note: The Title 40 CFR Part 60 and 61 General Provisions included in Sections 3.1 and 3.2 apply to these affected facilities.			
5.8.38 VOC	NWCAA Section 560 (4/14/93)	Storage of Organic Liquid Design and equip the storage vessel with the following vapor loss control device, properly installed, in good working order and in operation: A floating roof, consisting of a pontoon type or double-deck type roof, resting on the surface of the liquid contents and equipped with a closure seal, or seals, to close the space between the roof edge and tank wall. The control equipment provided for in this paragraph shall not be used if the gasoline or petroleum distillate has a True Vapor Pressure of 11.1 pounds per square inch or greater under actual storage conditions. All tank gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place.	*Directly enforceable* Perform all Monitoring, Recordkeeping, and Reporting required in the rest of this table for the subject vessels. Maintain records demonstrating that the stored material has a TVP less than 11.1 pounds per square inch. Notify the NWCAA within 12 hours of discovering an exceedence of the 11.1 pounds per square inch TVP limit.
5.8.39	OAC 314 conditions 4 & 5 (8/21/91) which references Title 40 CFR Subpart Kb 60.112b(a)(2)(i) 10/8/97), 60.113b(b)(1),	External Floating Roof Seal Coverage Except as provided in §60.113b (b) (4), the primary seal shall completely cover the annular space between the edge of the floating roof and the tank wall. The secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion except as allowed in	Measure gaps between the vessel wall and the primary seal initially and at least once every 5 years thereafter. Gap measurement between the vessel wall and the secondary seal shall be performed initially and at least once per year thereafter. Seal gaps shall be measured at one or more floating roof levels when the roof is floating off the roof leg supports. Measure around the entire tank circumference in each place where a 0.32-cm diameter uniform probe passes

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	(2), (4)(i) and (4)(ii) and (5)(8/11/89), and 60.115b(b)(2) and (3)(4/8/87) Also, NWCAA Section 580.32 (11/12/98 – same as 12/13/89)	§60.113b (b) (4). Section §60.113b(b)(4) requires necessary repairs or emptying the storage vessel within 45 days of identification in any inspection for seals not meeting the following requirements: For the primary seal, the accumulated area of gaps shall not exceed 212 cm^2 per meter of tank diameter, and the width of any portion of any gap shall not exceed 3.81 cm. For the primary seal, one end of the mechanical shoe should extend into the stored liquid and the other end should be at least 61 cm above the liquid surface. There are to be no holes, tears, or other openings in the shoe seal fabric, or the seal envelope. The secondary seal is to be installed above the primary seal so that it completely covers the space between the roof edge and the tank wall except as provided in paragraph (b)(2)(iii) of this section. For the secondary seal, the accumulated area of gaps shall not exceed 21.2 cm^2 per meter of tank diameter and the width of any portion of any gap shall not exceed 1.27 cm. There are to be no holes, tears, or other openings in the seal or seal fabric.	freely between the seal and the vessel wall. Measure the circumferential distance of each such location. The total surface area of each gap shall be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance. Notify the NWCAA 30 calendar days prior to gap testing. Within 60 days of performing seal gap measurements, submit a report to the NWCAA containing the date of measurement, the raw data obtained, and the calculations of gap width and accumulated area (if gaps were found). Keep records of the result of each seal gap measurement. Include the date of each measurement, the raw data obtained, and the calculations.
5.8.40 HAP	40 CFR Subpart CC §63.646 (2/21/97) which references 63.119(c)(1)(iii) (12/12/06) and	<u>External Floating Roof Seal Coverage</u> Except during inspections, both the primary and secondary seals shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion. There shall	Except when unsafe (as addressed in 63.120(b)(7)), determine the gap areas and maximum gap widths between the primary seal and the wall of the storage vessel at least once every 5 years following the initial gap measurement. Except when unsafe, measure gaps between the vessel

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	63.120(b)(1-6), (b)(9)(all 1/17/97) and 63.655 (h)(2)(ii) (6/30/10), and 63.123(d)(2/23/04) NWCAA 104.2 (6/10/10)	be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope of the primary seal, and no holes, tears, or other openings in the seal or seal fabric. For the primary seal, one end of the mechanical shoe should extend into the stored liquid and the other end should be at least 61 cm above the liquid surface. The accumulated area of gaps between the vessel wall and the primary seal shall not exceed 212 square cm/meter of vessel diameter and the width of any gap shall not exceed 3.81 cm (1.5 inches). The accumulated area of gaps between the vessel wall and the secondary seal shall not exceed 21.2 square cm/meter of vessel diameter and the width of any portion of any gap shall not exceed 1.27 cm (0.5 inch). These seal gap requirements may be exceeded during the measurement of primary seal gaps.	wall and the secondary seal at least once per year following the initial measurement. Seal gaps shall be measured at one or more floating roof levels when the roof is not resting on the leg supports. Measure around the entire circumference in each place where a 0.32-cm (1/8-inch) diameter uniform probe passes freely between the seal and the wall of the storage vessel. Measure the circumferential distance of each location. Measure the total surface area of each gap. Add the gap surface area of each gap location for the primary seal and divide the sum by the nominal diameter of the vessel. Add the gap surface area of each gap location for the secondary seal and divide the sum by the nominal diameter of the vessel. Notify the NWCAA in writing 30 calendar days in advance of any gap measurements. Keep records describing the results of each seal gap measurement. Include the date of each measurement, the raw data obtained, and the calculations.
5.8.41 VOC	OAC 314 condition 4 (8/21/91) which references Title 40 CFR Subpart Kb 60.112b(a)(2)(ii) (10/8/97) Also, NWCAA Section 580.32 (11/12/98 – same as 12/13/89)	Roof Openings Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is to be equipped with a gasketed cover, seal, or lid that is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Automatic bleeder vents are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. Rim vents are to be set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting. Automatic bleeder vents and rim space	*Directly enforceable* Visually inspect the vessel openings and bleeder vents quarterly. If inspection shows that openings not related to safety are not sealed, close the opening. Document inspection results and any action taken to seal openings. Visually inspect the emergency roof drain's fabric covers annually. If inspection shows that the roof drain cover is damaged, fix or replace them.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		vents are to be gasketed. Each emergency roof drain is to be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.	
5.8.42 VOC	NWCAA Section 580.98 (12/13/89)	Emergency Roof Drains Provide roof drains with slotted membrane fabric covers or equivalent, which cover at least ninety percent of the area of the opening.	
5.8.43 HAP	40 CFR Subpart CC §63.646 (2/21/97), which references 63.119(c)(3) and (4) (11/21/06) and 63.646(f)(3) (2/21/97) NWCAA 104.2 (6/10/10)	External Floating Roof on Surface The external floating roof shall be floating on the liquid surface at all times except when it must be supported by the leg supports during (i) the initial fill, (ii) after the vessel has been completely emptied and degassed, and (iii) when the vessel is completely emptied before being subsequently refilled. When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as soon as possible. Automatic bleeder vents are to be closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the roof leg supports.	*Directly Enforceable* Keep records of periods when the tank is resting on the leg supports.
5.8.44 VOC	OAC 314 condition 4 (8/21/91) which references Title 40 CFR Subpart Kb 60.112b(a)(2)(iii) (10/8/97) Also, NWCAA Section 580.32 (11/12/98 – same	External Floating Roof on Surface The roof shall be floating on the liquid at all times (i.e., off the roof leg supports) except during initial fill until the roof is lifted off leg supports and when the tank is completely emptied and subsequently refilled. The process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.	*Directly enforceable* Keep records of periods when the tank is resting on the leg supports.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	as 12/13/89)		
5.8.45 VOC	OAC 314 conditions 4 & 5 (8/21/91) which reference Title 40 CFR Subpart Kb 60.113b(b)(4) and (b)(4)(iii) (8/11/89) and 60.115b(b)(4) (4/8/87) Also, NWCAA Section 580.32 (11/12/98 – same as 12/13/89)	External Floating Roof Gap Test Discrepancies Repair conditions not meeting the gap allowances, or empty the storage vessel within 45 days of identification of failures found in any inspection. If a failure is detected that cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested in the inspection report.	Report to the NWCAA within 30 days of the inspection if a gap was found exceeding the limitations. The report shall identify the vessel, the date of measurement, the raw data obtained, and the calculations of gap width and accumulation, as well as the date the vessel was emptied or the repairs made and date of repair. An extension request must include a demonstration of unavailability of alternate storage capacity and a specification of a schedule that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.
5.8.46 HAP	40 CFR Subpart CC §63.646 (2/21/97), which references 63.120(b)(8) (1/17/97), 63.123(g) (1/17/97), and 63.655(g)(3) and (h)(2) (6/30/10) NWCAA 104.2 (6/10/10)	External Floating Roof Gap Test Discrepancies Repair conditions that do not meet the gap allowances no later than 45 calendar days after identification, or empty and remove the storage vessel from service no later than 45 calendar days after identification. If a failure is detected that cannot be repaired within 45 calendar days and if the vessel cannot be emptied within 45 calendar days, 2 extensions of up to 30 additional days each can be utilized.	Submit in the Periodic Report documentation of each seal gap measurement made in which the seal and seal gap requirements of this part are not met. The documentation shall include the information specified in paragraphs (g) (3) (i) (A) through (g) (3) (i) (D). Documentation of a decision to use an extension shall include a failure description, documentation that alternate storage capacity is unavailable, and an action schedule that will ensure that the control equipment will be repaired or the vessel will be emptied as soon as possible. Keep this documentation in a readily accessible location.
5.8.47 VOC	OAC 314 conditions 4 & 5 (8/21/91) which references Title 40 CFR Subpart Kb 60.113b(b)(6)(i)	External Floating Roof Visual Inspection After Degassing Visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed. If inspection shows that the external floating roof has defects; the primary seal has holes, tears, or other openings in the seal	Following an inspection after degassing, notify the NWCAA in writing at least 30 days prior to the filling or refilling of each storage vessel. If the inspection is unplanned and could not have been known 30 days prior to refilling, notify the NWCAA at least 7 days prior to refilling. Notification may be made by telephone, followed by written documentation demonstrating why the inspection was

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	and (ii) (8/11/89) Also, NWCAA Section 580.32 (11/12/98 – same as 12/13/89)	or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, repair the items as necessary so that none of the conditions specified in this paragraph exist before filling or refilling the storage vessel with VOL.	unplanned.
5.8.48 HAP	40 CFR Subpart CC §63.646(6/2//97), which references 63.120(b)(10)(i), (ii), and (iii)(1/17/97), 63.655(g)(3)(iii) and 63.655(h)(2) (6/30/10) NWCAA 104.2 (6/10/10)	External Floating Roof Visual Inspection Discrepancies After Degassing Visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed. If inspection shows that the external floating roof has defects; the primary seal has holes, tears, or other openings in the seal or the seal fabric; or the secondary seal has holes, tears, or other openings in the seal or fabric; the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before filling or refilling the storage vessel with organic HAP.	Following an inspection after degassing, notify the NWCAA in writing at least 30 days prior to the filling or refilling of each storage vessel. If the inspection is unplanned and could not have been known 30 days prior to refilling, notify the NWCAA at least 7 days prior to refilling. Notification may be made by telephone, followed by written documentation demonstrating why the inspection was unplanned. Submit in the Periodic Report documentation of any failure identified during the visual inspection. Include the date of the inspection, identification of each storage vessel in which a failure was detected, and a description of the failure. Also describe the nature of and date the repair was made.
5.8.49	OAC 314 conditions 4 & 5 (8/21/91) which references Title 40 CFR Subpart Kb 60.116b(b) (10/15/03)	Dimensions and Capacities Keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.	None
5.8.50	OAC 314 conditions 4 & 5 (8/21/91) which references Title 40 CFR Subpart	Maximum True Vapor Pressure Maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.	*Directly enforceable* Calculate the maximum true vapor pressure on a daily basis using known Reid Vapor Pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	Kb 60.116b(c) and (e) (10/15/03)		stored product. Maintain records at the facility with this information.
5.8.51 VOC	NWCAA Section 580.33 (11/12/98 – same as 12/13/89)	Seal Condition All seals are to be maintained in good operating condition and the seal fabric shall contain no visible holes, tears, or other openings.	*Directly Enforceable* Semiannually, visually inspect the secondary seal. If the secondary seal has holes, tears, or other openings in the seal or fabric, repair the items as necessary. Maintain records of the types of petroleum liquids stored, the maximum true vapor pressure of the liquid as stored, and the results of any inspections performed for a period of two years after the date on which the record was made. Note: Under WAC 173-401-615(2), records must be retained for five years.
5.8.52 VOC	NWCAA Sections 580.93, 580.94,and 580.99(all 12/13/89)	Volatile Organic Compound in External Floating Roof Tanks Store volatile organic compounds in vessels subject to this section that have been fitted with a rim-mounted secondary seal. All of these seals or closure devices shall meet the following requirements: There must be no visible holes, tears, or other openings in the seal or seal fabric; The seal shall be intact and uniformly in place around the circumference of the floating roof between the roof and the tank wall.	*Directly enforceable* Semiannually, visually inspect the secondary seal. If the secondary seal has holes, tears, or other openings in the seal or fabric, repair the items as necessary. Maintain records of the types of petroleum liquids stored, the maximum true vapor pressure of the liquid as stored, and the results of any inspections performed for a period of two years after the date on which the record was made. Note: Under WAC 173-401-615(2), records must be retained for five years.
5.8.53 VOC	NWCAA Section 580.95 (12/13/89)	Openings All openings in the external floating roof, except for automatic bleeder vents, rim space vents, and leg sleeves shall be equipped with covers, seals, or lids in the closed position except when the openings are in actual use; and equipped with projections into the tank which remain below the liquid surface at all times.	*Directly enforceable* Visually inspect the vessel openings and bleeder vents quarterly. If inspection shows that openings not related to safety are not sealed, close the opening. Document inspection results and any action taken to seal openings.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.8.54 VOC	NWCAA Section 580.34 (11/12/98 – same as 12/13/89)	Openings All openings not related to safety are to be sealed with suitable closures.	
5.8.55 HAP	40 CFR Subpart CC §63.646(f)(1) (2/21/97) NWCAA 104.2 (6/10/10)	Cover or Lid If a cover or lid is installed on an opening on a floating roof, the cover or lid shall remain closed except when the cover or lid must be open for access.	
5.8.56 VOC	NWCAA Section 580.96 (12/13/89)	Automatic Bleeder Vents Keep closed at all times except when the roof is floated off or landed on the roof leg supports.	
5.8.57 VOC	NWCAA Section 580.97 (12/13/89)	Rim Vents Shall be set to open when the roof is being floated off the leg supports or at the manufacturer's recommended setting.	*Directly enforceable* Visually inspect annually for damage and pressure setting.
5.8.58 HAP	40 CFR Subpart CC §63.646(f)(2) (2/21/97) NWCAA 104.2 (6/10/10)	Rim Space Vents Rim space vents are to be set to open only when the floating roof is not floating or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting.	
Tank Group 5: External Floating Roof Tanks 900X1, 900X2, 900X3			
Note: The Title 40 CFR Part 60 and 61 General Provisions included in Sections 3.1, and 3.2 apply to these affected facilities.			
5.8.59 VOC	NWCAA Section 560 (4/14/93)	Storage of Organic Liquid Design and equip the storage vessel with the following vapor loss control device, properly installed, in good working order and in operation: A floating roof, consisting of a pontoon type or double-deck type roof, resting on the surface of the liquid contents and equipped with a closure seal, or seals, to close the space between the roof edge	*Directly enforceable* Perform all Monitoring, Recordkeeping, and Reporting required in the rest of this table for the subject vessels. Maintain records demonstrating that the stored material has a TVP less than 11.1 pounds per square inch. Notify the NWCAA within 12 hours of discovering an exceedance of the 11.1 pounds per square inch TVP limit.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		and tank wall. The control equipment provided for in this paragraph shall not be used if the gasoline or petroleum distillate has a True Vapor Pressure of 11.1 pounds per square inch or greater under actual storage conditions. All tank gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place.	
5.8.60 VOC	Title 40 CFR Subpart Kb 60.112b(a)(2)(i) 10/8/97), 60.113b(b)(1), (2), (4)(i) and (4)(ii) and (5)(8/11/89), and 60.115b(b)(2) and (3)(4/8/87) Also NWCAA Section 580.32 (11/12/98 – same as 12/13/89) 40 CFR 61.351 (9/10/90) which references 40 CFR 60.112b(a)(2) (10/8/97) NWCAA 104.2 (6/10/10)	<u>External Floating Roof Seal Coverage</u> Except as provided in §60.113b (b) (4), the primary seal shall completely cover the annular space between the edge of the floating roof and the tank wall. The secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion except as allowed in §60.113b (b) (4). Section 60.113b(b(4) requires necessary repairs or emptying the storage vessel within 45 days of identification in any inspection for seals not meeting the following requirements; For the primary seal, the accumulated area of gaps shall not exceed 212 cm^2 per meter of tank diameter, and the width of any portion of any gap shall not exceed 3.81 cm. For the primary seal, one end of the mechanical shoe should extend into the stored liquid and the other end should be at least 61 cm above the liquid surface. There are to be no holes, tears, or openings in the shoe, seal fabric, or the seal envelope. The secondary seal is to be installed above	Measure gaps between the vessel wall and the primary seal initially and at least once every 5 years thereafter. Gap measurement between the vessel wall and the secondary seal shall be performed initially and at least once per year thereafter. Seal gaps shall be measured at one or more floating roof levels when the roof is floating off the roof leg supports. Measure around the entire tank circumference in each place where a 0.32-cm diameter uniform probe passes freely between the seal and the vessel wall. Measure the circumferential distance of each such location. The total surface area of each gap shall be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance. Notify the NWCAA 30 calendar days prior to gap testing. Within 60 days of performing seal gap measurements, submit a report to the NWCAA containing the date of measurement, the raw data obtained, and the calculations of gap width and accumulated area (if gaps were found). Keep records of the result of each seal gap measurement. Include the date of each measurement, the raw data obtained, and the calculations.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		the primary seal so that it completely covers the space between the roof edge and the tank wall except as provided in paragraph (b)(2)(iii) of this section. For the secondary seal, the accumulated area of gaps shall not exceed 21.2 cm^2 per meter of tank diameter and the width of any portion of any gap shall not exceed 1.27 cm. There are to be no holes, tears, or other openings in the seal or seal fabric.	
5.8.61 VOC	Title 40 CFR Subpart Kb 60.112b(a)(2)(ii) (10/8/97) Also, NWCAA Section 580.32 (11/12/98 same as 12/13/89) 40 CFR 61.351 (9/10/90) NWCAA 104.2 (6/10/10)	Roof Openings Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is to be equipped with a gasketed cover, seal, or lid that is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Automatic bleeder vents are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. Rim vents are to be set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting. Automatic bleeder vents and rim space vents are to be gasketed. Each emergency roof drain is to be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.	*Directly enforceable* Visually inspect the vessel openings and bleeder vents quarterly. If inspection shows that openings not related to safety are not sealed, close the opening. Document inspection results and any action taken to seal openings. Visually inspect the emergency roof drain's fabric covers annually. If inspection shows that the roof drain cover is damaged, fix or replace them.
5.8.62 VOC	NWCAA Section 580.98 (12/13/89)	Emergency Roof Drains Provide roof drains with slotted membrane fabric covers or equivalent, which cover at least ninety percent of the area of the opening.	
5.8.63	Title 40 CFR	External Floating Roof on Surface The roof	*Directly enforceable*

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
VOC	Subpart Kb 60.112b(a)(2)(iii) (10/8/97) Also, NWCAA Section 580.32 (11/12/98 – same as 12/13/89) 40 CFR 61.351 (9/10/90) NWCAA 104.2 (6/10/10)	shall be floating on the liquid at all times (i.e., off the roof leg supports) except during initial fill until the roof is lifted off leg supports and when the tank is completely emptied and subsequently refilled. The process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.	Keep records of periods when the tank is resting on the leg supports.
5.8.64 VOC	Title 40 CFR Subpart Kb 60.113b(b)(4) and (b)(4)(iii) (8/11/89) and 60.115b(b)(4) (4/8/87) Also, NWCAA Section 580.32 (11/12/98 – same as 12/13/89) Also 40 CFR 61.351 (9/10/90) which references Title 40 CFR Subpart Kb 60.113b(b)(4)(iii) NWCAA 104.2 (6/10/10)	<u>External Floating Roof Gap Test Discrepancies</u> Repair conditions not meeting the gap allowances, or empty the storage vessel within 45 days of identification of failures found in any inspection. If a failure is detected that cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested in the inspection report.	Report to the NWCAA within 30 days of the inspection if a gap was found exceeding the limitations. The report shall identify the vessel, the date of measurement, the raw data obtained, and the calculations of gap width and accumulation, as well as the date the vessel was emptied or the repairs made and date of repair. An extension request must include a demonstration of unavailability of alternate storage capacity and a specification of a schedule that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.
5.8.65 VOC	Title 40 CFR Subpart Kb 60.113b(b)(6)(i) and (ii) (8/11/89)	<u>External Floating Roof Visual Inspection After Degassing</u> Visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the	Following an inspection after degassing, notify the NWCAA in writing at least 30 days prior to the filling or refilling of each storage vessel. If the inspection is unplanned and could not have been known 30 days prior to refilling, notify

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	Also, NWCAA Section 580.32 (11/12/98 – same as 12/13/89) NWCAA 104.2 (6/10/10)	vessel is emptied and degassed. If inspection shows that the external floating roof has defects; the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, repair the items as necessary so that none of the conditions specified in this paragraph exist before filling or refilling the storage vessel with VOL.	the NWCAA at least 7 days prior to refilling. Notification may be made by telephone, followed by written documentation demonstrating why the inspection was unplanned.
5.8.66	Title 40 CFR Subpart Kb 60.116b(b) (10/15/03) NWCAA 104.2 (6/10/10)	Dimensions and Capacities Keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.	None
5.8.67	Title 40 CFR Subpart Kb 60.116b(c) and (e) (10/15/03) NWCAA 104.2 (6/10/10)	Maximum True Vapor Pressure Maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.	*Directly enforceable* Calculate the maximum true vapor pressure on a daily basis using known Reid Vapor Pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product. Maintain records at the facility with this information.
5.8.68 VOC	NWCAA Section 580.33(11/12/98 – same as12/13/89)	Seal Condition All seals are to be maintained in good operating condition and the seal fabric shall contain no visible holes, tears, or other openings.	*Directly Enforceable* Semiannually, visually inspect the secondary seal. If the secondary seal has holes, tears, or other openings in the seal or fabric, repair the items as necessary. Maintain records of the types of petroleum liquids stored, the maximum true vapor pressure of the liquid as stored, and the results of any inspections performed for a period of two years after the date on which the record was made. Note: Under WAC 173-401-615(2), records must be retained for five years.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.8.69 VOC	NWCAA Sections 580.93, 580.94,and 580.99(all 12/13/89)	Volatile Organic Compound in External Floating Roof Tanks Store volatile organic compounds in vessels subject to this section that have been fitted with a rim-mounted secondary seal. All of these seals or closure devices shall meet the following requirements: • There must be no visible holes, tears, or other openings in the seal or seal fabric; • The seal shall be intact and uniformly in place around the circumference of the floating roof between the roof and the tank wall.	*Directly enforceable* Semiannually, visually inspect the secondary seal. If the secondary seal has holes, tears, or other openings in the seal or fabric, repair the items as necessary. Maintain records of the types of petroleum liquids stored, the maximum true vapor pressure of the liquid as stored, and the results of any inspections performed for a period of two years after the date on which the record was made. Note: Under WAC 173-401-615(2), records must be retained for five years.
5.8.70 VOC	NWCAA Section 580.95 (12/13/89)	Openings All openings in the external floating roof, except for automatic bleeder vents, rim space vents, and leg sleeves shall be equipped with covers, seals, or lids in the closed position except when the openings are in actual use; and equipped with projections into the tank which remain below the liquid surface at all times.	*Directly enforceable* Visually inspect the vessel openings and bleeder vents quarterly. If inspection shows that openings not related to safety are not sealed, close the opening. Document inspection results and any action taken to seal openings.
5.8.71 VOC	NWCAA Section 580.34 (11/12/98 – same as 12/13/89)	Openings All openings not related to safety are to be sealed with suitable closures.	
5.8.72 VOC	NWCAA Section 580.96 (12/13/89)	Automatic Bleeder Vents Keep closed at all times except when the roof is floated off or landed on the roof leg supports.	
5.8.73 VOC	NWCAA Section 580.97 (12/13/89)	Rim Vents Shall be set to open when the roof is being floated off the leg supports or at the manufacturer's recommended setting.	*Directly enforceable* Visually inspect annually for damage and pressure setting.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
Tank Group 6: External Floating Roof Tank 100X95			
Note: The Title 40 CFR Part 61 General Provisions included in Section 3.2 apply to these affected facilities.			
5.8.74 VOC	NWCAA Section 560 (4/14/93)	Storage of Organic Liquid Design and equip the storage vessel with the following vapor loss control device, properly installed, in good working order and in operation: A floating roof, consisting of a pontoon type or double-deck type roof, resting on the surface of the liquid contents and equipped with a closure seal, or seals, to close the space between the roof edge and tank wall. The control equipment provided for in this paragraph shall not be used if the gasoline or petroleum distillate has a True Vapor Pressure of 11.1 pounds per square inch or greater under actual storage conditions. All tank gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place.	*Directly enforceable* Perform all Monitoring, Recordkeeping, and Reporting required in the rest of this table for the subject vessels. Maintain records demonstrating that the stored material has a TVP less than 11.1 pounds per square inch. Notify the NWCAA within 12 hours of discovering an exceedence of the 11.1 pounds per square inch TVP limit.
5.8.75 VOC	OAC 314 conditions 4 & 5 (8/21/91) which reference Title 40 CFR Subpart Kb 60.112b(a)(2)(i) 10/8/97), 60.113b(b)(1), (2), (4)(i) and (4)(ii) and (5)(8/11/89), and 60.115b(b)(2) and (3)(4/8/87) Also, NWCAA Section 580.32 (11/12/98 – same	External Floating Roof Seal Coverage Except as provided in §60.113b (b) (4), the primary seal shall completely cover the annular space between the edge of the floating roof and the tank wall. The secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion except as allowed in §60.113b (b) (4). Section §60.113b(b)(4) requires necessary repairs or emptying the storage vessel within 45 days of identification in any inspection for seals not meeting the following requirements: For the primary seal, the accumulated area of gaps shall not exceed 212 cm^2 per meter	Measure gaps between the vessel wall and the primary seal initially and at least once every 5 years thereafter. Gap measurement between the vessel wall and the secondary seal shall be performed initially and at least once per year thereafter. Seal gaps shall be measured at one or more floating roof levels when the roof is floating off the roof leg supports. Measure around the entire tank circumference in each place where a 0.32-cm diameter uniform probe passes freely between the seal and the vessel wall. Measure the circumferential distance of each such location. The total surface area of each gap shall be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	as 12/13/89) Also 40 CFR Subpart FF §61.351 (9/10/90) NWCAA 104.2 (6/10/10)	of tank diameter, and the width of any portion of any gap shall not exceed 3.81 cm. For the primary seal, one end of the mechanical shoe should extend into the stored liquid and the other end should be at least 61 cm above the liquid surface. There are to be no holes, tears, or other openings in the shoe, seal fabric, or the seal envelope. The secondary seal is to be installed above the primary seal so that it completely covers the space between the roof edge and the tank wall except as provided in paragraph (b)(2)(iii) of this section. For the secondary seal, the accumulated area of gaps shall not exceed 21.2 cm^2 per meter of tank diameter and the width of any portion of any gap shall not exceed 1.27 cm. There are to be no holes, tears, or other openings in the seal or seal fabric.	Notify the NWCAA 30 calendar days prior to gap testing. Within 60 days of performing seal gap measurements, submit a report to the NWCAA containing the date of measurement, the raw data obtained, and the calculations of gap width and accumulated area (if gaps were found). Keep records of the result of each seal gap measurement. Include the date of each measurement, the raw data obtained, and the calculations.
5.8.76 VOC	OAC 314 condition 4 (8/21/91) which references Title 40 CFR Subpart Kb 60.112b(a)(2)(ii) (10/8/97) Also, NWCAA Section 580.32 (11/12/98 – same as 12/13/89) 40 CFR Subpart FF §61.351	Roof Openings Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is to be equipped with a gasketed cover, seal, or lid that is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Automatic bleeder vents are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. Rim vents are to be set to open when the roof is being floated off the roof leg supports or at	*Directly enforceable* Visually inspect the vessel openings and bleeder vents quarterly. If inspection shows that openings not related to safety are not sealed, close the opening. Document inspection results and any action taken to seal openings. Visually inspect the emergency roof drain's fabric covers annually. If inspection shows that the roof drain cover is damaged, fix or replace them.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	(9/10/90) NWCAA 104.2 (6/10/10)	the manufacturer's recommended setting. Automatic bleeder vents and rim space vents are to be gasketed. Each emergency roof drain is to be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.	
5.8.77 VOC	NWCAA Section 580.98 (12/13/89)	Emergency Roof Drains Provide roof drains with slotted membrane fabric covers or equivalent, which cover at least ninety percent of the area of the opening.	
5.8.78 VOC	OAC 314 condition 4 (8/21/91) which references Title 40 CFR Subpart Kb 60.112b(a)(2)(iii) (10/8/97) Also, NWCAA Section 580.32 (11/12/98 – same as 12/13/89) 40 CFR Subpart FF §61.351 (9/10/90) NWCAA 104.2 (6/10/10)	External Floating Roof on Surface The roof shall be floating on the liquid at all times (i.e., off the roof leg supports) except during initial fill until the roof is lifted off leg supports and when the tank is completely emptied and subsequently refilled. The process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.	*Directly enforceable* Keep records of periods when the tank is resting on the leg supports.
5.8.79 VOC	OAC 314 conditions 4 & 5 (8/21/91) which references Title 40 CFR Subpart Kb 60.113b(b)(4) and (b)(4)(iii) (8/11/89) and 60.115b(b)(4)	External Floating Roof Gap Test Discrepancies Repair conditions not meeting the gap allowances, or empty the storage vessel within 45 days of identification of failures found in any inspection. If a failure is detected that cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested	Report to the NWCAA within 30 days of the inspection if a gap was found exceeding the limitations. The report shall identify the vessel, the date of measurement, the raw data obtained, and the calculations of gap width and accumulation, as well as the date the vessel was emptied or the repairs made and date of repair. An extension request must include a demonstration of unavailability of alternate storage capacity and a

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	(4/8/87) Also, NWCAA Section 580.32 (11/12/98 – same as 12/13/89)	in the inspection report.	specification of a schedule that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.
5.8.80 VOC	OAC 314 conditions 4 & 5 (8/21/91) which references Title 40 CFR Subpart Kb 60.113b(b)(6)(i) and (ii) (8/11/89) Also, NWCAA Section 580.32 (11/12/98 – same as 12/13/89)	External Floating Roof Visual Inspection After Degassing Visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed. If inspection shows that the external floating roof has defects; the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, repair the items as necessary so that none of the conditions specified in this paragraph exist before filling or refilling the storage vessel with VOL.	Following an inspection after degassing, notify the NWCAA in writing at least 30 days prior to the filling or refilling of each storage vessel. If the inspection is unplanned and could not have been known30 days prior to refilling, notify the NWCAA at least 7 days prior to refilling. Notification may be made by telephone, followed by written documentation demonstrating why the inspection was unplanned.
5.8.81	OAC 314 conditions 4 & 5 (8/21/91) which reference Title 40 CFR Subpart Kb 60.116b(b) (10/15/03)	Dimensions and Capacities Keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.	None
5.8.82	OAC 314 conditions 4 & 5 (8/21/91) which reference Title 40 CFR Subpart Kb 60.116b(c) and (e) (10/15/03)	Maximum True Vapor Pressure Maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.	*Directly enforceable* Calculate the maximum true vapor pressure on a daily basis using known Reid Vapor Pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product. Maintain records at the facility with this information.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.8.83 VOC	NWCAA Section 580.33(11/13/98 – same as 12/13/89)	Seal Condition All seals are to be maintained in good operating condition and the seal fabric shall contain no visible holes, tears, or other openings.	*Directly Enforceable* Semiannually, visually inspect the secondary seal. If the secondary seal has holes, tears, or other openings in the seal or fabric, repair the items as necessary. Maintain records of the types of petroleum liquids stored, the maximum true vapor pressure of the liquid as stored, and the results of any inspections performed for a period of two years after the date on which the record was made. Note: Under WAC 173-401-615(2), records must be retained for five years.
5.8.84 VOC	NWCAA Sections 580.93, 580.94,and 580.99(all 12/13/89)	Volatile Organic Compound in External Floating Roof Tanks Store volatile organic compounds in vessels subject to this section that have been fitted with a rim-mounted secondary seal. All of these seals or closure devices shall meet the following requirements: There must be no visible holes, tears, or other openings in the seal or seal fabric; The seal shall be intact and uniformly in place around the circumference of the floating roof between the roof and the tank wall.	*Directly enforceable* Semiannually, visually inspect the secondary seal. If the secondary seal has holes, tears, or other openings in the seal or fabric, repair the items as necessary. Maintain records of the types of petroleum liquids stored, the maximum true vapor pressure of the liquid as stored, and the results of any inspections performed for a period of two years after the date on which the record was made. Note: Under WAC 173-401-615(2), records must be retained for five years.
5.8.85 VOC	NWCAA Section 580.95 (12/13/89)	Openings All openings in the external floating roof, except for automatic bleeder vents, rim space vents, and leg sleeves shall be equipped with covers, seals, or lids in the closed position except when the openings are in actual use; and equipped with projections into the tank which remain below the liquid surface at all times.	*Directly enforceable* Visually inspect the vessel openings and bleeder vents quarterly. If inspection shows that openings not related to safety are not sealed, close the opening. Document inspection results and any action taken to seal openings.
5.8.86 VOC	NWCAA Section 580.34 (11/12/98 – same as	Openings All openings not related to safety are to be sealed with suitable closures.	

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	12/13/89)		
5.8.87 VOC	NWCAA Section 580.96 (12/13/89)	Automatic Bleeder Vents Keep closed at all times except when the roof is floated off or landed on the roof leg supports.	
5.8.88 VOC	NWCAA Section 580.97 (12/13/89)	Rim Vents Shall be set to open when the roof is being floated off the leg supports or at the manufacturer's recommended setting.	*Directly enforceable* Visually inspect annually for damage and pressure setting.
Internal Floating Roof Tanks: Tank Group 7: 100X96, 50X304			
Note: The Title 40 CFR Part 63 General Provisions included in Section 3.3 apply to this affected source.			
5.8.89 VOC	NWCAA Section 560 (4/14/93)	Storage of Organic Liquid Design and equip the storage vessel with the following vapor loss control device, properly installed, in good working order and in operation: A floating roof, consisting of a pontoon type or double-deck type roof, resting on the surface of the liquid contents and equipped with a closure seal, or seals, to close the space between the roof edge and tank wall. The control equipment provided for in this paragraph shall not be used if the gasoline or petroleum distillate has a True Vapor Pressure of 11.1 pounds per square inch or greater under actual storage conditions. All tank gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place.	*Directly Enforceable* Perform all monitoring, recordkeeping and reporting as required in the rest of this table. Maintain records demonstrating that the stored VOL has a TVP less than 11.1 psia. Notify the NWCAA within 12 hours of discovering an exceedance of the 11.1 TVP limit.
5.8.90 VOC	NWCAA Sections 580.32 and 580.33 (11/12/98 – same as 12/13/89) which reference 40 CFR	Internal Floating Roof Seal Coverage A seal system shall be in place that completely covers the annular space between the floating roof and the storage vessel wall, except for when necessary repairs are being made as provided in	Visually inspect the internal floating roof and seal system through manholes and roof hatches at least once every 12 months. If: • the floating roof is not resting on the VOL surface, or, • there is liquid accumulated on the roof, or, • the seal is detached or there are holes or tears in the

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	60 Subpart Kb 60.112b(a)(1)(ii) (10/8/97) and 60.113b(a)(2) (8/11/89)	60.113b (a) (2).	seal fabric The permittee shall repair the items or empty and remove the vessel from service within 45 days. If a failure detected during inspections cannot be repaired within 45 days, a 30-day extension may be requested from the NWCAA. Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the permittee will take that will assure that the control equipment will be emptied as soon as possible.
5.8.91 HAP	40 CFR 63 Subpart CC 63.646 (2/21/97) which references 63.119(b)(3) (12/21/06), and 63.120(a)(1) and (2)(i),(a)(4), and 63.123(g) (12/23/04) and 63.655(g)(1) and (g)(2) (6/30/10) NWCAA 104.2 (6/10/10)	<u>Internal Floating Roof Seal Coverage</u> A seal system shall be in place that completely covers the annular space between the floating roof and the storage vessel wall, except for when necessary repairs are being made as provided in 63.120(a)(4	Visually inspect the internal floating roof and seal system through manholes and roof hatches at least once every 12 months. A failure is defined as any time in which: • the floating roof is not resting on the VOL surface and is not resting on the leg supports, or, • there is liquid on the floating roof, or, • the seal is detached or there are holes or tears in the seal fabric, or, • there are visible gaps between the seal and the wall of the storage vessel The permittee shall repair the items or empty and remove the vessel from service within 45 calendar days. If a failure detected during inspections cannot be repaired within 45 calendar days and if the vessel cannot be emptied within 45 calendar days, the permittee may utilize up to 2 extensions of up to 30 additional calendar days each. Documentation of a decision to utilize an extension shall include a description of the failure, shall document that alternative storage capacity is unavailable, and shall specify a schedule of actions that will ensure that the control equipment will be repaired or the vessel will be emptied as soon as practical. Keep this documentation in a readily accessible location.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
			The permittee shall submit a Periodic Report no later than 60 days after the end of each 6-month period when a compliance exception occurred. Submit the results of each inspection in which a failure is detected in the control equipment. Each Periodic Report shall include the date of the inspection, identification of each storage vessel in which a failure was detected, and a description of the failure. The Report shall also describe the nature of the date the repair was made or the date the storage vessel was emptied. If an extension is used, the Permittee shall, in the next Periodic Report, identify the vessel; include the documentation required above, and describe the date the storage vessel was emptied and the nature of and date the repair was made.
5.8.92 VOC	NWCAA Section 580.32 and 580.33 (11/12/98 – same as 12/13/89) which reference 40 CFR 60 Subpart Kb 60.113b(a)(4) and (a)(5) (8/11/89)	Internal Floating Roof – Inspection After Degassing The primary seal shall completely cover the annular space between the floating roof and the storage vessel wall. There should be no holes, tears, or other openings in the seal, seal fabric, or the seal envelope.	Visually inspect the internal floating roof, the seal system, gaskets, slotted membranes and sleeve seals (if any) each time the vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears or other openings in a seal or seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10% open area, repair prior to refilling. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years. Notify the NWCAA in writing at least 30 days prior to refilling. If the inspection is not planned and the Permittee could not have known about the inspection 30 days in advance or refilling the tank,, the notification may be made at least 7 days prior to refilling. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned.
5.8.93 HAP	40 CFR 63 Subpart CC 63.646 (2/21/97) which references	Internal Floating Roof – Inspection After Degassing The primary seal shall completely cover the	Visually inspect the internal floating roof and the seal system each time the vessel is emptied and degassed. and at least once every 10 years.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	63.119(b)(3) (12/21/06), 63.120(a)(2)(ii), (a)(5) and (a)(6) (1/17/97) and 63.655(g)(2)(ii) and 63.655(h)(2)(i) (6/30/10) NWCAA 104.2 (6/10/10)	annular space between the floating roof and the storage vessel wall.	Except as provided in paragraph 63.120(a)(6), notify the NWCAA in writing at least 30 days prior to refilling. If the inspection is not planned and the Permittee could not have known about the inspection 30 days in advance of refilling the tank, the notification may be made at least 7 days prior to refilling. Notification shall be made by telephone and immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, the notification including the written documentation may be made in writing and sent so that it is received by the NWCAA at least 7 calendar days prior to refilling. The permittee shall submit a Periodic Report no later than 60 days after the end of each 6-month period when a compliance exception occurred. Submit the results of each inspection in which a failure is detected in the control equipment. A failure is defined as any time in which the internal floating roof has defects; or the primary seal has holes, tears or other openings in the seal or the seal fabric. Each Periodic Report shall include the date of the inspection, identification of each storage vessel in which a failure was detected, and a description of the failure. The Report shall also describe the nature of and date the repair was made.
5.8.94	NWCAA Section 580.32 (11/12/98 – same as 12/13/89) which references 40 CFR 60 Subpart Kb 60.112b(a)(1)(i) (10/8/97)	Roof Floating on Surface The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as	*Directly Enforceable* Keep records of periods when the tank is resting on the leg supports.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		rapidly as possible.	
5.8.95	40 CFR 63 Subpart CC 63.646 (2/21/97) which references 63.119(b)(1) and (b)(2) (11/21/06) NWCAA 104.2 (6/10/10)	Roof Floating on Surface The internal floating roof shall be floating on the liquid surface at all times except when it must be supported by the leg supports during, initial fill, after the vessel has been completely emptied and degassed, and when the vessel is completely emptied before being subsequently refilled. When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as soon as possible.	
5.8.96 VOC	NWCAA Section 580.34 (11/12/98 – same as 12/13/89)	Openings All openings not related to safety are to be sealed with suitable closures.	*Directly Enforceable* Each time the vessel is emptied and degassed, and at least once every 10 years, conduct an internal inspection of the vessel. If inspection shows that covers or lids are not closed and they are not open for access, or that rim space vents are set incorrectly, or that automatic bleeder vents are not closed when the roof is floating (except when the roof is being floated off or is being landed on the roof legs) notify the NWCAA of a deviation in the next Periodic Report.
5.8.97 HAP	40 CFR 63 Subpart CC 63.646(f) (2/21/97) and 63.119(b)(4) (1/17/97) NWCAA 104.2 (6/10/10)	Roof Openings If a cover or lid is installed on an opening on a floating roof, the cover or lid shall remain closed except when the cover or lid must be open for access. Rim space vents are to be set to open only when the floating roof is not floating or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting. Automatic bleeder vents are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.	
Tank Group 8: Internal Floating Roof Tank 400X1			
Note: The Title 40 CFR Part 60 General Provisions included in Section 3.1 apply to this affected source.			
5.8.98 VOC	NWCAA Section 560 (4/14/93)	Storage of Organic Liquid Design and equip the storage vessel with	*Directly Enforceable* Perform all monitoring, recordkeeping and reporting as

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		the following vapor loss control device, properly installed, in good working order and in operation: A floating roof, consisting of a pontoon type or double-deck type roof, resting on the surface of the liquid contents and equipped with a closure seal, or seals, to close the space between the roof edge and tank wall. The control equipment provided for in this paragraph shall not be used if the gasoline or petroleum distillate has a True Vapor Pressure of 11.1 pounds per square inch or greater under actual storage conditions. All tank gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place.	required in the rest of this table. Maintain records demonstrating that the stored VOL has a TVP less than 11.1 psia. Notify the NWCAA within 12 hours of discovering an exceedance of the 11.1 TVP limit.
5.8.99 VOC	40 CFR 60 Subpart Kb 60.112b(a)(1)(ii) (10/8/97), 60.113b(a)(2) (8/11/89) and 60.115(b)(a)(2) and (a)(3) (4/8/87) NWCAA 104.2 (6/10/10) NWCAA Sections 580.32 and 580.33 (11/12/98 – same as 12/13/89) which reference 40 CFR 60 Subpart Kb	<u>Internal Floating Roof Seal Coverage</u> A seal system shall be in place that completely covers the annular space between the floating roof and the storage vessel wall, except for when necessary repairs are being made as provided in 60.113b (a) (2).	Conduct a visual inspection of the internal floating roof and seal system through manholes and roof hatches at least once every 12 months. If: • the floating roof is not resting on the VOL surface, or, • there is liquid accumulated on the floating roof, or, • a seal is detached or there are holes or tears in the seal fabric The permittee shall repair the items or empty and remove the vessel from service within 45 days. If a failure detected during inspections cannot be repaired within 45 days, a 30-day extension may be requested from the NWCAA. Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the permittee will take that will assure that the control equipment will be emptied as soon as possible. Keep a record of each inspection that includes the tank #, date of inspection, and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
			If any of the conditions listed above are detected during the annual visual inspection, a report shall be sent to the NWCAA within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the condition and list each repair made.
5.8.100 VOC	40 CFR 60 Subpart Kb 60.113b(a)(4) and (a)(5) (8/11/89), and 60.115b(a)(2) (4/8/87) NWCAA 104.2 (6/10/10) NWCAA Section 580.32 and 580.33 (11/12/98 – same as 12/13/89) which references 40 CFR 60 Subpart Kb	<u>Seal Coverage – Inspection After Degassing</u> The primary seal shall completely cover the annular space between the floating roof and the storage vessel wall. There should be no holes, tears, or other openings in the seal, seal fabric, or the seal envelope.	Visually inspect the internal floating roof, the seal system, gaskets, slotted membranes and sleeve seals (if any) each time the vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears or other openings in a seal or seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10% open area, repair prior to refilling. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years. Notify the NWCAA in writing at least 30 days prior to refilling. If the inspection is not planned and the permittee could not have known about the inspection 30 days in advance, the notification may be made verbally at least 7 days prior to refilling followed immediately by written documentation demonstrating why the inspection was unplanned. Keep a record of each inspection that includes the tank #, date of inspection, and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).
5.8.101 VOC	NWCAA Section 580.34 (11/12/98 – same as 12/13/89) NWCAA 104.2 (6/10/10)	<u>Openings</u> All openings not related to safety are to be sealed with suitable closures.	
5.8.102 VOC	40 CFR 60 Subpart Kb 60.112b(a)(1)(iii) --(a)(1)(ix) (10/8/97) and 60.113b(a)(4) and (a)(5) (8/11/89), and 60.115b(a)(2)	<u>Roof Openings - Inspection After Degassing</u> Except for automatic bleeder vents (vacuum breaker vents) and rim space vents, each opening in the roof shall have a projection below the liquid surface. Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, ladder wells, sample wells, and stub drains, are to be equipped	

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	(4/8/87) NWCAA 104.2 (6/10/10)	with a gasketed cover or lid maintained in a closed position at all times (i.e., no visible gap) except when the device is in use. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use. Automatic bleeder vents are to be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. Rim space vents shall be equipped with a gasket and are to be set to open only when the roof is not floating or at the manufacturer's recommended setting. Each penetration of the floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90% of the opening. Each penetration of the floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover. Each penetration that allows for passage of a ladder shall have a gasketed sliding cover.	
5.8.103 VOC	40 CFR 60 Subpart Kb 60.112b(a)(1)(i) (10/8/97) NWCAA 104.2 (6/10/10) NWCAA Section 580.32 (11.12.98 – same as 12/13/89) which	Roof Floating on Surface The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the	*Directly Enforceable* Keep records of periods when the tank is resting on the leg supports.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	references 40 CFR 60 Subpart Kb	process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.	
5.8.104 General	Title 40 CFR Subpart Kb 60.116b(b) (10/15/03) NWCAA 104.2 (6/10/10)	Dimensions and Capacities Keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.	None
5.8.105 General	Title 40 CFR Subpart Kb 60.116b(c) and (e) (10/15/03) NWCAA 104.2 (6/10/10)	Maximum True Vapor Pressure Maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.	Calculate the maximum true vapor pressure on a daily basis using known Reid Vapor Pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product. Maintain records at the facility with this information.
Tank Group 9: Internal Floating Roof Tanks 300X40 and 100X98 (wastewater vessels)			
Note: The Title 40 CFR Part 61 General Provisions included in Section 3.2 apply to this affected source.			
5.8.106 VOC	NWCAA Section 560 (4/14/93)	Storage of Organic Liquid Design and equip the storage vessel with the following vapor loss control device, properly installed, in good working order and in operation: A floating roof, consisting of a pontoon type or double-deck type roof, resting on the surface of the liquid contents and equipped with a closure seal, or seals, to close the space between the roof edge and tank wall. The control equipment provided for in this paragraph shall not be used if the gasoline or petroleum distillate has a True Vapor Pressure of 11.1 pounds per square inch or greater under actual storage conditions. All tank gauging and	*Directly enforceable* Perform all monitoring, recordkeeping and reporting as required in the rest of this table. Maintain records demonstrating that the stored VOL has a TVP less than 11.1 psia. Notify the NWCAA within 12 hours of discovering an exceedance of the 11.1 TVP limit.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		sampling devices shall be gas-tight except when gauging or sampling is taking place.	
5.8.107 VOC/Benzene	OAC 314 Condition 3 (8/21/91) which references 40 CFR 60 Subpart Kb 60.112b(a)(1)(ii) (10/8/97), 60.113b(a)(2) (8/11/89) and 60.115(b)(a)(2) and (a)(3) (4/8/87) NWCAA Sections 580.32 and 580.33 (11/12/98 – same as 12/13/89) which reference 40 CFR 60 Subpart Kb 40 CFR Subpart FF 61.351 (9/10/90) which references 40 CFR 60.112b(a)(1) NWCAA 104.2 (6/10/10)	<u>Internal Floating Roof Seal Coverage</u> A seal system shall be in place that completely covers the annular space between the floating roof and the storage vessel wall, except for when necessary repairs are being made as provided in 60.113b(a)(2).	Conduct a visual inspection of the internal floating roof and seal system through manholes and roof hatches at least once every 12 months. If: • the floating roof is not resting on the VOL surface, or, • there is liquid accumulated on the floating roof, or, • a seal is detached or there are holes or tears in the seal fabric The permittee shall repair the items or empty and remove the vessel from service within 45 days. If a failure detected during inspections cannot be repaired within 45 days, a 30-day extension may be requested from the NWCAA. Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the permittee will take that will assure that the control equipment will be emptied as soon as possible. Keep a record of each inspection that includes the tank #, date of inspection, and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings). If any of the conditions listed above are detected during the annual visual inspection, a report shall be sent to the NWCAA within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the condition and list each repair made.
5.8.108 VOC/Benzene	OAC 314 Condition 3 (8/21/91) which references 40 CFR 60 Subpart Kb 60.113b(a)(4) and (a)(5)	<u>Seal Coverage – Inspection After Degassing</u> The primary seal shall completely cover the annular space between the floating roof and the storage vessel wall. There should be no holes, tears, or other openings in the seal, seal fabric, or the seal envelope.	Visually inspect the internal floating roof, the seal system, gaskets, slotted membranes and sleeve seals (if any) each time the vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears or other openings in a seal or seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10% open area,

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	(8/11/89), and 60.115b(a)(2) (4/8/87) NWCAA Section 580.32 and 580.33 (11/12/98 – same as 12/13/89) which references 40 CFR 60 Subpart Kb		repair prior to refilling. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years. Notify the NWCAA in writing at least 30 days prior to refilling. If the inspection is not planned and the permittee could not have known about the inspection 30 days in advance, the notification may be made verbally at least 7 days prior to refilling followed immediately by written documentation demonstrating why the inspection was unplanned. Keep a record of each inspection that includes the tank #, date of inspection, and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).
5.8.109 VOC/Benzene	NWCAA Section 580.34 (11/12/98 – same as 12/13/89)	<u>Openings</u> All openings not related to safety are to be sealed with suitable closures.	
5.8.110 VOC/Benzene	OAC 314 Condition 3 (8/21/91) which references 40 CFR 60 Subpart Kb 60.112b(a)(1)(iii) --(a)(1)(ix) (10/8/97) and 60.113b(a)(4) and (a)(5) (8/11/89), and 60.115b(a)(2) (4/8/87) 40 CFR Subpart FF 61.351 (9/10/90) which references 40 CFR 60.112b(a)(1) NWCAA 104.2 (6/10/10)	<u>Roof Openings - Inspection After Degassing</u> Except for automatic bleeder vents (vacuum breaker vents) and rim space vents, each opening in the roof shall have a projection below the liquid surface. Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, ladder wells, sample wells, and stub drains, are to be equipped with a gasketed cover or lid maintained in a closed position at all times (i.e., no visible gap) except when the device is in use. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use. Automatic bleeder vents are to be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. Rim space vents shall be	

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		equipped with a gasket and are to be set to open only when the roof is not floating or at the manufacturer's recommended setting. Each penetration of the floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90% of the opening. Each penetration of the floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover. Each penetration that allows for passage of a ladder shall have a gasketed sliding cover.	
5.8.111 VOC/Benzene	OAC 314 Condition 3 (8/21/91) which references 40 CFR 60 Subpart Kb 60.112b(a)(1)(i) (10/8/97) NWCAA Section 580.32 (11.12.98 – same as 12/13/89) which references 40 CFR 60 Subpart Kb 40 CFR Subpart FF 61.351 (9/10/90) which references 40 CFR 60.112b(a)(1) NWCAA 104.2 (6/10/10)	Roof Floating on Surface The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at at all times, except during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.	*Directly Enforceable* Keep records of periods when the tank is resting on the leg supports.
5.8.112	40 CFR Subpart	Sampling Well Each penetration of the	*Directly enforceable*

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
VOC/Benzene	FF §61.351 (9/10/90), which references 60.112(b)(a)(1)(vii) (10/8/97) NWCAA 104.2 (6/10/10) OAC 314 Condition 3 (8/21/91) which references 40 CFR part 60 subpart Kb.	internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening.	Each time the vessel is emptied and degassed, and at least once every 10 years, conduct an internal inspection of the vessel. If inspection shows that the floating roof has defects including, by not limited to, improper gasketing or unsealed openings, repair the defects prior to refilling. Notify the NWCAA in writing at least 30 days prior to refilling. If the inspection is unplanned, the notification may be made verbally at least 7 days prior to refilling followed immediately by written notification.
5.8.113 VOC/HAP	40 CFR Subpart FF §61.351 (9/10/90), which references 60.112(b)(a)(1)(viii) (10/8/97) NWCAA 104.2 (6/10/10) OAC 314 Condition 3 (8/21/91) which references 40 CFR part 60 subpart Kb.	Column Supporting Fixed Roof Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.	
5.8.114 VOC/HAP	40 CFR Subpart FF §61.351 (9/10/90), which references 60.112(b)(a)(1)(ix) (10/8/97) NWCAA 104.2	Gasketed Sliding Cover Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.	*Directly enforceable* Each time the vessel is emptied and degassed, and at least once every 10 years, conduct an internal inspection of the vessel. If inspection shows that the floating roof has defects including, but not limited to, improper gasketting or unsealed openings, repair the defects prior to refilling. Notify the NWCAA in writing at least 30 days prior to

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	(6/10/10) OAC 314 Condition 3 (8/21/91) which reference 40 CFR part 60 subpart Kb.		refilling. If the inspection is unplanned, the notification may be made verbally at least 7 days prior to refilling followed immediately by written notification.
5.8.115 General	OAC 314 conditions 3, & 5 (8/21/91) which reference Title 40 CFR Subpart Kb 60.116b(b) (10/15/03)	Dimensions and Capacities Keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.	None
5.8.116 General	OAC 314 conditions 3 & 5 (8/21/91) which reference Title 40 CFR Subpart Kb 60.116b(c) and (e) (10/15/03)	Maximum True Vapor Pressure Maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.	Calculate the maximum true vapor pressure on a daily basis using known Reid Vapor Pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product. Maintain records at the facility with this information.
Tank Group 10: Internal Floating Roof Tank 100X99, 100X94 (wastewater vessel)			
Note: The Title 40 CFR Part 61 General Provisions included in Section 3.2 apply to this affected source.			
5.8.117 VOC	NWCAA Section 560 (4/14/93)	Storage of Organic Liquid Design and equip the storage vessel with the following vapor loss control device, properly installed, in good working order and in operation: A floating roof, consisting of a pontoon type or double-deck type roof, resting on the surface of the liquid contents and equipped with a closure seal, or seals, to close the space between the roof edge and tank wall. The control equipment provided for in this paragraph shall not be	*Directly enforceable* Perform all monitoring, recordkeeping and reporting as required in the rest of this table. Maintain records demonstrating that the stored VOL has a TVP less than 11.1 psia. Notify the NWCAA within 12 hours of discovering an exceedance of the 11.1 TVP limit.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		used if the gasoline or petroleum distillate has a True Vapor Pressure of 11.1 pounds per square inch or greater under actual storage conditions. All tank gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place.	
5.8.118 VOC/Benzene	NWCAA Sections 580.32 and 580.33 (11/12/98 – same as 12/13/89) which reference 40 CFR 60 Subpart Kb 60,112b(a)(1)(ii) (10/8/97), 60.113b(a)(2) (8/11/89) and 60.115(b)(a)(2) and (a)(3) (4/8/87) 40 CFR Subpart FF 61.351 (9/10/90) which references 40 CFR 60.112b(a)(1) NWCAA 104.2 (6/10/10)	<u>Internal Floating Roof Seal Coverage</u> A seal system shall be in place that completely covers the annular space between the floating roof and the storage vessel wall, except for when necessary repairs are being made as provided in 60.113b(a)(2).	Conduct a visual inspection of the internal floating roof and seal system through manholes and roof hatches at least once every 12 months. If: • the floating roof is not resting on the VOL surface, or, • there is liquid accumulated on the floating roof, or, • a seal is detached or there are holes or tears in the seal fabric The permittee shall repair the items or empty and remove the vessel from service within 45 days. If a failure detected during inspections cannot be repaired within 45 days, a 30-day extension may be requested from the NWCAA. Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the permittee will take that will assure that the control equipment will be emptied as soon as possible. Keep a record of each inspection that includes the tank #, date of inspection, and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings). If any of the conditions listed above are detected during the annual visual inspection, a report shall be sent to the NWCAA within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the condition and list each repair made.
5.8.119 VOC	NWCAA Section 580.32 and 580.33 (11/12/98	<u>Seal Coverage – Inspection After Degassing</u> The primary seal shall completely cover the annular space between the floating roof	Visually inspect the internal floating roof, the seal system, gaskets, slotted membranes and sleeve seals (if any) each time the vessel is emptied and degassed. If the internal

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	– same as 12/13/89) which references 40 CFR 60 Subpart Kb 60.113b(a)(4) and (a)(5) (8/11/89), and 60.115b(a)(2) (4/8/87)	and the storage vessel wall. There should be no holes, tears, or other openings in the seal, seal fabric, or the seal envelope.	floating roof has defects, the primary seal has holes, tears or other openings in a seal or seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10% open area, repair prior to refilling. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years. Notify the NWCAA in writing at least 30 days prior to refilling. If the inspection is not planned and the permittee could not have known about the inspection 30 days in advance, the notification may be made verbally at least 7 days prior to refilling followed immediately by written documentation demonstrating why the inspection was unplanned. Keep a record of each inspection that includes the tank #, date of inspection, and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).
5.8.120 VOC	NWCAA Section 580.34 (11/12/98 – same as 12/13/89)	<u>Openings</u> All openings not related to safety are to be sealed with suitable closures.	
5.8.121 HAP	40 CFR Subpart FF 61.351 (9/10/90) which references 40 CFR 0.112b(a)(1) (10/8/97) NWCAA 104.2 (6/10/10)	<u>Roof Openings - Inspection After Degassing</u> Except for automatic bleeder vents (vacuum breaker vents) and rim space vents, each opening in the roof shall have a projection below the liquid surface. Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, ladder wells, sample wells, and stub drains, are to be equipped with a gasketed cover or lid maintained in a closed position at all times (i.e., no visible gap) except when the device is in use. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use. Automatic bleeder vents are to be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. Rim space vents shall be equipped with a gasket and are to be set to	

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		open only when the roof is not floating or at the manufacturer's recommended setting. Each penetration of the floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90% of the opening. Each penetration of the floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover. Each penetration that allows for passage of a ladder shall have a gasketed sliding cover.	
5.8.122 VOC/Benzene	40 CFR Subpart FF 61.351 (9/10/90) which references 40 CFR 60 Subpart Kb 60.112b(a)(1)(i) (10/8/97) NWCAA 104.2 (6/10/10) NWCAA Section 580.32 (11.12.98 – same as 12/13/89) which references 40 CFR 60 Subpart Kb	Roof Floating on Surface The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.	*Directly Enforceable* Keep records of periods when the tank is resting on the leg supports.
5.8.123 VOC/Benzene	40 CFR Subpart FF §61.351 (9/10/90), which references 60.112(b)(a)(1)(vii) (10/8/97) NWCAA 104.2	Sampling Well Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening.	*Directly enforceable* Each time the vessel is emptied and degassed, and at least once every 10 years, conduct an internal inspection of the vessel. If inspection shows that the floating roof has defects including, by not limited to, improper gasketting or unsealed openings, repair the defects prior to refilling.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	(6/10/10)		Notify the NWCAA in writing at least 30 days prior to refilling. If the inspection is unplanned, the notification may be made verbally at least 7 days prior to refilling followed immediately by written notification.
5.8.124 VOC/Benzene	40 CFR Subpart FF §61.351 (9/10/90), which references 60.112(b)(a)(1)(viii) (10/8/97) NWCAA 104.2 (6/10/10)	Column Supporting Fixed Roof Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.	
5.8.125 VOC/Benzene	40 CFR Subpart FF §61.351 (9/10/90), which references 60.112(b)(a)(1)(ix) (10/8/97) NWCAA 104.2 (6/10/10)	Gasketed Sliding Cover Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.	*Directly enforceable* Each time the vessel is emptied and degassed, and at least once every 10 years, conduct an internal inspection of the vessel. If inspection shows that the floating roof has defects including, by not limited to, improper gasketting or unsealed openings, repair the defects prior to refilling. Notify the NWCAA in writing at least 30 days prior to refilling. If the inspection is unplanned, the notification may be made verbally at least 7 days prior to refilling followed immediately by written notification.
Tank Group 11: Tanks 6X10, 6X11, 50X300, 50X301, 50X302, 50X303, 100X91, 300X36, 300X37, 300X38, 300X39, 550X100, 550X103, 550X104, 550X105, 800X140, 800X146, 800X147, 800X148, 800X149, 800X150, 960X1			
Note: The 40 CFR Part 63 General Provisions in Section 3.3 apply to these affected sources.			
5.8.126 VOC/HAP	Title 40 CFR Subpart CC §63.646 (2/21/97), which references 63.119 (a)(3) (12/21/06) NWCAA 104.2 (6/10/10)	Dimensions and Capacities Keep readily accessible records of the dimensions and capacities of each Group 2 storage vessel. Note: The 40 CFR Part 63 General Provisions apply to these affected sources.	Maintain records at the facility with dimensions and capacities.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
Tank Group 12: Tanks 300X35, 300X46			
Note: The Title 40 CFR Part 61 General Provisions included in Sections 3.2 apply to these affected facilities.			
5.8.127 VOC	NWCAA Section 560 (4/14/93)	Storage of Organic Liquid Design and equip the storage vessel with the following vapor loss control device, properly installed, in good working order and in operation: A floating roof, consisting of a pontoon type or double-deck type roof, resting on the surface of the liquid contents and equipped with a closure seal, or seals, to close the space between the roof edge and tank wall. The control equipment provided for in this paragraph shall not be used if the gasoline or petroleum distillate has a True Vapor Pressure of 11.1 pounds per square inch or greater under actual storage conditions. All tank gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place.	*Directly enforceable* Perform all Monitoring, Recordkeeping, and Reporting required in the rest of this table for the subject vessels. Maintain records demonstrating that the stored material has a TVP less than 11.1 pounds per square inch. Notify the NWCAA within 12 hours of discovering an exceedence of the 11.1 pounds per square inch TVP limit.
5.8.128 VOC	40 CFR Subpart FF 61.351 (9/10/90) which references 40 CFR 60.112b(a)(2) (10/8/97) NWCAA 104.2 (6/10/10) NWCAA Section 580.32 (11/12/98 – same as 12/13/89) which references 40 CFR Part 60 Subpart Kb	External Floating Roof Seal Coverage Except as provided in §60.113b (b) (4), the primary seal shall completely cover the annular space between the edge of the floating roof and the tank wall. The secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion except as allowed in §60.113b (b) (4). Section 60.113b(b(4) requires necessary repairs or emptying the storage vessel within 45 days of identification in any inspection for seals not meeting the following requirements; For the primary seal, the accumulated area	Measure gaps between the vessel wall and the primary seal initially and at least once every 5 years thereafter. Gap measurement between the vessel wall and the secondary seal shall be performed initially and at least once per year thereafter. Seal gaps shall be measured at one or more floating roof levels when the roof is floating off the roof leg supports. Measure around the entire tank circumference in each place where a 0.32-cm diameter uniform probe passes freely between the seal and the vessel wall. Measure the circumferential distance of each such location. The total surface area of each gap shall be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		of gaps shall not exceed 212 cm^2 per meter of tank diameter, and the width of any portion of any gap shall not exceed 3.81 cm. For the primary seal, one end of the mechanical shoe should extend into the stored liquid and the other end should be at least 61 cm above the liquid surface. There are to be no holes, tears, or openings in the shoe, seal fabric, or the seal envelope. The secondary seal is to be installed above the primary seal so that it completely covers the space between the roof edge and the tank wall except as provided in paragraph (b)(2)(iii) of this section. For the secondary seal, the accumulated area of gaps shall not exceed 21.2 cm^2 per meter of tank diameter and the width of any portion of any gap shall not exceed 1.27 cm. There are to be no holes, tears, or other openings in the seal or seal fabric.	Notify the NWCAA 30 calendar days prior to gap testing. Within 60 days of performing seal gap measurements, submit a report to the NWCAA containing the date of measurement, the raw data obtained, and the calculations of gap width and accumulated area (if gaps were found). Keep records of the result of each seal gap measurement. Include the date of each measurement, the raw data obtained, and the calculations.
5.8.129 VOC	NWCAA Section 580.32 (11/12/98 – same as 12/13/89) and 40 CFR Subpart FF §61.351 (9/10/90) which references 40 CFR 60.112b(a)(2) (10/8/97) NWCAA 104.2 (6/10/10)	Roof Openings Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is to be equipped with a gasketed cover, seal, or lid that is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Automatic bleeder vents are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. Rim vents are to be set to open when the roof is	*Directly enforceable* Visually inspect the vessel openings and bleeder vents quarterly. If inspection shows that openings not related to safety are not sealed, close the opening. Document inspection results and any action taken to seal openings. Visually inspect the emergency roof drain's fabric covers annually. If inspection shows that the roof drain cover is damaged, fix or replace them.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		being floated off the roof leg supports or at the manufacturer's recommended setting. Automatic bleeder vents and rim space vents are to be gasketed. Each emergency roof drain is to be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.	
5.8.130 VOC	NWCAA Section 580.98 (12/13/89)	Emergency Roof Drains Provide roof drains with slotted membrane fabric covers or equivalent, which cover at least ninety percent of the area of the opening.	
5.8.131 VOC	NWCAA Section 580.32 (11/12/98 – same as 12/13/89) and 40 CFR Subpart FF §61.351 (9/10/90) which references 40 CFR 60.112b(a)(2) (10/8/97) NWCAA 104.2 (6/10/10)	External Floating Roof on Surface The roof shall be floating on the liquid at all times (i.e., off the roof leg supports) except during initial fill until the roof is lifted off leg supports and when the tank is completely emptied and subsequently refilled. The process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.	Keep records of periods when the tank is resting on the leg supports. An extension request must include a demonstration of unavailability of alternate storage capacity and a specification of a schedule that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.
5.8.132 VOC	NWCAA Section 580.32 (11/12/98 – same as 12/13/89)	External Floating Roof Gap Test Discrepancies Repair conditions not meeting the gap allowances, or empty the storage vessel within 45 days of identification of failures found in any inspection. If a failure is detected that cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested in the inspection report.	*Directly Enforceable* Report to the NWCAA within 30 days of the inspection if a gap was found exceeding the limitations. The report shall identify the vessel, the date of measurement, the raw data obtained, and the calculations of gap width and accumulation, as well as the date the vessel was emptied or the repairs made and date of repair.
5.8.133	NWCAA Section	External Floating Roof Visual Inspection	*Directly Enforceable*

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
VOC	580.32 (11/12/98 – same as 12/13/89)	After Degassing If inspection shows that the external floating roof has defects; the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, repair the items as necessary so that none of the conditions specified in this paragraph exist before filling or refilling the storage vessel with VOL.	Following an inspection after degassing, notify the NWCAA in writing at least 30 days prior to the filling or refilling of each storage vessel. If the inspection is unplanned and was not foreseen 30 days prior to refilling, notify the NWCAA at least 7 days prior to refilling. Notification may be made by telephone, followed by written documentation.
5.8.134 VOC	NWCAA Section 580.33 (11/12/98 – Same as 12/13/89)	Seal Condition All seals are to be maintained in good operating condition and the seal fabric shall contain no visible holes, tears, or other openings.	*Directly Enforceable* Semiannually, visually inspect the secondary seal. If the secondary seal has holes, tears, or other openings in the seal or fabric, repair the items as necessary. Maintain records of the types of petroleum liquids stored, the maximum true vapor pressure of the liquid as stored, and the results of any inspections performed for a period of two years after the date on which the record was made. Note: Under WAC 173-401-615(2), records must be retained for five years.
5.8.135 VOC	NWCAA Sections 580.93, 580.94,and 580.99(all 12/13/89)	Volatile Organic Compound in External Floating Roof Tanks Store volatile organic compounds in vessels subject to this section that have been fitted with a rim-mounted secondary seal. All of these seals or closure devices shall meet the following requirements: There must be no visible holes, tears, or other openings in the seal or seal fabric; The seal shall be intact and uniformly in place around the circumference of the floating roof between the roof and the tank wall.	*Directly Enforceable* Semiannually, visually inspect the secondary seal. If the secondary seal has holes, tears, or other openings in the seal or fabric, repair the items as necessary. Maintain records of the types of petroleum liquids stored, the maximum true vapor pressure of the liquid as stored, and the results of any inspections performed for a period of two years after the date on which the record was made. Note: Under WAC 173-401-615(2), records must be retained for five years.
5.8.136	NWCAA Section	Openings All openings in the external	*Directly Enforceable*

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
VOC	580.95 (12/13/89)	floating roof, except for automatic bleeder vents, rim space vents, and leg sleeves shall be equipped with covers, seals, or lids in the closed position except when the openings are in actual use; and equipped with projections into the tank which remain below the liquid surface at all times.	Visually inspect the vessel openings and bleeder vents quarterly. If inspection shows that openings not related to safety are not sealed, close the opening. Document inspection results and any action taken to seal openings.
5.8.137 VOC	NWCAA Section 580.34 (12/13/89)	Openings All openings not related to safety are to be sealed with suitable closures.	
5.8.138 HAP	40 CFR Subpart CC §63.646(f)(1) (2/21/97) NWCAA 104.2 (6/10/10)	Cover or Lid If a cover or lid is installed on an opening on a floating roof, the cover or lid shall remain closed except when the cover or lid must be open for access.	
5.8.139 VOC	NWCAA Section 580.96 (12/13/89)	Automatic Bleeder Vents Keep closed at all times except when the roof is floated off or landed on the roof leg supports.	
5.8.140 VOC	NWCAA Section 580.97 (12/13/89)	Rim Vents Shall be set to open when the roof is being floated off the leg supports or at the manufacturer's recommended setting.	*Directly Enforceable* Visually inspect annually for damage and pressure setting.
5.8.141 HAP	40 CFR Subpart CC §63.646(f)(2) (2/21/97) NWCAA 104.2 (6/10/10)	Rim Space Vents Rim space vents are to be set to open only when the floating roof is not floating or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting.	

5.9 Flare System

Table 5-9 Flare System

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
Individual Drain Systems serving 40 CFR Part 61 Subpart FF and Part 63 Subpart CC			
Note: The Title 40 CFR Part 61 and Part 63 General Provisions in Sections 3.2 and 3.3 apply to wastewater systems in the flare area			
5.9.1 HAP	40 CFR Part 63 Subpart CC 40 CFR Part 61 Subpart FF NWCAA 104.2 (6/10/10)	Comply with the standards for individual drain systems for waste streams subject to Part 63 Subpart CC and Part 61 Subpart FF	Monitoring/Recordkeeping/Reporting (MR&R) requirements are included in Table 5-14
ZTOF Flare (13V-10)			
Note: The Title 40 CFR Part 63 General Provisions included in Section 3.3 apply to this affected facility.			
5.9.2 HAP	Title 40 CFR Subpart CC §63.648 (8/18/98) NWCAA 104.2 (6/10/10)	Petroleum Refinery MACT – Equipment Leak Standards	Follow the MR&R requirements in terms 5.13.1 through 5.13.17.
5.9.3 HAP	40 CFR Subpart CC §63.643(a)(1)(8/18/95),which references 40 CFR 63.11(b) (2) and (3) (10/17/00) and 63.644(a) (2) (8/18/98). NWCAA 104.2 (6/10/10)	Miscellaneous Process Vent Flare Operation Flares shall be operated at all times when emissions may be vented to them. Flares shall be steam-assisted, air-assisted, or non-assisted. Flares shall be operated with a flame present at all times.	Monitor the flare with a device capable of continuously detecting the presence of a pilot flame (including, but not limited to a thermocouple, an ultraviolet beam sensor, or an infrared sensor). All monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturer's specifications or other written procedures that provide adequate assurance that the equipment will monitor accurately. Submit a Periodic Report no later than 60 days after the end of each 6-month period when a compliance exception occurred. Periods of excess emissions shall be identified in the Periodic Reports and shall be used to determine compliance with the emission standards. Periods of excess emissions means any of the following conditions: (i) An operating day when all pilot flames of a flare are absent.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
			(ii) An operating day when monitoring data required to be recorded in paragraphs (i) (3) (i) (data values measured at least once every hour) and (ii) (each measured data value; or block average values for 1 hour or shorter periods calculated from all measured data values during each period) are available for less than 75% of the operating hours or a day when less than 18 monitoring values were recorded. Maintain hourly records of whether the monitor was continuously operating and whether a pilot flame was continuously present. Record and report the times and durations of all periods when all pilot flames for a flare are absent or the monitor is not operation. The following is *Directly Enforceable:* Thermocouples, or any other equivalent device, to detect the presence of a flame, shall continuously monitor each flare for the presence of a flame and the data recorded electronically in no less than 15-minute averages. Operating a flare in the absence of a pilot flame shall be reported to the NWCAA as an upset with 12 hours of the event in accordance with NWCAA 340.
5.9.4	40 CFR Subpart CC §63.643(a) (1) (8/18/95), which references 40 CFR Subpart A 63.11(b) (4) (10/17/00). Also, Title 40 CFR Subpart CC §63.648(8/18/98), which references 60.18(c)(1) and (f) (12/22/08) and 60.485(g)(1) (11/16/07) NWCAA 104.2 (6/10/10)	Visible Emissions Flares shall be designed for and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours (EPA Method 22).	*Directly Enforceable* Any exceedance of the applicable opacity limit shall be reported to the NWCAA as an upset with 12 hours of the event in accordance with NWCAA 340.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.9.5	40 CFR Subpart CC §63.643(a) (1) (8/18/95), which references 40 CFR 63.11(b) (6) (10/17/00). Also, Title 40 CFR Subpart CC §63.648 (8/18/98), which references 60.18(c) (3)(ii) (12/22/08). NWCAA 104.2 (6/10/10)	Heating Value The net heating value of the gas being combusted shall be 11.2 MJ/scm (300 Btu/scf) or greater for steam or air-assisted flares. For nonassisted flares, the net heating value shall be 7.45 MJ/scm (200 Btu/scf) or greater. The net heating value shall be calculated by the equation in 63.11(b) (6) (ii), which is identical to the equations in 60.18(f) (3) and 60.485(g) (4).	*Directly Enforceable* Maintain records of determination.
5.9.6	40 CFR Subpart CC §63.643(a) (1) (8/18/95), which references 40 CFR Subpart A 63.11(b)(7)(i)(10/17/00). Also, Subpart CC 63.648 (8/18/98), which references 60.18(c) (4) (12/22/08) and 60.485(g) (7) (11/16/07). NWCAA 104.2 (6/10/10)	Exit Velocity Steam-assisted and nonassisted flares shall be designed for and operated with an exit velocity less than 18.3 m/sec (60 ft/sec), except as provided in paragraphs 63.11(b)(7)(ii) and 63.11(b)(7)(iii). These paragraphs are identical to 60.18(c) (4) (i), 60.18(c) (4) (ii), 60.18(c) (4) (iii) and 60.485(g) (7).	*Directly Enforceable* Maintain records of determination.
5.9.7	40 CFR Subpart CC §63.643(a) (1) (8/18/95), which references 40 CFR Subpart A 63.11(b) (7) (ii)(10/17/00). Also, 63.648 (8/18/98), which references 60.18(c)(4)(ii) (12/22/08) and 60.485(g)(7) (11/16/07) NWCAA 104.2 (6/10/10)	Exit Velocity Exemption Steam-assisted and nonassisted flares designed for and operated with an exit velocity equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec) are allowed if the gas net heating value is greater than 37.3 MJ/scm (1000 Btu/scf).	

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.9.8	40 CFR Subpart CC §63.643(a) (1) (8/18/95), which references 40 CFR 63.11(b) (7) (iii) (10/17/00). Also, Title 40 CFR Subpart CC §63.648(8/18/98), which references 60.18(c)(4)(iii) (12/22/08) and 60.485(g) (7)(11/16/07). NWCAA 104.2 (6/10/10)	Exit Velocity Exemption Steam-assisted and nonassisted flares designed for and operated with an exit velocity less than the velocity, V_{max}, as determined by the method specified in 63.11(b)(7)(iii), but less than 122 m/sec (400 ft/sec) are allowed.	
5.9.9	Title 40 CFR Subpart CC §63.648 (8/18/98), which references 40 CFR Subpart VV 60.482-10 (12/14/00) which references 60.18(c) (2), (d), (e), and (f) (2/22/08) and 60.485(g) (2) (11/16/07). Also, 40 CFR Subpart CC §63.655(d) which references 60.486 and 60.487(6/30/10) NWCAA 104.2 (6/10/10)	Pilot Flame Flares shall be operated with a flame present at all times. Flares shall be operated at all times when emissions may be vented to them.	The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame. The flare shall be monitored to assure that it is operated and maintained in conformance with its design. Record and keep (for a minimum of 5 years) the following records in a readily accessible location: i. Detailed schematics, design specifications, and piping and instrumentation diagrams. ii. The dates and descriptions of any changes in the design specifications. iii. A description of the parameter monitored to ensure that the control devices is operated and maintained in conformance with its design and an explanation of why that parameter was selected for monitoring. iv. Periods when a flare pilot light does not have a flame. v. Dates of startups and shutdowns of the closed vent system and control device. Submit the following in a semiannual report to the NWCAA: (1) Process unit identification

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
			(2) Dates of process unit shutdowns which occurred during the period. The following is *Directly Enforceable*: Thermocouples, or any other equivalent device, to detect the presence of a flame, shall continuously monitor each flare for the presence of a flame and the data recorded electronically in no less than 15-minute averages. Operating a flare in the absence of a pilot flame shall be reported to the NWCAA as an upset with 12 hours of the event in accordance with NWCAA 340.
Flare Gas Recovery System			
5.9.10 General	OAC 1029 Conditions 1, 2, and 3 (10/16/08)	Recovery Flare gas produced at the facility shall be routed to and recovered by the flare gas recovery unit during continuous and/or routine releases. Process upset gases and fuel gas that is released to the flare as a result of relief valve leakage or other emergency malfunction are exempt from this requirement.	Continuously monitor the position of the control valve used to route the flare gas to the FGR system versus the existing flare system. The control valve shall be alarmed to indicate FGR system bypass to the flare. A record shall be kept of each occurrence when flare gas is not recovered in accordance with Condition 1. Records shall include the time, date, duration and description of each event and an estimate of the resulting sulfur dioxide emissions that would otherwise have been removed.
5.9.11 VOC	OAC 1029 Condition 4 and 5 (10/16/08)	Fugitive leak equipment (including compressors) associated with the FGR system area in VOC service shall be in compliance with 40 CFR Part 60 Subpart GGGa.	Monitoring/Recordkeeping/Reporting (MR&R) requirements are included in Permit Terms 5.13.30 through 5.13.45.
5.9.12 VOC	OAC 1029 Condition 6 (10/16/08)	Notification The NWCAA shall be notified in writing of the completion of installation of the first phase of the project and of the second phase.	Notification shall be postmarked no later than 15 days after the compressor trains' startup dates.

5.9.13 Compliance Plan for the Emergency Ground Flare to Meet 40 CFR Part 60 Subpart J

(Excerpt from Submittal Letter December 19, 2007 to the U.S. Environmental Protection Agency and the NWCAA – Civil Action No. H-05-0258)

The ConocoPhillips Ferndale Refinery plans to either comply with the emergency only provisions in accordance with option (c) of Paragraph 139 of the facility's Consent Decree or replace the Emergency Ground Flare with a flare that meets one of the other options by December 31, 2011. Ferndale is currently evaluating a flare system infrastructure project which will be complete by December 31, 2011. The final disposition of the Ground Flare will be determined during this process.

5.9.14 Compliance Plan for the ZTOF Flare to Meet 40 CFR Part 60 Subpart J

(Excerpt from Submittal Letter December 19, 2007 to the U.S. Environmental Protection Agency and the NWCAA – Civil Action No. H-05-0258)

Per paragraph 142 (a-d) of the facility's Consent Decree, ConocoPhillips Ferndale Refinery plans to accept NSPS Subpart J applicability for the ZTOF in accordance with option (a) of Paragraph 139 to operate and maintain a flare gas recovery system to control continuous or routine combustion. The flare gas recovery system is anticipated to be installed by the end of 2011. The current project is in engineering design phase which includes compressors and associated equipment to compress the collected gas off the flare header, an amine contactor for H2S removal prior to routing the stream into the refinery fuel gas system, and associated control systems. The H2S will be recovered in the Sulfur Recovery Units.

5.10 Transfer (Loading) Terminals

Table 5-10 Gasoline/Diesel Truck Loading Terminal

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
Individual Drain Systems serving 40 CFR Part 61 Subpart FF and Part 63 Subpart CC			
Note: The Title 40 CFR Part 61 and Part 63 General Provisions in Sections 3.2 and 3.3 apply to wastewater systems in the flare area			
5.10.1 VOC/HAP	40 CFR Part 63 Subpart CC 40 CFR Part 61 Subpart FF NWCAA 104.2 (6/10/10)	Comply with the standards for individual drain systems for waste streams subject to Part 63 Subpart CC and Part 61 Subpart FF	Monitoring/Recordkeeping/Reporting (MR&R) requirements are included in Table 5-14
Gasoline/Diesel Truck Loading Rack Vapor Combustion Device (13V-11)			
Note: The Title 40 CFR Part 60 and 63 General Provisions included in Sections 3.1 and 3.3 apply to this affected facility.			
5.10.2 HAP	40 CFR 63 Subpart CC 63.648 (8/18/98)	Petroleum Refinery MACT – Equipment Leak Standards	Follow the MR&R requirements in terms 5.13.1 through 5.13.17.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.10.3 HAP	40 CFR 63 Subpart CC 63.650(a) (6/12/96) which references 63.422(b) (12/19/03), 63.427(a)(3) and (b) (12/19/03), 63.425(a), (b) and (c) (3/19/03) and 63.428(c) and (h)(1) (4/6/06) 40 CFR 63 Subpart CC 63.655(b) (6/30/10) which references 63.428(c) and (h)(1) (4/6/06) NWCAA 104.2 (6/10/10)	Emissions to the atmosphere from the vapor collection and processing systems due to the loading of gasoline cargo tanks shall not exceed 10 milligrams of total organic compounds per liter of gasoline loaded.	Install, certify, operate, and maintain, according to manufacturer's specifications, a continuous monitoring system (CMS). Install a CMS capable of measuring temperature in the firebox or in the ductwork immediately downstream from the firebox in a position before any substantial heat exchange occurs. Operate the vapor processing system in a manner not to go below a temperature of 450 °F during loading; a minimum temperature established using the procedures in 63.425(b). Keep an up-to-date, readily accessible record of the continuous monitoring data. This record shall indicate the time intervals during which loadings of gasoline cargo tanks have occurred or, alternatively, shall record the operating parameter data only during such loadings. The date and time of day shall also be indicated at reasonable intervals on this record. Submit an excess emissions report to the NWCAA in accordance with § 63.10(e) (3) when there is a failure to maintain vapor combustor temperature above 450 °F. The report shall include the monitoring data for the days the failure occurred, and a description and timing of the steps taken to repair or perform maintenance on the vapor collection and processing systems or the CMS. After every performance test on the vapor combustor, document the reasons for any change in the operating parameter value since the previous performance test.
5.10.4 VOC	NWCAA 580.424 (12/13/89) Federally enforceable WAC 173-491-040(2)(c)(i) and (2)(c)(ii) (12/23/97–state only) CAM	The vapor control system shall prevent the emission of at least 90 percent by weight of the VOC and shall limit the emission to no more than 35 milligrams VOC per liter of gasoline transferred.	*Directly Enforceable* Comply with AOP Term 5.10.3. Upon inspection, demonstrate that the temperature for adding auxiliary fuel is set at a minimum temperature of 850° F. In addition, perform biennial testing in accordance with 40 CFR 60.503 (12/19/03), and 40 CFR 63.425(a) & (b) (3/19/03) except a reading of 500 ppm shall be used to determine the level of leaks to be repaired under 60.503(b). Provide the NWCAA 30 days' notice prior to testing (unless

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.10.5 VOC	NWCAA 580.424 (6/14/01) State Only CAM	The vapor control system shall prevent the emission of at least 90 percent by weight of the volatile organic compounds and shall limit the emission of volatile organic compounds to no more than 10 milligrams per liter of gasoline transferred.	waived by the NWCAA) and submit the test results to the NWCAA not less than 45 days after testing is completed. CAM Plan: Monitor temperature in the firebox or in the ductwork immediately downstream from the firebox in a position before any substantial heat exchange occurs. Temperatures of less than 450 °F during loading indicate a loss of control. In response, loading will be discontinued until control is reestablished.
5.10.6 VOC	OAC 265 Condition 2 (1/26/90) CAM	Emissions of VOC from the flare shall be limited to no more than 35 milligrams per liter of gasoline transferred.	
5.10.7 Opacity	OAC 265 Condition 3 (1/26/90)	Visual emissions as measured by Title 40 CFR Appendix A Method 9 shall not exceed ten percent opacity from the flare stack.	*Directly Enforceable* Visually observe the stack on a monthly basis (for days with operation) to qualitatively assess whether emissions are visible. The frequency may be reduced to quarterly if no visible emissions are observed for six consecutive months of operation. The permittee shall revert to daily observations (for days with operation) if any visible emissions are noted during the observation. If visible emissions are observed, reduce to no visible emissions as soon as possible. If visible emissions cannot be reduced to zero, the permittee may monitor by EPA Appendix A Method 9 no later than 24 hours after detection and daily thereafter until visible emission returns to 10% or less, otherwise the visible emissions shall be considered in excess of the standard. Record observation results for observations with visible emissions and any related equipment or operational failure, the occurrence dates and times, actions taken, and the type of fuel burned.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
			Record that an observation was performed, with date, time, background conditions and identification of the observer. Keep records of all observations available for inspection.
5.10.8 SO_2	40 CFR 60 Subpart J 60.104(a)(1) and 60.105(a)(3) (10/17/00) NWCAA 104.2 (6/10/10)	NSPS Subpart J - Fuel Gas Fuel gas limited to 162 ppm H_2S based on a 3-hour rolling average	Monitor as per the alternative monitoring plan approved by the EPA on April 4, 2003. The plan is summarized as follows: 1) COP shall monitor all fuels loaded at the rack to assure they meet sulfur specifications for that finished product, 2) COP shall keep a record of each fuel sampling performed pursuant to #1, 3) the records shall be kept for at least 5 years, 4) COP will notify the EPA and NWCAA within 30 days after any change in fuel type or sulfur specification greater than indicated below and if there is a change in the type of auxiliary fuel used in the truck rack ZTOF combustor. Fuel sulfur specification: Regular/Super/Midgrade Gasoline ..... 0.1% (wt.) Diesel..... 0.047% (wt.) Ultralow Sulfur Diesel ..... 30 ppm (wt.)
Gasoline/Diesel Truck Load Rack			
Note: The Title 40 CFR Part 63 General Provisions included in Section 3 apply to these affected facilities.			
5.10.9 HAP	40 CFR 63 Subpart CC 63.648 (8/18/98) NWCAA 104.2 (6/10/10)	Petroleum Refinery MACT – Equipment Leak Standards	Follow the MR&R requirements in terms 5.13.1 through 5.13.17.
5.10.10 VOC	NWCAA 580.425 (12/13/89) Same as 6/14/01 version, which is State Only	The vapor control system shall be equipped with an appropriate alarm system to alert personnel when the system is not in compliance with 580.424.	*Directly Enforceable* Operate a functioning interlock system that prevents loading when a cargo tank is not in compliance or when the vapor recovery system is not in operation.
5.10.11 VOC	NWCAA 580.421 (12/13/89) Same as State	The loading terminal shall employ submerged or bottom loading and be equipped with a vapor control system.	*Directly Enforceable* Keep written operation and maintenance procedures on-site specifying that all product loading will be submerge-loaded and

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	Only 6/14/01 version WAC 173-491-040(2)(b)(i) (12/23/97-state only)		that the vapor combustor shall be operating at all times when gasoline vapors are being routed to the device.
5.10.12 VOC	NWCAA 580.422 (12/13/89) same as (6/14/01) State Only WAC 173-491-040(2)(b)(iv) (12/23/97-state only)	All loading and vapor lines shall be equipped with vapor-tight fittings which close automatically upon disconnect. The point of closure shall be on the tank side of any hose or immediate connecting line.	*Directly Enforceable* Keep written procedures on-site specifying that all product loading and vapor control lines shall be equipped with vapor-tight fittings that close automatically and that the lines are designed to prevent leaks.
5.10.13 VOC	40 CFR 63 Subpart CC 63.650(a) (6/12/96) which references 63.422(a) (12/19/03) which references 60.502(h) and (i) (2/12/99) and 60.503(d)(12/19/03) NWCAA 104.2 (6/10/10)	Equipment shall be operated to prevent gauge pressure in the delivery tank from exceeding 4,500 pascals (450 mm of water) during product loading and pressure-vacuum vent in the bulk gasoline terminal's vapor collection system shall not begin to open at a system pressure less than 4,500 pascals.	*Directly Enforceable* Perform a pressure measurement test as per 40 CFR Part 60.503(d) (12/19/03) during the biennial testing required in this table. Include test results in the test report submitted to the NWCAA note less than 45 days after the testing is completed.
5.10.14 VOC	40 CFR 63 Subpart CC 63.650(a) (6/12/96) which references 63.422(a) (12/19/03) which references	Equip with a vapor collection system designed to collect the total organic compounds vapors displaced from tank trucks during product loading and to prevent any total organic compounds vapors collected at one loading rack from passing to another loading rack.	none

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	60.502(a) and (d) (2/12/99) NWCAA 104.2 (6/10/10)		
5.10.15 VOC	NWCAA 580.423 (12/13/89) Same as State Only version 6/14/01 WAC 173-491-040(2)(b)(ii) and (iii) (12/23/97-state only)	Vapor return lines shall be connected between the transport tank and the vapor control system such that all displaced volatile organic compounds are vented to the vapor recovery system. Excludes emissions from pressure relief valves when the back pressure in the collection lines is lower than the relief pressure setting of the transport tank's relief valves.	*Directly Enforceable* Perform biennial testing in accordance with 40 CFR 60.503(b) and (d) (12/19/03) except a reading of 500 ppm shall be used to determine the level of leaks to be repaired under 60.503(b). Provide the NWCAA 30 days notice prior to testing (unless waived by the NWCAA) and submit the test results to the NWCAA not less than 45 days after testing is completed.
5.10.16 VOC	NWCAA 580.104 and 580.1033 (12/13/89), WAC 173-491-040(6)(b)(iii)(A)(II), (III), (IV) and (B) (12/23/97-state only)	System must be operated such that gasoline vapor concentration is less than the lower explosive limit at a distance of 2.5 cm or greater from any potential leak source; and liquid leaks must be less than 3 drops per minute and no more than 10 ml per disconnect (4 drops per minute per WAC 173-491-040). Repair and retest a vapor collection system that exceeds these limits within ten days (15 days per WAC 173-491-040).	
5.10.17 VOC	NWCAA 580.426 (12/13/89) Same as State Only 6/14/01 version	All loading arms shall be designed, maintained and operated to prevent overfill, fugitive liquid or vapor leaks, and excess gasoline drainage during disconnect.	
5.10.18 VOC	WAC 173-491-040(6)(b)(iii)(A)(1) and (b)(iii)(B)	Transport tank pressure shall not exceed a pressure of eighteen inches of water or a vacuum of six inches of	

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	(12/23/97-state only)	water. Repair and retest a vapor collection system that exceeds this limit within fifteen days.	
5.10.19 VOC	WAC 173-491-040(2)(c)(iii) (12/23/97-state only)	The backpressure in the vapor collection system shall not exceed the transport tank's pressure relief settings.	
5.10.20 VOC/HAP	NWCAA 580.102, 1031, 1032 & 1033 (12/13/89) NWCAA 580.105 (12/13/89) WAC 173-491-040(6)(b)(i) and WAC 173-491-040(6)(d) (12/23/97) (State only) WAC 173-491-030(4) (7/2/91) (State only)	Gasoline transport tanks have to be leak tested annually. Ensure that gasoline is loaded only into cargo tanks that pass annual leak checks performed in accordance with Title 40 CFR Appendix A Method 27 and the criteria of NWCAA 580.105.	
5.10.21 VOC/HAP	40 CFR 63 Subpart CC 63.650(a) (6/12/96) which references 60.502(f) and (g) (2/12/99) and, 60.502(e) (2/12/99) which is modified by 63.422(c)(3/19/03) 40 CFR 63 Subpart CC	Loading of liquid product into gasoline tank trucks shall be limited to vapor-tight gasoline tank trucks using the procedures specified at §60.502(e) (as modified by §63.422(c). Assure that loading of gasoline tank trucks is made only into tanks equipped with vapor collection equipment that is compatible with the terminal's vapor collection system and that the terminal's and the tank truck's vapor collection systems are connected during each loading of a gasoline tank truck at the affected facility.	Ensure that gasoline is loaded only into cargo tanks that pass annual leak checks performed in accordance with the criteria of §63.425(e), (f), (g) and (h). Obtain the vapor tightness documentation described in §60.505(b) for each gasoline tank truck loaded at the affected facility. Record the tank identification number as each gasoline tank truck is loaded at the facility. Cross-check each tank identification number with the file of tank vapor tightness documentation within 2 weeks after the corresponding tank is loaded, unless either less than an average of one gasoline tank truck per month over the last 26 weeks is loaded without vapor tightness documentation then the documentation cross-check shall be performed each quarter; or less than an average of one gasoline tank truck per month over the last 52 weeks is

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	63.650(a) (6/12/96) which references 63.425(e), (f), (g) and (h) (3/19/03), 63.428(b), 63.428(g)(1) and 63.428(h)(2)-(h)(3) (4/6/06) 40 CFR 63 Subpart CC 63.655(b) (6/30/10) which references 63.428(b), 63.428(g)(1) and 63.428(h)(2)-(h)(3) (4/6/06) NWCAA 104.2 (6/10/10)		loaded without vapor tightness documentation then the documentation cross-check shall be performed semiannually. Return to biweekly crosschecks if these conditions are not maintained. Notify the owner or operator of each non-vapor-tight gasoline tank truck loaded at the affected facility within 1 week of the crosscheck. Ensure that the nonvapor-tight gasoline cargo tank will not be reloaded until vapor tightness documentation is obtained. Maintain records in accordance with §63.428(b) of cargo tank annual certification and continuous performance testing. The records shall include the name of test, the tank owner's name and address, tank identification number, test location and date, tester name and signature, witnessing inspector, if any: name, signature, and affiliation, nature of repair work and when performed in relation to vapor tightness testing. And test results. Include in a semiannual report to the NWCAA each loading of a cargo tank for which vapor tightness documentation had not been previously obtained by the facility. Submit an excess emissions report to the NWCAA in accordance with §63.10(e) (3), when a nonvapor-tight gasoline cargo tank is loaded and there was a failure to take steps to assure that the cargo tank would not be reloaded before vapor tightness documentation was obtained. Also report each reloading of a nonvapor-tight gasoline cargo tank before vapor tightness documentation for is obtained in accordance with §63.422(c) (2).
5.10.22 VOC	WAC 173-491-040(6)(a) (12/23/97-state only)	During the months of May, June, July, August, and September any failure of a vapor collection system to comply with WAC 173-491-040 requires the discontinuation of gasoline transfer operations for the failed part of the system.	*Directly Enforceable* Record any periods during these months when the vapor collection system failed and actions taken.
5.10.23 VOC	WAC 173-491-040(6)(e)	Take reasonable measures to prevent the spilling, discarding sewers, storing	None

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	(12/23/97-state only)	in open containers, or handling of gasoline in a manner that will result in evaporation to the ambient air.	
Marine Terminal			
5.10.24 VOC	OAC 733c Condition 16 (7/29/05)	The quantity of gasoline loaded onto marine vessels at the refinery marine terminal shall be less than 10,000,000 barrels per rolling 12-month period. The quantity of VOC emitted from the marine terminal shall not exceed 819 tons per rolling 12-month period.	The owner or operator shall record the quantity and identity of each product transferred into marine vessels, and keep the records available to the NWCAA for at least five years. The owner or operator shall provide to the NWCAA semiannual or more frequent reports indicating the monthly rolling 12-month quantity of gasoline transferred onto marine vessels and VOC emissions from the marine terminal.

5.11 Fire Training Area

Table 5-11 Fire Training Area

Term	Citation	Description	Monitoring/Recordkeeping,/Reporting
5.11.1	Fire Permit 09003 (1/9/09) Condition 1 NWCAA 502 (11/8/07)	Permit Availability A copy of this permit must be available at the site of the fire.	None Required.
5.11.2	Fire Permit 09003 (1/9/09) Condition 3 and NWCAA 502 (1/9/09)	Approval Conditions Approval is granted only for the burning of materials listed and during the dates specified.	None Required.

Term	Citation	Description	Monitoring/Recordkeeping,/Reporting
5.11.3	Fire Permit 09003 (1/9/09) Condition 4 and NWCAA 502 (1/9/09)	Particulate Matter Smoke and/or fly ash (particulate matter) from the fire shall not be emitted in a manner which creates a nuisance and/or interferes with visibility on any public roads.	*Directly Enforceable* A written nuisance complaint response plan will be maintained at the facility. Upon receiving a nuisance or public road visibility complaint from the NWCAA or the public, the fire training area shall be checked for proper operation. Problems identified shall be repaired or corrected as soon as possible. If the problems identified cannot be repaired or corrected within four hours, action shall be taken to minimize emissions until repairs can be made. Notification shall be provided to the NWCAA. The results of the investigation, identification of any malfunctioning equipment or aberrant operation, and the date and time of repair or mitigation shall be recorded. A log of these records shall be maintained for inspection. Receipt of a nuisance/visibility complaint in itself shall not necessarily be a violation.
5.11.4	Fire Permit 09003 (1/9/09) Condition 5 and NWCAA 502 (1/9/09)	Burn Ban There shall be no burning during any stage of an air pollution episode or any day designated by the Control Officer of the NWCAA.	None Required.
5.11.5	Fire Permit 09003 (1/9/09) and NWCAA 502 (11/8/07)	Materials Prohibited The material to be burned shall not contain garbage, dead animals, asphalt, paints, rubber products, plastics, paper (except what is needed to start fire), cardboard, treated wood, construction/demolition debris, metal or any substance (other than natural vegetation) which normally emits dense smoke, toxic emissions, or obnoxious odors.	None Required.

5.12 Miscellaneous Individual Drain Systems and Wastes

Table 5-12 Miscellaneous Individual Drain Systems and Wastes

Term	Citation	Description	Monitoring/Recordkeeping,/Reporting
Engine Lab			
Note: The Title 40 CFR Part 60, 61, and Part 63 General Provisions in Sections 3.1, 3.2, and 3.3 apply to individual drain systems from the engine lab.			
5.12.1	40 CFR Part 63 Subpart CC 40 CFR Part 61 Subpart FF NWCAA 104.2 (6/10/10)	Engine Lab Individual Drain Systems Comply with the standards for individual drain systems for waste streams subject to Part 63 Subpart CC and Part 61 Subpart FF	Monitoring/Recordkeeping/Reporting (MR&R) requirements are included in Table 5-14
5.12.2	40 CFR Part 60 Subpart QQQ NWCAA 104.2 (6/10/10)	Engine Lab Individual Drain Systems Comply with 40 CFR Part 60 Subpart QQQ except for individual drain systems regulated under Part 63 Subpart CC	Monitoring/Recordkeeping/Reporting (MR&R) requirements are included in Table 5-15
Spills and Miscellaneous Waste Streams			
Note: The Title 40 CFR Part 61, and Part 63 General Provisions in Sections 3.2, and 3.3 apply to these waste streams			
5.12.3	40 CFR Part 63 Subpart CC 40 CFR Part 61 Subpart FF NWCAA 104.2 (6/10/10)	Spills and Miscellaneous Waste Streams Comply with the standards for individual drain systems for waste streams subject to Part 63 Subpart CC and Part 61 Subpart FF	Monitoring/Recordkeeping/Reporting (MR&R) requirements are included in Table 5-14
Laboratory			
Note: The Title 40 CFR Part 60, 61, and Part 63 General Provisions in Sections 3.1, 3.2, and 3.3 apply to individual drain systems from the engine lab.			

Term	Citation	Description	Monitoring/Recordkeeping,/Reporting
5.12.4	40 CFR Part 63 Subpart CC 40 CFR Part 61 Subpart FF NWCAA 104.2 (6/10/10)	Individual Drain Systems Comply with the standards for individual drain systems for waste streams subject to Part 63 Subpart CC and Part 61 Subpart FF	Monitoring/Recordkeeping/Reporting (MR&R) requirements are included in Table 5-14
5.12.5	40 CFR Part 60 Subpart QQQ NWCAA 104.2 (6/10/10)	Individual Drain Systems Comply with 40 CFR Part 60 Subpart QQQ except for individual drain systems regulated under Part 63 Subpart CC	Monitoring/Recordkeeping/Reporting (MR&R) requirements are included in Table 5-15
Solid Waste			
Note: The Title 40 CFR Part 61General Provisions in Sections 3.2 apply to this waste stream			
5.12.6	40 CFR Part 63 Subpart CC 40 CFR Part 61 Subpart FF NWCAA 104.2 (6/10/10)	Solid Waste Comply with the standards for individual drain systems for waste streams subject to Part 61 Subpart FF	Monitoring/Recordkeeping/Reporting (MR&R) requirements are included in Table 5-14

5.13 LDAR – Commonly Referenced Requirements

Table 5-13 LDAR – Commonly Referenced Requirements

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
Leak detection and repair program for equipment subject to NSPS GGG, NWCAA 580, and Refinery MACT Subpart CC unless otherwise specified			
5.13.1 VOC/HAP	As referenced: 40 CFR 60 Subpart VV 60.482-2(a), (b), and (c) (11/16/07), 60.485(b) (11/16/07), 60.486(a), (b), (c) and (e) (11/16/07) and 60.487(c), and (e) (11/16/07) NWCAA 104.2 (6/10/10)	Pumps in Light Liquid Service, Without Dual Mechanical Seals Monitor each pump monthly to detect leaks. A pump that begins operation in light liquid service after the initial startup date for the process unit must be monitored for the first time within 30 days after the end of its startup period, except for a pump that replaces a leaking pump. Visually inspect each calendar week. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. If there are indications of liquids dripping from the pump seal, follow either of these two procedures: (Note: This requirement does not apply to a pump that was monitored after a previous weekly inspection if the instrument reading was less than 10,000 ppm and the pump was not repaired since that monitoring event) (i) Monitor the pump within 5 days. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. (ii) Designate the visual indications of liquids dripping as a leak, and repair the leak within 15 days of detection by eliminating the visual indications of liquids dripping. When a leak is detected, it shall be repaired	Monitor each pump monthly to detect leaks. Each calendar week, visually inspect each pump for indications of liquids dripping from the pump seal. EPA Method 21 shall be used to determine the presence of leaking sources. The instrument shall be calibrated before use each day. The following calibration gases shall be used: Zero air (less than 10 ppm of hydrocarbon in air); and a mixture of methane or n-hexane and air at a concentration of about, but not less than, 10,000 ppm methane or n-hexane. When a leak is detected, record the information listed in 60.486(c) in a log that is kept in a readily accessible location. For all equipment subject to this permit term, record in a log in a readily accessible location the information required in 60.486(e). Submit a semiannual report to the NWCAA that includes the process unit identification and for each month, the number of pumps for which leaks were detected and the number of pumps for which leaks were not repaired as required. Also, the facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible. Report the dates of process unit shutdowns which occurred within the semiannual period and revisions to items reported according to the initial semiannual report (60.487(b)) if changes have occurred since the initial report or the subsequent revisions to the initial report. Report the results of all performance tests in accordance

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 60.482-9. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. First attempts at repair include, but are not limited to, the practices described in paragraphs 60.482-2(c) (2)(i) and (ii). When a leak is detected, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached. The identification may be removed after it has been repaired.	with 60.8 of the General Provisions. Note: Under WAC 173-401-615(2), records must be retained for five years.
5.13.2 VOC/HAP	As referenced: 40 CFR 60 Subpart VV 60.482-2 (b), (c) and (d) (11/16/07), 60.485(b) (11/16/07), 60.486(a), (b), (c), (e),(h) (11/16/07), and 60.487(c), and (e) (11/16/07) NWCAA 104.2 (6/10/10)	<u>Pumps in Light Liquid Service, With Dual Mechanical Seals Including A Barrier Fluid System</u> Operate the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure, or equip the dual mechanical seal system with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of §60.482–10; or equip with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere. The barrier fluid system should be in heavy liquid service or not in VOC service. Equip each barrier fluid system with a sensor that will detect failure of the seal system, the barrier fluid system, or both. When a leak is detected, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached. The identification may be	Each calendar week, visually inspect each pump for indications of liquids dripping from the pump seals. If there are indications of liquids dripping from the pump seal at the time of the weekly inspection, follow either of the following procedures: A. Monitor the pump within 5 days as specified in 60.485(b) to determine if there is a leak of VOC in the barrier fluid. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. B. Designate the visual indications of liquids dripping as a leak. Check each sensor daily or equip the sensor with an audible alarm. Determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both. If the sensor indicates failure of the seal system, the barrier fluid system, or both, based on the criterion that indicates failure, a leak is detected. When a leak is detected by monitoring as per procedure A, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §60.482–9. A first attempt at repair shall be made no later than 5 calendar days after

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		removed after it has been repaired.	each leak is detected. First attempts at repair include, but are not limited to, the practices described in paragraphs (c) (2)(i) and (ii) of this section. If the sensor indicates a leak, the leak shall be repaired within 15 days of detection by eliminating the conditions that activated the sensor. A designated leak as per procedure B shall be repaired within 15 days of detection by eliminating visual indications of liquids dripping. EPA Method 21 shall be used to determine the presence of leaking sources. The instrument shall be calibrated before use each day. The following calibration gases shall be used: Zero air (less than 10 ppm of hydrocarbon in air); and a mixture of methane or n-hexane and air at a concentration of about, but not less than, 10,000 ppm methane or n-hexane. When a leak is detected, record the information listed in 60.486(c) in a log that is kept in a readily accessible location. For all equipment subject to this permit term, record in a log in a readily accessible location the information required in 60.486(e). Required design criterion must be recorded in a log and kept readily accessible. An explanation of the design criterion and any changes to the criterion (and reasons for the changes) must be kept as well. Submit a semiannual report to the NWCAA that includes the process unit identification and for each month, the number of pumps for which leaks were detected and the number of pumps for which leaks were not repaired as required. Also, the facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible. Report the dates of process unit shutdowns which occurred within the semiannual period and revisions to items reported according to the initial

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
			semiannual report (60.487(b)) if changes have occurred since the initial report or the subsequent revisions to the initial report. Report the results of all performance tests in accordance with 60.8 of the General Provisions. Note: Under WAC 173-401-615(2), records must be retained for five years.
5.13.3 VOC/HAP	As referenced: 40 CFR 60 Subpart VV 60.482-2 (e)(11/16/07), 60.485(b) and (c) (11/16/07), 60.486(a), (c), (e)(11/16/07), and 60.487(c), and (e) (11/16/07) NWCAA 104.2 (6/10/10)	Pump Designated for No Detectable Emissions Any pump that is designated for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraphs (a), (c), and (d) of this section if the pump: (1) Has no externally actuated shaft penetrating the pump housing, (2) Is demonstrated to be operating with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background, and (3) Is tested for compliance initially upon designation, annually, and at other times requested by the NWCAA.	EPA Method 21 shall be used to determine the presence of leaking sources. The instrument shall be calibrated before use each day of its use by the procedures in Method 21. The following calibration gases shall be used: Zero air (less than 10 ppm of hydrocarbon in air); and a mixture of methane or n-hexane and air at a concentration of about, but not less than, 10,000 ppm methane or n-hexane. EPA Method 21 shall be used to determine the background level. All potential leak interfaces shall be traversed as close to the interface as possible. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance. When a leak is detected, record the information listed in 60.486(c) in a log that is kept in a readily accessible location.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
			For all equipment subject to this permit term, record in a log in a readily accessible location the identification numbers for equipment designated for no detectable emissions under the provision of 60.482-2(e). The designation of equipment as subject to the requirements of 60.482-2(e) shall be signed by the owner or operator. Alternatively, the owner or operator may establish a mechanism with the NWCAA that satisfies this requirement. Also record in the log the dates of each compliance test, the background level measured during each compliance test, and the maximum instrument reading measured at the equipment during each compliance test. Submit a semiannual report to the NWCAA that includes the process unit identification and revisions to items reported according to the initial semiannual report (60.487(b)) if changes have occurred since the initial report or the subsequent revisions to the initial report. Report the results of all performance tests in accordance with 60.8 of the General Provisions. Note: Under WAC 173-401-615(2), records must be retained for five years.
5.13.4 VOC/HAP	As referenced: 40 CFR 60 Subpart VV 60.482-2(g) (11/16/07), 60.485(b) (11/16/07) and 60.486(a), (b), (c), and (f) (11/16/07), and 60.487(c) and (e) (11/16/07) NWCAA 104.2 (6/10/10)	Pumps Designated as Unsafe-to-Monitor Any pump that is designated as an unsafe-to-monitor pump is exempt from the monitoring and inspection requirements of paragraphs (a) and (d)(4) through (6) of this section if: (1) The owner or operator of the pump has a written plan that requires monitoring of the pump as frequently as practicable during safe-to-monitor times but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures in paragraph (c) of this section if a leak is detected. When a leak is detected, a weatherproof and	EPA Method 21 shall be used to determine the presence of leaking sources. The instrument shall be calibrated before use each day. The following calibration gases shall be used: Zero air (less than 10 ppm of hydrocarbon in air); and a mixture of methane or n-hexane and air at a concentration of about, but not less than, 10,000 ppm methane or n-hexane. When a leak is detected, record the information required in 60.486(c). For all equipment subject to this permit term, record in a log in a readily accessible location a list of identification numbers for the pumps that are designated as unsafe-to-monitor, an explanation for each pump stating why the pump is unsafe-to-monitor, and the plan for monitoring each pump.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		readily visible identification, marked with the equipment identification number, shall be attached. The identification may be removed after it has been repaired.	Submit a semiannual report to the NWCAA that includes the process unit identification and revisions to items reported according to the initial semiannual report (60.487(b)) if changes have occurred since the initial report or the subsequent revisions to the initial report. Report the results of all performance tests in accordance with 60.8 of the General Provisions. Note: Under WAC 173-401-615(2), records must be retained for five years.
5.13.5 VOC/HAP	As referenced: 40 CFR 60 Subpart VV 60.482-3 (11/16/07), 60.486(a),(b), (c), and (e) (11/16/07), and 60.487(c), and (e) (11/16/07) NWCAA 104.2 (6/10/10)	<u>Compressors</u> Equip each compressor with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere. Operate the seal system with a barrier fluid at a pressure that is greater than the compressor stuffing box pressure, or, equip with a barrier fluid system degassing reservoir routed to a process or fuel gas system or connected by a closed vent system to a control device, or, purge the barrier fluid into a process stream with zero VOC emissions to the atmosphere. The barrier fluid system shall be in heavy liquid service or shall not be in VOC service. Equip each barrier fluid system with a sensor that will detect failure of the seal system, the barrier fluid system, or both. Check each sensor daily or equip the sensor with an audible alarm. Determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both. If the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected. When a leak is detected, it	When a leak is detected, record the information listed in 60.486(c) in a log and keep for two years in a readily accessible location. For all equipment subject to this permit term, record in a log in a readily accessible location the information required in 60.486(e) Submit a semiannual report including process unit identification and for each month, the number of compressors for which leaks were detected and the number of compressors for which leaks were not repaired as required. Also, the facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible. Report the dates of process unit shutdowns which occurred within the semiannual period and revisions to items reported according to the initial semiannual report (60.487(b)) if changes have occurred since the initial report or the subsequent revisions to the initial report. Report the results of all performance tests in accordance with 60.8 of the General Provisions. Note: Under WAC 173-401-615(2), records must be retained for five years.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 60.482-9. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. When a leak is detected, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached. The identification may be removed after it has been repaired. Note: Compressors in hydrogen service as per Subpart GGG 60.593(b) are exempt from these requirements.	
5.13.6 VOC/HAP	As referenced: 40 CFR 60 Subpart VV 60.482-3(i)(11/16/07), 60.485(b) and (c) (11/16/07), 60.486(a), (c), (e)(11/16/07), and 60.487(c), and (e) (11/16/07) NWCAA 104.2 (6/10/10)	Compressor Designated for No Detectable Emissions A compressor designated for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of (a)-(h) if the compressor: (1) Is demonstrated to be operating with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, and (2) Is tested for compliance initially upon designation, annually, and at other times requested by the NWCAA.	EPA Method 21 shall be used to determine the presence of leaking sources. The instrument shall be calibrated before use each day of its use by the procedures in Method 21. The following calibration gases shall be used: Zero air (less than 10 ppm of hydrocarbon in air); and a mixture of methane or n-hexane and air at a concentration of about, but not less than, 10,000 ppm methane or n-hexane. EPA Method 21 shall be used to determine the background level. All potential leak interfaces shall be traversed as close to the interface as possible. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance. When a leak is detected, record the information listed in 60.486(c) in a log that is kept in a readily accessible location. For all equipment subject to this permit term, record in a log in a readily accessible location the identification numbers for equipment designated for no detectable emissions under the provision of 60.482-2(e). The designation of equipment as subject to the requirements

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
			of 60.482-2(e) shall be signed by the owner or operator. Alternatively, the owner or operator may establish a mechanism with the NWCAA that satisfies this requirement. Also record in the log the dates of each compliance test, the background level measured during each compliance test, and the maximum instrument reading measured at the equipment during each compliance test. Submit a semiannual report to the NWCAA that includes the process unit identification and revisions to items reported according to the initial semiannual report (60.487(b)) if changes have occurred since the initial report or the subsequent revisions to the initial report. Report the results of all performance tests in accordance with 60.8 of the General Provisions. Note: Under WAC 173-401-615(2), records must be retained for five years.
5.13.7 VOC/HAP	As referenced: 40 CFR 60 Subpart VV 60.482-4 (12/14/00), 60.485(c), (11/16/07), 60.486(a), (e) (11/16/07), and 60.487(c) and (e) (11/16/07) NWCAA 104.2 (6/10/10)	<u>Pressure Relief Devices</u> Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background. After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions as soon as practicable, but no later than 5 calendar days after the pressure release, except as provided in 60.482-9. No later than 5 calendar days after the pressure release, the pressure relief device shall be monitored to confirm the conditions of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background. Any pressure relief device routed to the fuel	EPA Method 21 shall be used to determine the presence of leaking sources. The instrument shall be calibrated before use each day of its use by the procedures in Method 21. The following calibration gases shall be used: Zero air (less than 10 ppm of hydrocarbon in air); and a mixture of methane or n-hexane and air at a concentration of about, but not less than, 10,000 ppm methane or n-hexane. EPA Method 21 shall be used to determine the background level. All potential leak interfaces shall be traversed as close to the interface as possible. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance. For pressure relief devices required to comply with this condition, record a list of equipment identification numbers in a log in a readily accessible location. Also record the date of each compliance test, the background level measured during the compliance test, and the

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		gas system or equipped with a closed vent system a control device is exempt from these requirements. Any pressure relief device equipped with a rupture disk upstream of the pressure relief device is exempt from this requirement, provided that after each release a new rupture disk is installed as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in 60.482-9.	maximum instrument reading. Submit a semiannual report including process unit identification, the facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible. Report the dates of process unit shutdowns which occurred within the semiannual period and revisions to items reported according to the initial semiannual report (60.487(b)) if changes have occurred since the initial report or the subsequent revisions to the initial report. Report the results of all performance tests in accordance with 60.8 of the General Provisions. Note: Under WAC 173-401-615(2), records must be retained for five years.
5.13.8 VOC/HAP	As referenced: 40 CFR 60 Subpart VV 60.482-5 (11/16/07) and 60.486(a), (e) (11/16/0712/14/00) NWCAA 104.2 (6/10/10)	<u>Sampling Connection Systems</u> Each sampling connection system shall be equipped with a closed-purged, closed-loop, or closed-vent system (except for in situ sampling systems and sampling systems without purges). Gases displaced during sample container filling are not required to be collected or captured. Containers that are part of a closed-purge system must be covered or closed when not being filled or emptied. Gases remaining in the tubing or piping between the closed-purge system valve(s) and sample container valve(s) after the valves are closed and the sample container is disconnected are not required to be collected or captured. Design and operate the system to either return the purged process fluid directly to the process line, or collect and recycle to a process, or, collect, store, and transport all the purged process fluid to a control device	The permittee shall record in a log kept in a readily accessible location a list of identification numbers for equipment subject to the requirements of this condition. Note: Under WAC 173-401-615(2), records must be retained for five years.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		that complies with the requirements of 60.482-10.	
5.13.9 VOC/HAP	As referenced: 40 CFR 60 Subpart VV 60.482-6 (11/16/07), and 60.486(a), (e) (11/16/07) NWCAA 104.2 (6/10/10)	<u>Open-ended Valves or Lines</u> Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve except open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset, and, open-ended valves or lines containing materials which would autocatalytically polymerize or would present an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system. The cap, blind flange, plug or second valve shall seal the open end at all times except during operations requiring process fluid flow. Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed. When a double block-and-bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves, but shall remain closed at other times.	The permittee shall record in a log kept in a readily accessible location a list of identification numbers for equipment subject to the requirements of this condition. Note: Under WAC 173-401-615(2), records must be retained for five years.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.13.10 VOC/HAP	As referenced: 40 CFR 60 Subpart VV 60.482-8 (11/16/07, 60.485(b) (11/16/07), 60.486(a), (b), (c) and (e) (11/16/07), and 60.487(c) (11/16/07) NWCAA 104.2 (6/10/10)	<u>Pumps and Valves in Heavy Liquid Service, Pressure Relief Devices in Light Liquid or Heavy Liquid Service, and Connectors</u> If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method, either monitor within 5 days or eliminate the visual, audible, olfactory, or other indication of potential leak within 5 calendar days of detection. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 60.482-9. The first attempt at repair shall be made no later than 5 calendar days after each detected leak. First attempts at repair include, but are not limited to, the best practices described under 60.482-2(c) (2) and 60.482-7(e). When a leak is detected, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached. The identification may be removed after it has been repaired.	When a leak is detected, record the information required in 60.486(c). For all equipment subject to this permit term, record in a log in a readily accessible location a list of identification numbers for equipment subject to this requirement.. EPA Method 21 shall be used to determine the presence of leaking sources. The instrument shall be calibrated before use each day. The following calibration gases shall be used: Zero air (less than 10 ppm of hydrocarbon in air); and a mixture of methane or n-hexane and air at a concentration of about, but not less than, 10,000 ppm methane or n-hexane. Submit a semiannual report with process unit identification, the facts explaining each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible, and the dates of process unit shutdowns which occurred within the semiannual reporting period. Note: Under WAC 173-401-615(2), records must be retained for five years.
5.13.11 VOC/HAP	As referenced: 40 CFR 60 Subpart VV 60.482-9 (11/16/07) and 60.487(c)(2)(vii) and (3) (11/16/07) NWCAA 104.2 (6/10/10)	<u>Delay of Repair</u> Delay of repair of equipment for which leaks have been detected will be allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair shall occur before the end of the next process unit shutdown. Monitoring to verify repair must occur within 15 days after startup of the process unit. Delay is also allowed for equipment isolated from the	Report, in a semiannual report, the process unit identification and the facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible. Also report the dates of process unit shutdowns which occurred within the semiannual reporting period.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		process and which does not remain in VOC service. Valves: Delay of repair will be allowed if (1) it is demonstrated that purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and (2) when repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with 60.482-10. Delay of repair beyond a process unit shutdown will be allowed if valve assembly replacement is necessary, valve assembly supplies have been depleted, and supplies had been sufficiently stocked before they were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown. Pumps: Delay of repair will be allowed if (1) repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and (2) repair is completed as soon as practicable, but not later than 6 months after the leak was detected. When delay of repair is allowed for a leaking pump or valve that remains in service, the pump or valve may be considered to be repaired and no longer subject to delay of repair requirements if two consecutive monthly monitoring instrument readings are below the leak definition.	
5.13.12 VOC/HAP	As referenced: 40 CFR 60 Subpart VV 60.482-7 (a-	<u>Standards for Valves in Gas/Vapor Service and Light Liquid Service</u>	Monthly, monitor valves to detect leaks by the methods specified in 60.485(b). EPA Method 21 shall be used to determine the presence of leaking sources. The

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	e)(11/16/07), 60.485(b) (11/16/07), 60.486(a),(b),(c),and (e) (11/16/07), and 60.487(c),and (e) (11/16/07) NWCAA 104.2 (6/10/10)	Monitor each valve monthly to detect leaks, except as provided in 60.482-7(f), (g), and (h). A valve that begins operation in gas/vapor service or light liquid service after the initial startup date for the process unit must be monitored monthly, with the valve monitored for the first time within 30 days after the end of its startup period, Any valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected or alternately subdivide the components such that each component is monitored every three months. If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in 60.482-9. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. First attempts at repair include, but are not limited to tightening of bonnet bolts, replacement of bonnet bolts, tightening of packing gland nuts, and injection of lubricant into lubricated packing. When a leak is detected, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached. The identification on a valve may	instrument shall be calibrated before use each day. The following calibration gases shall be used: Zero air (less than 10 ppm of hydrocarbon in air); and a mixture of methane or n-hexane and air at a concentration of about, but not less than, 10,000 ppm methane or n-hexane. When a leak is detected, record the information required in 60.486(c). For all equipment subject to this permit term, record in a log in a readily accessible location a list of identification numbers. Submit a semiannual report with process unit identification, the number of valves for which leaks were detected, the number of valves for which leaks were not repaired, the facts explaining each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible, and the dates of process unit shutdowns which occurred within the semiannual reporting period. Also, report revisions to items reported according to the initial semiannual report if changes have occurred since the initial report. Report the results of all performance tests in accordance with 60.8 of the General Provisions. Note: Under WAC 173-401-615(2), records must be retained for five years.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		be removed after it has been monitored for 2 successive months and no leak has been detected during those 2 months.	
5.13.13 VOC/HAP	As referenced: 40 CFR 60 Subpart VV 60.482-7(f) (11/16/07), 60.485(c) (11/16/07) and 60.486(a), (b), (c), and (e) (11/16/07), and 60.487(c) and (e) (11/16/07) NWCAA 104.2 (6/10/10)	Valves Designated for No Detectable Emissions Any valve that is designated for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of 60.482-7(a) if the valve: (1) Has no external actuating mechanism in contact with the process fluid, (2) Is operated with emissions less than 500 ppm above background, and (3) Is tested for compliance initially upon designation, annually, and at other times requested by the NWCAA. When a leak is detected, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached. The identification on a valve may be removed after it has been monitored for 2 successive months and no leak has been detected during those 2 months.	EPA Method 21 shall be used to determine the presence of leaking sources. The instrument shall be calibrated before use each day of its use by the procedures in Method 21. The following calibration gases shall be used: Zero air (less than 10 ppm of hydrocarbon in air); and a mixture of methane or n-hexane and air at a concentration of about, but not less than, 10,000 ppm methane or n-hexane. EPA Method 21 shall be used to determine the background level. All potential leak interfaces shall be traversed as close to the interface as possible. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance. When a leak is detected, record the information required in 60.486(c) For all equipment subject to this permit term, record in a log in a readily accessible location a list of identification numbers designated for no detectable emissions under 60.482-7(f). The designation of equipment as subject to the requirements of 60.482-7(f) shall be signed by the owner or operator. Alternatively, the owner or operator may establish a mechanism with their permitting authority that satisfies this requirement. Also record in the log the dates of each compliance test, the background level measured during each compliance test, and the maximum instrument reading measured at the equipment during each compliance test. Submit a semiannual report with process unit identification, dates of process unit shutdowns which occurred within the semiannual reporting period and revisions to items reported according to the initial semiannual report if changes have occurred since the initial report.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
			Report the results of all performance tests in accordance with 60.8 of the General Provisions. Note: Under WAC 173-401-615(2), records must be retained for five years.
5.13.14 VOC/HAP	As referenced: 40 CFR 60 Subpart VV 60.482-7(g) (11/16/07), 60.485(b) (11/16/07) and 60.486(a), (b), (c), and (e) (11/16/07), and 60.487(c) and (e) (11/16/07) NWCAA 104.2 (6/10/10)	Valves Designated as Unsafe-to-Monitor Any valve that is designated as an unsafe-to-monitor valve is exempt from the requirements of 60.482-7(a) if: (1) The owner or operator of the valve demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (a), and (2) the owner or operator of the valve adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times. When a leak is detected, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached. The identification on a valve may be removed after it has been monitored for 2 successive months and no leak has been detected during those 2 months.	EPA Method 21 shall be used to determine the presence of leaking sources. The instrument shall be calibrated before use each day. The following calibration gases shall be used: Zero air (less than 10 ppm of hydrocarbon in air); and a mixture of methane or n-hexane and air at a concentration of about, but not less than, 10,000 ppm methane or n-hexane. When a leak is detected, record the information required in 60.486(c). For all equipment subject to this permit term, record in a log in a readily accessible location a list of identification numbers for the equipment. Note: Under WAC 173-401-615(2), records must be retained for five years.
5.13.15 VOC/HAP	As referenced: 40 CFR 60 Subpart VV 60.482-7 (h), 60.485(b) (11/16/07) and 60.486(a), (b), (c), and (e) (11/16/07), and 60.487(c) and (e) (11/16/07) NWCAA 104.2	Valves Designated as Difficult-to-Monitor Any valve that is designated as a difficult-to-monitor valve is exempt from the requirements of 60.482-7(a) if: (1) The owner or operator of the valve demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface. and (2) the process unit within which the valve is located either becomes an affected facility through modification or reconstruction or the	EPA Method 21 shall be used to determine the presence of leaking sources. The instrument shall be calibrated before use each day. The following calibration gases shall be used: Zero air (less than 10 ppm of hydrocarbon in air); and a mixture of methane or n-hexane and air at a concentration of about, but not less than, 10,000 ppm methane or n-hexane. When a leak is detected, record the information required in 60.486(c). For all equipment subject to this permit term, record in a log in a readily accessible location a list of identification numbers for the equipment.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	(6/10/10)	owner or operator designates less than 3.0 percent of the total number of valves as difficult-to-monitor and (3) the owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year. When a leak is detected, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached. The identification on a valve may be removed after it has been monitored for 2 successive months and no leak has been detected during those 2 months.	Note: Under WAC 173-401-615(2), records must be retained for five years.
5.13.16 VOC/HAP	As referenced: 40 CFR 60 Subpart VV 60.485(d) (10/17/00) and 60.486(a),(j) (12/14/00) NWCAA 104.2 (6/10/10)	<u>Process Units Not in VOC Service</u> Each piece of equipment shall be tested unless the owner or operator demonstrates that a process unit is not in VOC service, i.e., that the VOC content would never be reasonably expected to exceed 10 % by weight.	To demonstrate that a process unit is not in VOC service, either follow (1) procedures that conform to the general methods in ASTM E-260, E-68, E-69 (incorporated by reference in 40 CFR 60.7), or, (2) demonstrate that the organic compounds are considered by the EPA to have negligible photochemical reactivity, or, (3) use engineering judgment to estimate the VOC content, if a piece of equipment has not been shown previously to be in service. Information and data used to demonstrate that a piece of equipment is not in VOC service shall be recorded in a log that is kept in a readily accessible location. Note: Under WAC 173-401-615(2), records must be retained for five years.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.13.17 VOC	As referenced: 40 CFR 60 Subpart VV 60.482-10(f)-(m) (12/14/00) and 60.486(d) and (e) (11/16/07) NWCAA 104.2 (6/10/10)	Inspection of Closed Vent Systems Conduct annual visual inspections for visible, audible, or olfactory indications of leaks on hard-piping. Conduct annual instrument monitoring using EPA Method 21 on ductwork using a leak definition of 500 ppm. Leaks shall be repaired as soon as practicable with the first attempt at repair no later than 5 days. Repairs shall be completed within 15 days, unless a delay of repair is utilized. Collection systems under a vacuum are exempt from monitoring. Equipment that is designated as difficult or unsafe to inspect must be identified and a written plan in place for inspection. Equipment designated as difficult to inspect must not exceed 3% of the total number of equipment in the system.	Keep the following records: For visual inspections or monitoring events during which no leaks are detected, a record of the inspection date, and a statement that no leaks were detected. If a leak is detected; record the monitoring instrument and operator identification numbers, the leaking equipment identification number, the date the leak was detected, the leak value in ppm, the date of each attempt at repair, and the repair methods used. If a delay of repair is utilized; record the reason for the delay and the signature of the person whose decision it was that repair could not be done without a process shutdown, the expected date of successful repair, the dates of process unit shutdowns that occurred while the equipment was unrepaired, and the date of successful repair. Identification of all parts of the closed vent system that are designated as difficult or unsafe to inspect, an explanation, and the plan for inspecting that equipment.
Leak detection and repair program for equipment subject to Subpart H (as modified by Subpart CC) pursuant to Orders of Approval to Construct			
5.13.18 VOC	As referenced: 40 CFR Subpart H 63.162(a) (6/23/03), 63.163(a) (1) (ii), (b), (c), and (d) (4/26/99) and 40 CFR Subpart H 63.180(b) and 63.181(b),(c) and (d) (6/23/03), and 63.182(d)	Pumps in Light Liquid Service, Without Dual Mechanical Seals Monitor each pump monthly to detect leaks. Visually check for liquids dripping from the pump seal once each calendar week. After initial startup, if an instrument reading of 2000 ppm or greater is measured, a leak is detected. If there are indications of liquids dripping from the pump seal, a leak is detected. When a leak is detected by an instrument reading above 2,000 ppm, or by visual inspection, the leak shall be repaired as soon	Monitor monthly as per the methods specified in 63.180(b) if less than 10% of light liquid pumps or three light liquid pumps are found leaking; except, if less than 3% of light liquid pumps or one liquid pump is found leaking, monitor quarterly. For visual inspections, document that the inspection was conducted and the date of the inspection. Retain these records for two years. Record a list of identification numbers for subject equipment. When a leak is detected, record the information in 63.181(d) and keep for two years. Semiannually submit a Periodic Report with the number of pumps for which leaks were detected, the percent

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	(1/17/97) and 40 CFR Subpart CC (63.648 (c)-(i)) (8/18/98). NWCAA 104.2 (6/10/10)	as practicable, but not later than 15 calendar days after it is detected, unless a delay of repair is required, as provided in Permit Term 5.13.29. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. If the greater of 10% of the pumps in a process unit or three pumps in a process unit leak (calculated on a 6-month rolling average), the permittee shall implement a quality improvement program for pumps that complies with part 63.176. The number of pumps at a process unit shall be the sum of all the pumps in organic HAP service, except pumps found leaking within 1 month after startup of the pump shall not count for that monitoring period. <u>Percent leaking pumps equation:</u> $\%P_L = \frac{(P_L - P_S)}{(P_t - P_S)} \times 100$ where % P_L = Percent leaking pumps P_L = Number of pumps found leaking P_T = Total pumps in organic HAP service P_S = Number of pumps leaking within 1 month of startup Note: As per Subpart CC 63.648(f), reciprocating pumps in light liquid service are exempt from 63.163 if recasting the distance piece or reciprocating pump replacement is required.	leakers, the total number of pumps monitored, and the number of pumps for which leaks were not repaired. Also report the information listed in paragraph (c) of this section for the Notification of Compliance Status for process units with later compliance dates and any revisions to items reported in earlier Notification of Compliance Status, if the method of compliance has changed since the last report. Maintain all records for a minimum of five years.
5.13.19	As referenced: 40 CFR Subpart H 63.162(a)(6/23/03), 63.163(e)	<u>Pumps in Light Liquid Service, With Dual Mechanical Seals Including a Barrier Fluid System</u> Operate the barrier fluid at a pressure that is	Check each pump by visual inspection each calendar week for indications of liquids dripping from the pump seal. If there are indications of liquids dripping from the pump seal at the time of the weekly inspection, monitor the

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	(4/26/99) and 40 CFR Subpart H 63.180(b) (1/22/01) and 63.181(b),(c) and (d) (6/23/03) and 63.182(d) (1/17/97) and 40 CFR Subpart CC (63.648 (c)-(i)) (8/18/98). NWCAA 104.2 (6/10/10)	at all times greater than the pump stuffing box pressure, or equip the dual mechanical seal system with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of §63.172; or equip with a system that purges the barrier fluid into a process stream. The barrier fluid system is not in light liquid service. Equip each barrier fluid system with a sensor that will detect failure of the seal system, the barrier fluid system, or both. The permittee may determine, based on design considerations and operating experience, criteria applicable to the presence and frequency of drips and to the sensor that indicates failure of the seal system, the barrier fluid system, or both. If liquids dripping from the pump seal exceed the established criteria, or the sensor indicates failure of the seal or barrier fluid system, a leak is detected. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 63.171. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. Note: As per 63.648(f), reciprocating pumps in light liquid service are exempt from 63.163 if recasting the distance piece or reciprocating pump replacement is required.	pump as specified in 63.180 to determine if there is a leak of organic HAP in the barrier fluid. If a reading of 2,000 ppm or greater is measured, a leak is detected. Observe each sensor daily unless it is equipped with an alarm. For visual inspections, document that the inspection was conducted and the date of the inspection. Retain these records for two years. Record a list of identification numbers for subject equipment. Record the design criteria if the permittee determined criteria applicable to the presence and frequency of drips and to the sensor. Also record any changes to these criteria and the reasons for the changes. Semiannually submit a Periodic Report with the number of pumps for which leaks were detected, the percent leakers, the total number of pumps monitored, and the number of pumps for which leaks were not repaired. Also report the information listed in paragraph (c) of this section for the Notification of Compliance Status for process units with later compliance dates and any revisions to items reported in earlier Notification of Compliance Status, if the method of compliance has changed since the last report. When a leak is detected, record the information in 63.181(d) and keep for two years. Maintain all records for a minimum of five years.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.13.20 VOC	As referenced: 40 CFR Subpart H 63.162(a)(6/23/03), 63.163(j) (4/26/99) and 40 CFR Subpart H 63.180(b) (1/22/01) and 63.181(6/23/03) and 63.182(d)(1/17/97) and 40 CFR Subpart CC (63.648 (c)-(i)) (8/18/98). NWCAA 104.2 (6/10/10)	Pumps Designated as Unsafe-to-Monitor Any pump that is designated as an unsafe-to-monitor pump is exempt from the paragraphs (b) through (e) of this section if: (1) The owner or operator of the pump determines that the pump is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (b) through (d) of this section; and, (2) has a written plan that requires monitoring of the pump as frequently as practicable during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable. For any leaks detected, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. Note: As per 63.648(f), reciprocating pumps in light liquid service are exempt from 63.163 if recasting the distance piece or reciprocating pump replacement is required.	Monitor each pump to detect leaks by the methods specified in 63.180 (b). For all equipment subject to this permit term, record the identification of equipment designated as unsafe-to-monitor, difficult to monitor, or unsafe to inspect and the plan for monitoring or inspecting this equipment. When each leak is detected, record the information required by 63.181(d) and keep it for 2 years. Submit a semiannual report to the NWCAA. The Periodic Report shall include the pertinent information in 63.182(d). Maintain all records for a minimum of five years.
5.13.21	As referenced: 40 CFR Subpart H 63.164 (4/26/99), 63.181(b) and (d) (6/23/03), 63.182(d) (1/17/97) and 40 CFR Subpart CC (63.648 (c)-(i)) (8/18/98). NWCAA 104.2	Compressors Equip each compressor with a seal system that includes a barrier fluid system and that prevents leakage of process fluid to the atmosphere. Operate the seal system with a barrier fluid at a pressure that is greater than the compressor stuffing box pressure, or, equip with a barrier fluid system degassing reservoir routed to a process or fuel gas system or connected by a closed vent system to a control device, or, equip	When a leak is detected, record the information listed in 63.181(d) in a log and keep for two years in a readily accessible location. Semiannually submit a Periodic Report with the number of compressors for which leaks were detected and the number of compressors for which leaks were not repaired. Report the facts that explain any delay of repairs and, where appropriate, why a process unit shutdown was technically infeasible. Also report the information listed in paragraph (c) of this section for the Notification of Compliance Status for

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	(6/10/10)	with a closed-loop system that purges the barrier fluid directly into a process stream. The barrier fluid system shall not be in light liquid service. Equip each barrier fluid system with a sensor that will detect failure of the seal system, the barrier fluid system, or both. Observe each sensor daily or equip the sensor with an alarm. Determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both. If the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 63.171. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. For any leaks detected, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. Note: Compressors in hydrogen service as per 40 CFR 63.648(g) are exempt from these requirements if the permittee demonstrates that a compressor is in hydrogen service. Also, as per 63.648(i), reciprocating compressors are exempt from seal requirements if recasting the distance piece or compressor replacement is required.	process units with later compliance dates and any revisions to items reported in earlier Notification of Compliance Status, if the method of compliance has changed since the last report. Maintain all records for a minimum of five years.
5.13.22	As referenced: 40	Compressors Designated <500 ppm Any	Record a list of identification numbers for compressors

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	CFR Subpart H 63.164(i) (4/26/99), 63.181(b),(d), and (f), (6/23/03), and 63.182(d) (1/17/97) and 40 CFR Subpart CC (63.648 (c)-(i)) (8/18/98) and 40 CFR Subpart CC (63.648 (c)-(i)) (8/18/98). NWCAA 104.2 (6/10/10)	compressor designated to operate with an instrument reading of less than 500 parts per million above background is exempt from the requirements of paragraphs (a) through (h) of this section if the compressor (1) is demonstrated to be operating with an instrument reading of less than 500 ppm above background, as measured by the method specified in 63.180(c) of this subpart, and (2) is tested for compliance initially upon designation, annually, and at other times requested by the NWCAA. For any leaks detected, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. Note: Compressors in hydrogen service as per 40 CFR 63.648(g) are exempt from these requirements if the permittee demonstrates that a compressor is in hydrogen service. Also, as per 63.648(i), reciprocating compressors are exempt from seal requirements if recasting the distance piece or compressor replacement is required.	that the owner or operator elects to designate as operating with an instrument reading of less than 500 parts per million above background, under the provisions of 63.164(i). When a leak is detected, record the information listed in 60.181(d) in a log and keep for two years in a readily accessible location. Also record the dates and results of each compliance test required for compressors subject to the provisions in 63.164(i), including, (1) the background level measured during each compliance test and (2) the maximum instrument reading measured at each piece of equipment during each compliance test. Semiannually submit a Periodic Report with the number of compressors for which leaks were detected and the number of compressors for which leaks were not repaired. Report the facts that explain any delay of repairs and, where appropriate, why a process unit shutdown was technically infeasible. Also report the information listed in paragraph (c) of this section for the Notification of Compliance Status for process units with later compliance dates and any revisions to items reported in earlier Notification of Compliance Status, if the method of compliance has changed since the last report. Maintain all records for a minimum of five years.
5.13.23 HAP	As referenced: 40 CFR Subpart H 63.162(f) (6/23/03) and 63.181(b)(10)(6/23/03) and 40 CFR Subpart CC (63.648 (c)-(i)) (8/18/98). NWCAA 104.2	<u>Leak Identification</u> When a leak is detected, clearly identify the leaking equipment. A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. Except for a valve or connector, the identification may be removed after it is repaired.	Record the identification number for equipment marked as leaking. Maintain all records for a minimum of five years.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	(6/10/10)		
5.13.24 HAP	As referenced: 40 CFR Subpart H 63.165(a) and (b) (1/17/97). 40 CFR Subpart H 63.181(b)(3) and (f) (4/26/99), and 63.182(d) 1/17/97) and 40 CFR Subpart CC (63.648 (c)-(i)) (8/18/98). NWCAA 104.2 (6/10/10)	Pressure Relief Devices Except as noted below, during pressure releases each pressure relief device in gas/vapor service shall be operated with an instrument reading of less than 500 parts per million above background. After each pressure release, the pressure relief device shall be returned to a condition indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after each pressure release, unless a delay of repair is required. No later than five calendar days after the release and being returned to service, monitor the device to confirm that the condition is less than 500 ppm above background. Any pressure relief device routed to the fuel gas system or that is equipped with a closed vent system and control device is exempt from this requirement. Any pressure relief device equipped with a rupture disk upstream of the pressure relief device is exempt from this requirement, provided that after each release a new rupture disk is installed as soon as practicable, but no later than 5 calendar days after each pressure release, except if a delay of repair is necessary.	For pressure relief devices not routed to the fuel gas system or a closed vent/control device system, and without a rupture disk, if a release occurs monitor the pressure relief device no later than 5 calendar days after being returned to service. List the equipment identification numbers for pressure relief devices subject to the 500 ppm above background standard. List the identification numbers for pressure relief devices equipped with rupture disks. Record the dates and results of the monitoring following a pressure release subject to the 500 ppm standard, including the background level measured during each compliance test and the maximum instrument reading. Semiannually submit a Periodic Report with the results of all monitoring to show compliance with 63.165(a) of this subpart conducted within the semiannual reporting period. Also report the information listed in paragraph (c) of this section for the Notification of Compliance Status for process units with later compliance dates and any revisions to items reported in earlier Notification of Compliance Status, if the method of compliance has changed since the last report. Maintain all records for a minimum of five years.
5.13.25 HAP	As referenced: 40 CFR Subpart H 63.166(a) and (b) 6/20/96) and 40	Sampling Connection Systems Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system. The purged process	None

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	CFR Subpart CC (63.648 (c)-(i)) (8/18/98). NWCAA 104.2 (6/10/10)	fluid must be returned directly to the process line or collected and recycled to a process, or transported to a control device that complies with 63.172 of this subpart.	
5.13.26 HAP	As referenced: 40 CFR Subpart H 63.167(a) and (b) 6/20/96) and 40 CFR Subpart CC (63.648 (c)-(i)) (8/18/98). NWCAA 104.2 (6/10/10)	Open-ended Valves or Lines Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve which shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line, or during maintenance or repair. Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.	None
5.13.27 HAP	As referenced: 40 CFR Subpart H 63.168(a), (b), (e), (f) (1/17/97) and 63.181(d) (4/26/99) and 63.182(d) 1/17/97) and 40 CFR Subpart CC (63.648 (c)-(i)) (8/18/98). NWCAA 104.2 (6/10/10)	Valves in Gas/Vapor Service and in Light Liquid Service Without Connector Monitoring Monitor all valves by the method specified in 63.180(b). If an instrument reading of 1000 ppm or greater is measured, a leak is detected. Percent Leaking Valves Equation: $V_L = \frac{V_L}{(V_T + V_C)} \times 100$ $\%V_L = (V_L/V_T+V_C))x100$ Where: $\%V_L$ = Percent leaking valves ad determined through periodic monitoring V_L = Number of valves found leaking excluding nonrepairables V_T = total valves monitored	Monitor valves per this frequency, with the percent leaking valves calculated as a rolling average of two consecutive monitoring periods: Leaking Valves ..... Frequency > .0 % ..... Monthly or QIP < .0 % ..... Quarterly <3.0 % ..... Semiannually <2 % ..... Annually When a leak has been repaired, the valve shall be monitored at least once within the first 3 months after its repair. When a leak is detected, record the information in 63.181(d) and keep for two years. Report semiannually the number of valves for which leaks were detected, the percent leakers, and the total number of valves monitored; the number of valves for which leaks

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		V_C = Optional credit for removed valves = 0.67 x net number of valves in organic HAP service removed. Non-repairable valves shall be included in the calculation of percent leaking valves the first time the valve is identified as leaking and non-repairable. Otherwise, a number of non-repairable valves up to 1% per year of the total number of valves in organic HAP service up to a maximum of 3% may be excluded from calculation of percent leaking valves for subsequent monitoring periods. When the number of non-repairable valves exceeds 3%, that number of non-repairable valves shall be included in the calculation of percent leaking valves. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 63.171. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.	were not repaired, and the number determined unrepairable. Also report the facts that explain any delay of repairs and, where appropriate, why a process unit shutdown was technically infeasible. Also report the information listed in paragraph (c) of this section for the Notification of Compliance Status for process units with later compliance dates and any revisions to items reported in earlier Notification of Compliance Status, if the method of compliance has changed since the last report. Maintain all records for a minimum of five years.
5.13.28 HAP	As referenced: 40 CFR Subpart H 63.169(a), (b), (c), and (d) (12/14/00) and 63.181(b)(4), (d), (i) (6/23/03) and 63.182(d)(1/17/97) and 40 CFR Subpart CC (63.648 (c)-(i)) (8/18/98). NWCAA 104.2	<u>Pumps, Valves, and Connectors in Heavy Liquid Service, Instrumentation Systems, and Pressure Relief Devices in Liquid Service</u> Monitor within 5 calendar days by the method specified in 63.180(b) if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method. If the potential leak is repaired as soon as practicable, but not later than 15 calendar days after it is detected (except as provided in 63.171), with the first attempt at repair made no later than 5 calendar days after the leak is detected, it is not necessary to monitor the system for leaks by the method	Record the identification numbers of instrumentation systems subject to this condition. When a leak is detected, record the information in 63.181(d) and keep for two years. Retain information, data, and analyses used to determine that a piece of equipment is in heavy liquid service. When requested by the NWCAA, demonstrate that the piece of equipment or process is in heavy liquid service. Report the information listed in paragraph (c) of this section for the Notification of Compliance Status for process units with later compliance dates and any revisions to items reported in earlier Notification of Compliance Status, if the method of compliance has

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	(6/10/10)	in 63.180(b). For equipment that is not monitored by the method specified in 63.180(b), repaired shall mean that the visual, audible, olfactory, or other indications of a leak to the atmosphere have been eliminated; that no bubbles are observed at potential leak sites during a leak check using soap solution; or that the system will hold a test pressure. For pumps, the leak definition is 2,000 ppm. For valves, connectors, instrumentation systems, and pressure relief devices the leak definition is 1000 ppm.	changed since the last report. Maintain all records for a minimum of five years.
5.13.29 HAP	As referenced: 40 CFR Subpart H 63.171 (12/14/00) and 63.182(d) (1/17/97) and 40 CFR Subpart CC (63.648 (c)-(i)) (8/18/98). NWCAA 104.2 (6/10/10)	Delay of Repair Delay of repair of equipment for which leaks have been detected is allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur by the end of the next process unit shutdown. Delay of repair is also allowed if the equipment is isolated from the process and does not remain in organic HAP service.	Submit semiannually a report explaining why each delay of repair was required and, where appropriate, why a process unit shutdown was technically infeasible. The first periodic report shall cover the first 6 months after startup. Maintain all records for a minimum of five years.
Leak detection and repair program for equipment subject to NSPS GGGa unless otherwise specified			
5.13.30 VOC	As referenced: 40 CFR 60 Subpart VVa 60.482-2a(a), (b), and (c) (11/16/07), 60.485a(b) (11/16/07), 60.486a(a), (b), (c) and (e) (11/16/07) and	Pumps in Light Liquid Service, Without Dual Mechanical Seals Monitor each pump monthly to detect leaks. A pump that begins operation in light liquid service after the initial startup date for the process unit must be monitored for the first time within 30 days after the end of its startup period, except for a pump that replaces a leaking pump. Visually inspect each calendar week.	Monitor each pump monthly to detect leaks by the methods specified in 60.485a(b). Each calendar week visually inspect each pump for indications of liquids dripping from the pump seal. For each monitoring event, record: (i) Monitoring instrument identification (ii) Operator identification (iii) Equipment identification (iv) Date of monitoring

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	60.487a(c), and (e) (11/16/07) NWCAA 104.2 (6/10/10)	If an instrument reading of 2,000 ppm or greater is measured, a leak is detected. If there are indications of liquids dripping from the pump seal, follow either of these two procedures: (Note: This requirement does not apply to a pump that was monitored after a previous weekly inspection if the instrument reading was less than 2,000 ppm and the pump was not repaired since that monitoring event) (iii) Monitor the pump within 5 days. If an instrument reading of 2,000 ppm or greater is measured, a leak is detected. (ii) Designate the visual indications of liquids dripping as a leak, and repair the leak within 15 days of detection or by eliminating the visual indications of liquids dripping. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 60.482-9a. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. First attempts at repair include, but are not limited to, the practices described in paragraphs 60.482-2a(c)(2)(i) and (ii). Note that "repair" includes remonitoring. When a leak is detected, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. The identification may be removed after it has been repaired.	(v) Instrument reading When a leak is detected, record the information listed in 60.486a(c) in a log and kept for 2 years in a readily accessible location. For all equipment subject to this permit term, record in a log in a readily accessible location the information required in 60.486a(e). Submit a semiannual report to the Administrator beginning 6 months after the initial startup date. The initial semiannual report shall include the information in 60.487a(b). All semiannual reports shall include the information in 50.487a(c). Report the results of all performance tests in accordance with 60.8 of the General Provisions. Note: Under WAC 173-401-615(2), records must be retained for five years.
5.13.31	As referenced: 40	<u>Pumps in Light Liquid Service, With Dual</u>	Each calendar week, visually inspect each pump for

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
VOC	CFR 60 Subpart VVa 60.482-2a(b), (c) and (d) (11/16/07), 60.485a(b) (11/16/07), 60.486a(a), (b), (c), (e),(h) (11/16/07), and 60.487a(a), (b),(c), and (e) (11/16/07) NWCAA 104.2 (6/10/10)	<u>Mechanical Seals Including A Barrier Fluid System</u> Operate the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure, or equip the dual mechanical seal system with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of §60.482–10a; or equip with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere. The barrier fluid system should be in heavy liquid service or not in VOC service. Equip each barrier fluid system with a sensor that will detect failure of the seal system, the barrier fluid system, or both. When a leak is detected, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached. The identification may be removed after it has been repaired.	indications of liquids dripping from the pump seals. If there are indications of liquids dripping from the pump seal at the time of the weekly inspection, follow either of the following procedures prior to the next required inspection: A. Monitor the pump within 5 days as specified in 60.485a(b) to determine if there is a leak of VOC in the barrier fluid. If an instrument reading of 2,000 ppm or greater is measured, a leak is detected. B. Designate the visual indications of liquids dripping as a leak. Check each sensor daily or equip the sensor with an audible alarm. Determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both. If the sensor indicates failure of the seal system, the barrier fluid system, or both, based on the criterion that indicates failure, a leak is detected. When a leak is detected by monitoring as per procedure A, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §60.482–9a. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. First attempts at repair include, but are not limited to, the practices described in paragraphs (c)(2)(i) and (ii) of this section. Note that “repair” includes remonitoring, by definition. If the sensor indicates a leak, the leak shall be repaired within 15 days of detection by eliminating the conditions that activated the sensor. A designated leak as per procedure B shall be repaired within 15 days of detection by eliminating visual indications of liquids dripping. When a leak is detected, record the information listed in 60.486a(c) in a log and kept for 2 years in a readily accessible location.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
			For each monitoring event, record: (i) Monitoring instrument identification (ii) Operator identification (iii) Equipment identification (iv) Date of monitoring (v) Instrument reading For all equipment subject to this permit term, record in a log in a readily accessible location the information required in 60.486a(e). Required design criterion must be recorded in a log and kept readily accessible. An explanation of the design criterion and any changes to the criterion (and reasons for the changes) must be kept as well. Submit a semiannual report to the Administrator beginning 6 months after the initial startup date. The initial semiannual report shall include the information in 60.487a(b). All semiannual reports shall include the information in 50.487a(c). Report the results of all performance tests in accordance with 60.8 of the General Provisions. Note: Under WAC 173-401-615(2), records must be retained for five years.
5.13.32 VOC	As referenced: 40 CFR 60 Subpart VVa 60.482-2a (e)(11/16/07), 60.485a(b) and (c) (11/16/07), 60.486a(a), (c), (e)(11/16/07), and 60.487a(a), (b),(c), and (e) (11/16/07) NWCAA 104.2	Pump Designated as No Detectable Emissions Any pump that is designated for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraphs (a), (c), and (d) of this section if the pump: (1) Has no externally actuated shaft penetrating the pump housing, (2) Is demonstrated to be operating with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background, and (3) Is	Monitor each pump initially, annually, and at other times as requested to detect leaks by the methods specified in 60.485a (b). For all equipment subject to this permit term, record in a log in a readily accessible location the identification numbers for equipment designated for no detectable emissions under the provision of 60.482-2a(e). The designation of equipment as subject to the requirements of 60.482-2a(e) shall be signed by the owner or operator. Alternatively, the owner or operator may establish a mechanism with the NWCAA that satisfies this requirement. Also record in the log the dates of each

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	(6/10/10)	tested for compliance initially upon designation, annually, and at other times requested by the NWCAA.	compliance test, the background level measured during each compliance test, and the maximum instrument reading measured at the equipment during each compliance test. Also record the information for monitoring instrument calibrations required by 60.486a(e)(8)(i) through (vi). Submit a semiannual report to the Administrator beginning 6 months after the initial startup date. The initial semiannual report shall include the information in 60.487a(b). All semiannual reports shall include the information in 50.487a(c). Report the results of all performance tests in accordance with 60.8 of the General Provisions. Note: Under WAC 173-401-615(2), records must be retained for five years.
5.13.33 VOC	As referenced: 40 CFR 60 Subpart VVa 60.482-2a(c) and (g) (11/16/07), 60.485a(b) (11/16/07) and 60.486a(a), (b), (c), (e) and (f) (11/16/07), and 60.487a(a),(b),(c) and (e) (11/16/07) NWCAA 104.2 (6/10/10)	Pumps Designated as Unsafe-to-Monitor Any pump that is designated as an unsafe-to-monitor pump is exempt from the monitoring and inspection requirements of paragraphs (a) and (d)(4) through (6) of this section if: (1) The owner or operator of the pump demonstrates that the pump is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (a); and, (2) has a written plan that requires monitoring of the pump as frequently as practicable during safe-to-monitor times but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures in paragraph (c) of this section if a leak is detected. When a leak is detected, it shall be repaired	Monitor each pump to detect leaks by the methods specified in 60.485a (b). When a leak is detected, record the information required in 60.486a (a), (c), and (e). For all equipment subject to this permit term, record in a log in a readily accessible location a list of identification numbers for the pumps that are designated as unsafe-to-monitor, an explanation for each pump stating why the pump is unsafe-to-monitor, and the plan for monitoring each pump. Submit a semiannual report to the Administrator beginning 6 months after the initial startup date. The initial semiannual report shall include the information in 60.487a(b). All semiannual reports shall include the information in 50.487a(c). Report the results of all performance tests in accordance with 60.8 of the General Provisions. Note: Under WAC 173-401-615(2), records must be retained for five years.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 60.482-9a. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. First attempts at repair include, but are not limited to, the practices described in paragraphs 60.482-2a(c)(2)(i) and (ii). Note that "repair" includes remonitoring, by definition. When a leak is detected, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. The identification may be removed after it has been repaired.	
5.13.34 VOC	As referenced: 40 CFR 60 Subpart VVa 60.482-3a (11/16/07), 60.486a(a),(b), (c), (e) and (h) (11/16/07), and 60.487a(a), (b),(c), and (e) (11/16/07) and Subpart GGGa 60.593a (a) and (b) (11/16/07) NWCAA 104.2 (6/10/10)	<u>Compressors</u> Equip each compressor with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere. Operate the seal system with a barrier fluid at a pressure that is greater than the compressor stuffing box pressure, or, equip with a barrier fluid system degassing reservoir routed to a process or fuel gas system or connected by a closed vent system to a control device, or, purge the barrier fluid into a process stream with zero VOC emissions to the atmosphere. The barrier fluid system shall be in heavy liquid service or shall not be in VOC service. Equip each barrier fluid system with a sensor that will detect failure of the seal system, the barrier fluid system, or both. Check each sensor daily or equip the sensor with an audible alarm. Determine, based on	When a leak is detected, record the information listed in 60.486a (a) and (c) in a log and keep for two years in a readily accessible location. For all equipment subject to this permit term, record in a log in a readily accessible location the information required in 60.486a(e) For equipment designated for no detectible emissions, the design criterion must be recorded in a log and kept readily accessible. An explanation of the design criterion and any changes to the criterion (and reasons for the changes) must be kept as well. Submit a semiannual report to the Administrator beginning 6 months after the initial startup date. The initial semiannual report shall include the information in 60.487a(b). All semiannual reports shall include the information in 50.487a(c). Report the results of all performance tests in accordance with 60.8 of the General Provisions. Note: Under WAC 173-401-615(2), records must be

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both. If the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 60.482-9a. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. Note that "repair" includes remonitoring, by definition. When a leak is detected, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached. The identification may be removed after it has been repaired. Compressors in hydrogen service are exempt from the requirements of §60.592a if an owner or operator demonstrates that a compressor is in hydrogen service.	retained for five years.
5.13.35 VOC	As referenced: 40 CFR 60 Subpart VVa 60.482-4a (12/14/00), 60.485a(c), (11/16/07), 60.486a(e) (11/16/07), and 60.487a(a), (b),(c) and (e) (11/16/07) NWCAA 104.2 (6/10/10)	<u>Pressure Relief Devices</u> Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background. After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions as soon as practicable, but no later than 5 calendar days after the pressure release, except as provided in 60.482-9a.	Monitor to detect leaks by the methods specified in 60.485a (b). For pressure relief devices required to comply with this condition, record a list of equipment identification numbers in a log in a readily accessible location. Also record the date of each compliance test, the background level measured during the compliance test, and the maximum instrument reading. Also record the information for monitoring instrument calibrations required by 60.486a(e)(8)(i) through (vi) and record each release from a pressure relief device. Submit a semiannual report to the Administrator

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		No later than 5 calendar days after the pressure release, the pressure relief device shall be monitored to confirm the conditions of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background. Any pressure relief device routed to the fuel gas system or equipped with a closed vent system a control device is exempt from these requirements. Any pressure relief device equipped with a rupture disk upstream of the pressure relief device is exempt from this requirement, provided that after each release a new rupture disk is installed as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in §60.482-9a.	beginning 6 months after the initial startup date. The initial semiannual report shall include the information in 60.487a(b). All semiannual reports shall include the information in 50.487a(c). Report the results of all performance tests in accordance with 60.8 of the General Provisions. Note: Under WAC 173-401-615(2), records must be retained for five years.
5.13.36 VOC	As referenced: 40 CFR 60 Subpart VVa 60.482-5a (11/16/0712/14/00) and 60.486(a), (e) (11/16/0712/14/00) NWCAA 104.2 (6/10/10)	<u>Sampling Connection Systems</u> Each sampling connection system shall be equipped with a closed-purged, closed-loop, or closed-vent system (except for in situ sampling systems and sampling systems without purges). Gases displaced during sample container filling are not required to be collected or captured. Containers that are part of a closed-purge system must be covered or closed when not being filled or emptied. Gases remaining in the tubing or piping between the closed-purge system valve(s) and sample container valve(s) after the valves are closed and the sample container is disconnected are not required to be collected or captured. Design and operate the system to either	The permittee shall record in a log kept in a readily accessible location a list of identification numbers for equipment subject to the requirements of this condition. Note: Under WAC 173-401-615(2), records must be retained for five years.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		return the purged process fluid directly to the process line, or collect and recycle to a process, or, collect, store, and transport all the purged process fluid to a control device that complies with the requirements of 60.482-10a.	
5.13.37 VOC	As referenced: 40 CFR 60 Subpart VVa 60.482-6a (11/16/07), and 60.486(a), (e) (11/16/07) NWCAA 104.2 (6/10/10)	<u>Open-ended Valves or Lines</u> Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve except open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset, and, open-ended valves or lines containing materials which would autocatalytically polymerize or would present an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system. The cap, blind flange, plug or second valve shall seal the open end at all times except during operations requiring process fluid flow. Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed. When a double block-and-bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves, but shall remain closed at other times. Open-ended valves or lines in an emergency shutdown system which are designed to	The permittee shall record in a log kept in a readily accessible location a list of identification numbers for equipment subject to the requirements of this condition. Note: Under WAC 173-401-615(2), records must be retained for five years.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		open automatically in the event of a process upset are exempt. Likewise, open-ended valves or lines containing materials which would polymerize or would present an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system is exempt.	

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.13.38 VOC	As referenced: 40 CFR 60 Subpart VVa 60.482-8a (11/16/07), 60.485a(b) (11/16/07), 60.486a(a), (b), (c) and (e) (11/16/07), and 60.487a(a), (b), and (c) (11/16/07) and 40 CFR 60 Subpart GGGa 60.593a(g) (11/16/07) NWCAA 104.2 (6/10/10)	<u>Pumps and Valves in Heavy Liquid Service, and Connectors in Gas/Vapor, Light Liquid, or Heavy Liquid Service, and Pressure Relief Devices in Light Liquid or Heavy Liquid Service</u> If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method, either monitor within 5 days by the method specified in 60.485a(b) or eliminate the visual, audible, olfactory, or other indication of potential leak within 5 calendar days of detection. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 60.482-9a. The first attempt at repair shall be made no later than 5 calendar days after each detected leak. First attempts at repair include, but are not limited to, the best practices described under 60.482-2a(c)(2) and 60.482-7a(e). Note that "repair" includes remonitoring, by definition. When a leak is detected, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached. The identification may be removed after it has been repaired.	Monitor to detect leaks by the methods specified in 60.485a (b). When a leak is detected, record the information required in 60.486a(a) and (c). For all equipment subject to this permit term, record in a log in a readily accessible location a list of identification numbers for equipment subject to this requirement. Also record the information for monitoring instrument calibrations required by 60.486a(e)(8)(i) through (vi). Submit a semiannual report to the Administrator beginning 6 months after the initial startup date. The initial semiannual report shall include the information in 60.487a(b). All semiannual reports shall include the information in 50.487a(c). Note: Under WAC 173-401-615(2), records must be retained for five years.
5.13.39 VOC	As referenced: 40 CFR 60 Subpart VVa 60.482-9a (11/16/07) and 60.487a(c)(2)(xi)	<u>Delay of Repair</u> Delay of repair of equipment for which leaks have been detected will be allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair	Report, in a semiannual report, the process unit identification and the facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible. Also report the dates of process unit shutdowns which occurred within

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	and (3) (11/16/07) NWCAA 104.2 (6/10/10)	shall occur before the end of the next process unit shutdown. Monitoring to verify repair must occur within 15 days after startup of the process unit. Delay is also allowed for equipment isolated from the process and which does not remain in VOC service. Valves and Connectors: Delay of repair will be allowed if (1) it is demonstrated that purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and (2) when repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with 60.482-10a. Delay of repair beyond a process unit shutdown will be allowed if valve assembly replacement is necessary, valve assembly supplies have been depleted, and supplies had been sufficiently stocked before they were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown. Pumps: Delay of repair will be allowed if (1) repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and (2) repair is completed as soon as practicable, but not later than 6 months after the leak was detected. When delay of repair is allowed for a leaking pump, valve, or connector that remains in service, the pump, valve, or connector may be considered to be repaired and no longer	the semiannual reporting period.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		subject to delay of repair requirements if two consecutive monthly monitoring instrument readings are below the leak definition.	
5.13.40 VOC	As referenced: 40 CFR 60 Subpart VVa 60.482-7a (a-e)(11/16/07), 60.485a(b) (11/16/07), 60.486a(b),(c),and (e) (11/16/07), and 60.487a(b), (c),and (e) (11/16/07) NWCAA 104.2 (6/10/10)	<u>Standards for Valves in Gas/Vapor Service and Light Liquid Service</u> Monitor each valve monthly to detect leaks. A valve that begins operation in gas/vapor service or light liquid service after the initial startup date for the process unit must be monitored monthly, with the valve monitored for the first time within 30 days after the end of its startup period, Any valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected. If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months. If an instrument reading of 500 ppm or greater is measured, a leak is detected. When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in 60.482-9a. Note that "repair" includes remonitoring, by definition. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. First attempts at repair include, but are not limited to tightening of bonnet bolts, replacement of bonnet bolts, tightening of packing gland nuts, and injection of lubricant into lubricated packing.	Monthly, monitor valves to detect leaks by the methods specified in 60.485a(b). For each monitoring event, record the information in 60.486a(a). When a leak is detected, record the information required in 60.486a(c). For all equipment subject to this permit term, record in a log in a readily accessible location a list of identification numbers and the monitoring instrument calibration information listed in 60.486a(e)8(i) through (vi). Submit a semiannual report to the Administrator beginning 6 months after the initial startup date. The initial semiannual report shall include the information in 60.487a(b). All semiannual reports shall include the information in 50.487a(c). Report the results of all performance tests in accordance with 60.8 of the General Provisions. Note: Under WAC 173-401-615(2), records must be retained for five years.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
		When a leak is detected, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached. The identification on a valve may be removed after it has been monitored for 2 successive months and no leak has been detected during those 2 months.	
5.13.41 VOC	As referenced: 40 CFR 60 Subpart VVa 60.482-7a(f) (11/16/07), 60.485a(b) and (c) (11/16/07) and 60.486a(a), (b), (c), and (e) (11/16/07), and 60.487a(c) and (e) (11/16/07) NWCAA 104.2 (6/10/10)	Valves Designated for No Detectable Emissions Any valve that is designated for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of 60.482-7a(a) if the valve: (1) Has no external actuating mechanism in contact with the process fluid, (2) Is operated with emissions less than 500 ppm above background, and (3) Is tested for compliance initially upon designation, annually, and at other times requested by the NWCAA. When a leak is detected, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached. The identification on a valve may be removed after it has been monitored for 2 successive months and no leak has been detected during those 2 months.	Monitor valves by the methods specified in 60.485a(b). EPA Method 21 of appendix A-7 shall be used to determine the background level. All potential leak interfaces shall be traversed as close to the interface as possible. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance. For each monitoring event, record the information in 60.486a(a). When a leak is detected, record the information required in 60.486a(c). For all equipment subject to this permit term, record in a log in a readily accessible location a list of identification numbers designated for no detectable emissions under 60.482-7a(f). The designation of equipment as subject to the requirements of 60.482-7a(f) shall be signed by the owner or operator. Alternatively, the owner or operator may establish a mechanism with their permitting authority that satisfies this requirement. Also record in the log the dates of each compliance test, the background level measured during each compliance test, and the maximum instrument reading measured at the equipment during each compliance test. Record the monitoring instrument calibration information listed in 60.486a(e)8(i) through (vi). Submit a semiannual report to the Administrator beginning 6 months after the initial startup date. The initial semiannual report shall include the information in 60.487a(b). All semiannual reports shall include the information in 50.487a(c).

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
			Report the results of all performance tests in accordance with 60.8 of the General Provisions. Note: Under WAC 173-401-615(2), records must be retained for five years.
5.13.42 VOC	As referenced: 40 CFR 60 Subpart VVa 60.482-7a(g) (11/16/07), 60.485a(b) (11/16/07) and 60.486a(a), (b), (c), (e) and (f) (11/16/07), and 60.487a(b),(c) and (e) (11/16/07) NWCAA 104.2 (6/10/10)	Valves Designated as Unsafe-to-Monitor Any valve that is designated as an unsafe-to-monitor valve is exempt from the requirements of 60.482-7a(a) if: (1) The owner or operator of the valve demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (a), and (2) the owner or operator of the valve adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times. When a leak is detected, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached. The identification on a valve may be removed after it has been monitored for 2 successive months and no leak has been detected during those 2 months.	Monitor valves by the methods specified in 60.485a(b). For each monitoring event, record the information in 60.486a(a). When a leak is detected, record the information required in 60.486a(c). For all equipment subject to this permit term, record in a log in a readily accessible location a list of identification numbers and the monitoring instrument calibration information listed in 60.486a(e)8(i) through (vi). Record in a log in a readily accessible location a list of identification numbers for designated valves, an explanation for each valve stating why the valve is unsafe-to-monitor, and the plan for monitoring each valve. Submit a semiannual report to the Administrator beginning 6 months after the initial startup date. The initial semiannual report shall include the information in 60.487a(b). All semiannual reports shall include the information in 50.487a(c). Note: Under WAC 173-401-615(2), records must be retained for five years.
5.13.43 VOC	As referenced: 40 CFR 60 Subpart VVa 60.482-7a(h), 60.485a(b) (11/16/07) and 60.486a(a), (b), (c), and (e) (11/16/07), and 60.487a(c) and (e) (11/16/07) NWCAA 104.2	Valves Designated as Difficult-to-Monitor Any valve that is designated as a difficult-to-monitor valve is exempt from the requirements of 60.482-7a(a) if: (1) The owner or operator of the valve demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface. and (2) the process unit within which the valve is located either becomes an affected facility through modification or reconstruction and	Monitor valves by the methods specified in 60.485a(b). For each monitoring event, record the information in 60.486a(a). When a leak is detected, record the information required in 60.486a(c). For all equipment subject to this permit term, record in a log in a readily accessible location a list of identification numbers and the monitoring instrument calibration information listed in 60.486a(e)8(i) through (vi). Record in a log in a readily accessible location a list of identification numbers for designated valves, an explanation for each valve stating why the valve is difficult-to-monitor, and the plan for

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	(6/10/10)	was construction on or before January 5, 1981; or the owner or operator designates less than 3.0 percent of the total number of valves as difficult-to-monitor and (3) the owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year. When a leak is detected, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached. The identification on a valve may be removed after it has been monitored for 2 successive months and no leak has been detected during those 2 months.	monitoring each valve. Submit a semiannual report to the Administrator beginning 6 months after the initial startup date. The initial semiannual report shall include the information in 60.487a(b). All semiannual reports shall include the information in 50.487a(c). Note: Under WAC 173-401-615(2), records must be retained for five years.
5.13.44 VOC	As referenced: 40 CFR Part 60 Subpart VVa 60.485a(d) (11/16/07) and 60.486a(a), (j) (12/14/00) NWCAA 104.2 (6/10/10)	<u>Process Units Not in VOC Service</u> Each piece of equipment shall be tested unless the owner or operator demonstrates that a process unit is not in VOC service, i.e., that the VOC content would never be reasonably expected to exceed 10 % by weight.	To demonstrate that a process unit is not in VOC service, either follow (1) procedures that conform to the general methods in ASTM E-260-73,91,or 96, E-168-67,77, or 92, E169-63,77, or 93 (incorporated by reference in 40 CFR 60.17), or, (2) demonstrate that the organic compounds are considered by the EPA to have negligible photochemical reactivity, or, (3) use engineering judgment to estimate the VOC content, if a piece of equipment has not been shown previously to be in service. Information and data used to demonstrate that a piece of equipment is not in VOC service shall be recorded in a log that is kept in a readily accessible location. Note: Under WAC 173-401-615(2), records must be retained for five years.
5.13.45 VOC	As referenced: 40 CFR Part 60 Subpart VVa 60.482-10a (f)-(m) and 60.486a (d) and (e)	<u>Inspection of Closed Vent Systems</u> Conduct annual visual inspections for visible, audible, or olfactory indications of leaks on hard-piping. Conduct annual instrument monitoring using EPA Method 21 on ductwork using a leak definition of 500 ppm.	Keep the following records: For visual inspections or monitoring events during which no leaks are detected, a record of the inspection date, and a statement that no leaks were detected. If a leak is detected; record the monitoring instrument and operator identification numbers, the leaking equipment

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
	(11/16/07) NWCAA 104.2 (6/10/10)	Leaks shall be repaired as soon as practicable with the first attempt at repair no later than 5 days. Repairs shall be completed within 15 days, unless a delay of repair is utilized. Collection systems under a vacuum are exempt from monitoring. Equipment that is designated as difficult or unsafe to inspect must be identified and a written plan in place for inspection. Equipment designated as difficult to inspect must not exceed 3% of the total number of equipment in the system.	identification number, the date the leak was detected, the leak value in ppm, the date of each attempt at repair, and the repair methods used. If a delay of repair is utilized, record the reason for the delay and the signature of the person whose decision it was that repair could not be done without a process shutdown, the expected date of successful repair, the dates of process unit shutdowns that occurred while the equipment was unrepaired, and the date of successful repair. Identification of all parts of the closed vent system that are designated as difficult or unsafe to inspect, an explanation, and the plan for inspecting that equipment.

5.14 Benzene Waste Operations – Commonly Referenced Requirements

Table 5-14 Benzene Waste Operations – Commonly Referenced Requirements

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
40 CFR Part 61 Subpart FF and 40 CFR Part 63 Subpart CC – Note: 40 CFR Parts 61 and 63 General Provisions in Section 3.2 and 3.3 of this permit apply to affected sources subject to these requirements.			
5.14.1	As referenced: 40 CFR Part 63 Subpart CC §63.647 (8/18/95) 40 CFR Part 61 Subpart FF §61.342(c)(2) and (c)(3) (10/17/00) NWCAA 104.2 (6/10/10)	Written Exemption Report: Benzene waste streams from these individual drain systems shall meet the requirements of Part 61 Subpart FF through written certification on an annual basis that they meet the exemption requirement.	Report annually to the NWCAA that the flow-weighted annual average benzene concentration for the waste streams is less than 10 ppmw.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.14.2	As referenced: 40 CFR Part 63 Subpart CC §63.647 (8/18/95) 40 CFR Part 61 Subpart FF §61.342(c)(3)(ii) (10/17/00) and 61.355(j) (10/17/00) NWCAA 104.2 (6/10/10)	Exemption for Quantity Waste streams chosen for exemption shall meet the requirements of Part 61 Subpart FF through written certification on an annual basis that they meet the exemption requirement.	Report annually to the NWCAA that the waste streams from these individual drain systems are part of the total annual benzene quantity that does not exceed 2.0 Mg/yr, as per 61.342(c)(3)(ii).
5.14.3	As referenced: 40 CFR Part 63 Subpart CC §63.655(a) (6/30/10) 40 CFR Part 61 Subpart FF §61.356(b) (11/12/02) NWCAA 104.2 (6/10/10)	Benzene Waste Stream Identification Maintain records identifying each waste stream subject to 40 CFR Subparts FF and CC, and indicate whether the streams are controlled. For each uncontrolled waste stream, the records must include all test results, measurements, calculations, and other documentation used to determine the waste stream identification, water content, waste stream type, annual waste quantity, range of benzene concentrations, annual average flow-weighted benzene concentrations, and annual benzene quantity. For each subject waste stream exempt as per 61.342(c)(3), the records shall include all measurements, calculations, and other documentation used to determine that the sum of the total annual benzene quantity in all exempt waste streams is less than 2.0 Mg/yr.	Records shall be retained as per the 40 CFR Part 61 and 40 CFR Part 63 requirements in Sections 3.2 and 3.3 of this permit.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.14.4	As referenced: 40 CFR Part 63 Subpart CC §63.647 (8/18/95) 40 CFR Part 61 Subpart FF §61.355 (10/17/00) §61.342(c)(3)(ii) (10/17/00) 40 CFR Part 63 Subpart CC §63.655(a) (6/30/10) 40 CFR Part 61 Subpart FF §61.357(d) (10/17/00) NWCAA 104.2 (6/10/10)	Total Annual Benzene Quantity from Benzene Waste Streams For each waste stream subject to Title 40 CFR Subparts CC and FF, the permittee shall: (i) Determine the annual waste quantity for each waste stream using the procedures in §61.355(b). (ii) Determine the flow-weighted annual average benzene concentration for each waste stream using the procedures in §61.355(c). (iii) Calculate the annual benzene quantity for each waste stream by multiplying the annual waste quantity of the waste stream times the flow-weighted annual average benzene concentration. Total annual benzene quantity is calculated by adding together the annual benzene quantity for each waste stream generated during the year and the annual benzene quantity for each process unit turnaround waste. The total annual benzene quantity in all waste streams chosen for exemption under §61.342(c)(3)(ii) shall not exceed 2.0 Mg/yr. The benzene quantity of these waste streams shall be determined as per §61.355(a), including wastes with water content of 10% or less.	Select the highest annual quantity of waste managed from historical records representing the most recent five years of operation. Using either knowledge of the waste, as per §61.355(c)(2), or measurements of benzene concentration, as per §61.355(c)(3), determine the flow-weighted annual average benzene concentration. Submit annually to the NWCAA: (1) The total annual benzene quantity from facility waste determined in accordance with §61.355(a). (2) A table identifying each waste stream and whether or not the stream will be controlled for benzene emissions. (3) For each waste stream identified as not being controlled for benzene emissions, report whether or not the water content of the waste stream is greater than 10%; whether or not the waste stream is a process wastewater stream, product tank drawdown, or landfill leachate; the annual waste quantity for the waste stream; the range of benzene concentrations for the waste stream; the annual average flow-weighted benzene concentration for the waste stream; and, the annual benzene quantity for the waste stream. If (1), (2), and (3) have not changed since the previous report, submit a statement to that effect. Also, identify the waste streams chosen for exemption under 61.342(c)(3)(ii), and the total annual benzene quantity in those streams.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.14.5	As referenced: 40 CFR Part 63 Subpart CC §63.647 (8/18/95) 40 CFR Part 61 Subpart FF 61.355(b)(4) (10/17/00) NWCAA 104.2 (6/10/10)	Process Unit Turnaround Waste The determination of annual waste quantity for each process unit turnaround waste generated only at 2 year or greater intervals, may be made by dividing the total quantity of waste generated during the most recent process unit turnaround by the time period between the turnaround resulting in generation of the waste and the most recent preceding process turnaround for the unit. If the owner or operator chooses not to annualize process unit turnaround waste, as specified in this paragraph, then the process unit turnaround waste quantity shall be included in the calculation of the annual benzene quantity for the year in which the turnaround occurs.	Maintain records including all test results, measurements, calculations, and other documentation used to determine the identification of each process unit that undergoes turnarounds, the date of the most recent turnaround for each process unit, identification of each process unit turnaround waste, the water content of each process unit turnaround waste, the annual waste quantity determined in accordance with 61.355(g)(4), the range of benzene concentrations in the waste, the annual average flow-weighted benzene concentration of the waste, and the annual benzene quantity calculated in accordance with 61.355(a)(1)(iii) of this section.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.14.6	As referenced: 40 CFR Part 63 Subpart CC §63.647 (8/18/95) §63.655(a) (6/30/10) 40 CFR Part 61 Subpart FF §61.346(a) (1/7/93) §61.350 (3/7/90) §61.355(h) (10/17/00) §61.356(d), (g), & (h) (11/12/02) §61.357(d)(6) & (d)(8) (10/17/00) NWCAA 104.2 (6/10/10)	Individual Drain Systems – Cover and Closed-Vent System Install, operate, and maintain on each drain system opening a cover and closed-vent system that routes all organic vapors from the drain system to a control device. The cover and all openings shall be designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background. Maintain each opening in a closed, sealed position except during waste sampling or removal, equipment inspection, maintenance or repair. Except where repair is technically impossible without a complete or partial facility or unit shutdown, when a broken seal or gasket or other problem is identified, or when detectable emissions are measured, make a first effort at repair as soon as practicable, but not later than 15 calendar days after identification. When repair is delayed for a shutdown, repair such equipment before the end of the next facility or unit shutdown.	Annually, monitor using an Organic Vapor Analyzer. Calibration gases shall be zero air (less than 10 ppm of hydrocarbon in air); and a mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane. Maintain records for each test of no detectable emissions. Quarterly, perform a visual inspection of each cover seal, access hatch, and all other openings to ensure there are no cracks or gaps and openings are closed and gasketed properly. Submit quarterly to the NWCAA a certification that the required inspections have been carried out. Annually, report all inspections during which detectable emissions were measured or a problem (such as a broken seal, gap, or other problem) that could result in benzene emissions is identified, including information about the repairs or corrective action taken. Maintain engineering design documentation for the life of the control equipment. Maintain records for each visual inspection that identifies a problem (such as a broken seal, gap, or other problem) that could result in benzene emissions.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.14.7 HAP	As referenced: 40 CFR Part 63 Subpart CC §63.647 (8/18/95) §63.655(a) (6/30/10) 40 CFR Part 61 Subpart FF §61.349(a)(1)(i),(ii), (iii) and (iv) (10/17/00) 61.354(f) (10/17/00) and 61.355(h) (10/17/00) 61.356(a),(h) (11/12/02),and 61.357(d)(6) (10/17/00) NWCAA 104.2 (6/10/10)	Closed Vent System Design the closed-vent system to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background. All gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place. Secure any bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. One or more devices which vent directly to the atmosphere may be used provided each device remains in a closed, sealed position during normal operations. Secure the closed position with a car-seal or a lock-and-key type configuration.	Annually, monitor using an Organic Vapor Analyzer. Calibration gases shall be zero air (less than 10 ppm of hydrocarbon in air); and a mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane. Maintain records for each test of no detectable emissions as per 61.356(h). Records shall be maintained in a readily accessible location on site for not less than two years. Monthly, visually inspect the bypass live valve, checking the position of the valve and the condition of the car-seal to ensure that the valve is maintained in the closed position. Quarterly, submit a certification to the NWCAA that the required inspections have been carried out. Note: Under WAC 173-401-615(2), records must be retained for five years.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.14.8 HAP	As referenced: 40 CFR Part 63 Subpart CC §63.647 (8/18/95) 63.655(a) (6/30/10) 40 CFR Part 61 Subpart FF §61.349(a)(2)(ii) and (c)(1) and (h) (10/17/00) and 61.354(d) (10/17/00). §61.356(a),(f)(2), and (j) (11/12/02). NWCAA 104.2 (6/10/10)	Control Device Design and operate control device to recover or control organic emissions vented to it with an efficiency of 95 wt % or greater, or recover or control the benzene emissions vented to it with an efficiency of 98 wt % or greater. Maintain a design analysis for the control device, including specifications, drawings, schematics, and piping and instrumentation diagrams. The design analysis shall consider the vent stream composition, constituent concentration, flow rate, relative humidity, and temperature. The analysis shall also establish the design exhaust vent stream organic compound concentration level or the design exhaust vent stream benzene concentration level, capacity of carbon bed, type and working capacity of activated carbon used for carbon bed, and design carbon replacement interval based on the total carbon working capacity of the control device and source operating schedule.	Monitor the organic compound concentration level in the exhaust either on a daily basis or at intervals no greater than 20% of the design carbon replacement interval, whichever is greater. Replace the carbon with fresh carbon when breakthrough (concentration of 500 ppmv above background) is indicated. Maintain documentation that includes the following information on control device operation: Dates of startup and shutdown of the closed-vent system and control device. A description of the operating parameter to be monitored to ensure that the control device will be operated in conformance with the standards and the design specifications and an explanation of the criteria used for selection of that parameter. Periods when the closed-vent system and control device are not operated as designed as per 61.356(j). Maintain records of dates and times of monitoring, when breakthrough is measured and the date and time when the existing carbon is replaced. Records shall be maintained for not less than two years. Note: Under WAC 173-401-615(2), records must be retained for five years.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.14.9	As referenced: 40 CFR Part 63 Subpart CC §63.647 (8/18/95) 63.655(a) (6/30/10) 40 CFR Part 61 Subpart FF §61.349(b),(f), and (g) (10/17/00) §61.350 (3/7/90) §61.356(a),(f)(1) (11/12/02) §61.357(d)(6) and (d)(8) (10/17/00) NWCAA 104.2 (6/10/10)	<u>Closed-Vent System and Control Device</u> Operate the closed-vent system and control device at all times when waste is placed in the waste management unit vented to the control device except when maintenance or repair of the waste management unit cannot be completed without a shutdown of the control device. Except where repair is technically impossible without a complete or partial facility or unit shutdown, if visible defects are observed during an inspection, or if other problems are identified, or if detectable emissions are measured, make a first effort at repair as soon as practicable, but not later than 5 calendar days after detection. Repair shall be completed no later than 15 calendar days after the emissions are detected or the visible defect is observed. When repair is delayed for a shutdown, repair such equipment before the end of the next facility or unit shutdown.	Quarterly, perform a visual inspection including ductwork, piping, and connections to covers and control devices for evidence of viable defects such as holes in ductwork or piping and loose connections. Maintain records with a signed and dated statement certifying that the closed-vent system and control device is designed to operate at the documented performance level when the waste management unit is or would be operating at the highest load or capacity expected to occur. Quarterly, submit a certification to the NWCAA that the required inspections have been carried out. Annually, submit a report summarizing all inspections required by 61.354 during which detectable emissions are measured or a problem (such as a broken seal, gap or other problem) that could result in benzene emissions is identified, including information about the repairs or corrective action taken. Records shall be maintained in a readily accessible location on site for not less than two years. Note: Under WAC 173-401-615(2), records must be retained for five years.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.14.10	As referenced: 40 CFR Part 63 Subpart CC §63.647 (8/18/95) §63.655(a) (6/30/10) 40 CFR Part 61 Subpart FF §61.346(b) (1/7/93) §61.350 (3/7/90) §61.356(d) & (g) (11/12/02) §61.357(d)(6) & (d)(8) (10/17/00) NWCAA 104.2 (6/10/10)	Equip individual drain systems with water seal controls. Except where repair is technically impossible without a complete or partial facility or unit shutdown, when a broken seal or gasket or other problem is identified, or when detectable emissions are measured, make a first effort at repair as soon as practicable, but not later than 15 calendar days after identification. When repair is delayed for a shutdown, repair such equipment before the end of the next facility or unit shutdown.	Perform a visual or physical inspection quarterly for indications of low water levels or other conditions that would reduce the effectiveness of water seal controls. Maintain engineering design documentation for the life of the control equipment. Maintain records for each visual inspection that identifies a problem that could result in benzene emissions. Submit quarterly to the NWCAA a certification that the required inspection has been carried out. Submit annually a report summarizing all inspections during which detectable emissions were measured or a problem (such as a broken seal, gap, or other problem) that could result in benzene emissions is identified, including information about the repairs or corrective action taken.
5.14.11	As referenced: 40 CFR Part 63 Subpart CC §63.647 (8/18/95) 40 CFR Part 61 Subpart FF §61.348(b)(1) (10/17/00) NWCAA 104.2 (6/10/10)	Treatment Processes Design and operate each waste management unit that comprises the wastewater treatment system in accordance with the appropriate standard specified in §61.343 through §61.347.	None

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.14.12	As referenced: 40 CFR Part 63 Subpart CC §63.647 (8/18/95) §63.655(a) (6/30/10) 40 CFR Part 61 Subpart FF §61.348(d) (10/17/00) §61.356(a),(e), and (i) (11/12/02) NWCAA 104.2 (6/10/10)	Treatment Process or Waste Stream Treat the waste stream by a means or to a level that meets benzene-specific effluent limitations or performance standards on accordance with the Effluent Guideline and Standards under 40 CFR parts 401-464.	Certify semiannually that the treatment process and subject waste streams are treated by a means or to a level that is in compliance with the facility's National Pollutant Discharge Emission Standard (NPDES) permit and Title 40 CFR Part 419. Maintain records for the life of the unit certifying that the treatment process or wastewater treatment system unit is designed to operate at the documented performance level when the waste stream entering the unit is at the highest waste stream flow rate and benzene content that is expected to occur. Maintain the complete design analysis and any test information, as per 61.356(e). Records shall be maintained in a readily accessible location on site for not less than two years. Note: Under WAC 173-401-615(2), records must be retained for five years. Maintain documentation that includes the following information: • Dates of startup and shutdown of the unit. • Periods when the unit is not operating as designed.

5.15 Common Requirements: 40 CFR Part 60 Subpart QQQ—Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems

Table 5-15 Common Requirements: 40 CFR Part 60 Subpart QQQ—Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
40 CFR Part 60 Subpart QQQ—Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems – *except* for individual drain systems regulated under Part 63 Subpart CC [63.640(o)].			
5.15.1 VOC and/or HAP	As referenced: 40 CFR Subpart QQQ §60.692-2(a)(1), (2), and (5) (11/23/88), and 60.697(b)(1), and (e) (10/17/00), and 60.698(b) and (c)(8/18/95) NWCAA 104.2 (6/10/10)	Individual Drain Systems In Active Service Each drain shall be equipped with water seal controls. Whenever low water levels or missing or improperly installed caps or plugs are identified, water shall be added or first efforts at repair shall be made as soon as practicable, but not later than 24 hours after detection, except as provided under 60.692-6, delay of repair. Delay of repair is allowed if the repair is technically impossible without a complete or partial refinery or process unit shutdown. Repair of such equipment shall occur before the end of the next refinery or process unit shutdown.	Check each drain visually or physically monthly for indications of low water levels or other conditions that would reduce water seal control effectiveness. For each problem identified during inspection that could result in VOC emissions, record the location, date, and corrective action. Semiannually, submit a report to the NWCAA summarizing these inspections. If an emission point cannot be repaired or corrected without a process unit shutdown, record the expected date of repair, the reason for the delay, the person's signature whose decision it was that the repair would be delayed, and the date of successful repair or corrective action. Certify semiannually that all of the required inspections have been carried out in accordance with these standards.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.15.2 VOC and/or HAP	As referenced: 40 CFR Subpart QQQ §60.692-2(a)(3), (4), (5), and 60.692-6 (11/23/88), and 60.697(b)(1), (e), (g) (10/17/00), and 60.698(b) and (c) (8/18/95) NWCAA 104.2 (6/10/10)	Individual Drain Systems Out of Active Service Each drain shall be equipped with water seal controls. Alternatively, install a tightly sealed cap or plug over a drain that is out of service. Whenever low water levels are identified or missing or improperly installed caps or plugs are identified, water shall be added or first efforts at repair shall be made as soon as practicable, but not later than 24 hours after detection. Delay of repair is allowed if the repair is technically impossible without a complete or partial refinery or process unit shutdown. Repair of such equipment shall occur before the end of the next refinery or process unit shutdown.	Check each drain visually or physically weekly for indications of low water levels or other problems that could result in VOC emissions. If a cap or plug has been installed, inspect semiannually to ensure caps or plugs are in place and properly installed. If a cap or plug has been installed over a drain, keep plans or specifications indicating the location of the drains readily accessible for the life of the facility.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.15.3 VOC and/or HAP	As referenced: 40 CFR Subpart QQQ §60.692-2(b)(1), (2), (3), (4) and 60.692-6 (11/23/88) , and 60.697(b)(2), (e) (10/17/00), and 60.698(b) and (c) (8/18/95) NWCAA 104.2 (6/10/10)	Junction Boxes Junction boxes shall be equipped with a cover and may have an open vent pipe of at least 3 ft in length and no more than 4 inches in diameter. Covers shall have a tight seal around the edge and shall be kept in place at all times, except during inspection and maintenance. If a broken seal or gap is identified, first efforts at repair shall be made as soon as practicable, but not later than 15 calendar days after the broken seal or gap is identified. Delay of repair is allowed if the repair is technically impossible without a complete or partial refinery or process unit shutdown. Repair of such equipment shall occur before the end of the next refinery or process unit shutdown.	Visually inspect semiannually to ensure that the cover is in place and to ensure that the cover has a tight seal around the edge. When a broken seal, gap, or other problem is identified by inspection that could result in VOC emissions, record the location, date, and corrective action. If an emission point cannot be repaired or corrected without a process unit shutdown, the expected date of a successful repair, the reason for the delay, the signature of the person whose decision it was that the repair would be delayed and the date of successful repair or corrective action shall be recorded. Certify semiannually that all of the required inspections have been carried out in accordance with these standards. Semiannually, submit a report summarizing all inspections when a water seal was dry or otherwise breached, when a drain cap or plug was missing or improperly installed, or when cracks, gaps, or other problems were identified that could result in VOC emissions, including information about the repairs or corrective action taken.

Term	Citation	Description	Monitoring/Recordkeeping/Reporting
5.15.4 VOC and/or HAP	As referenced: 40 CFR Subpart QQQ §60.692-2(c)(1), (2), (3), and 60.692-6 (11/23/88) and 60.697(b)(3), (e) (10/17/00), and 60.698(b) and (c) (8/18/95) NWCAA 104.2 (6/10/10)	Sewer Lines Sewer lines shall not be open to the atmosphere and shall be covered or enclosed in a manner so as to have no visual gaps or cracks in joints, seals, or other emission interfaces. Whenever cracks, gaps, or other problems are detected, repairs shall be made as soon as practicable, but not later than 15 calendar days after identification. Delay of repair is allowed if the repair is technically impossible without a complete or partial refinery or process unit shutdown. Repair of such equipment shall occur before the end of the next refinery or process unit shutdown.	Visually inspect semiannually the portion of each unburied sewer line for cracks, gaps, or other problems that could result in VOC emissions. When a problem is identified by inspection that could result in VOC emissions, record the location, date, and corrective action. If an emission point cannot be repaired or corrected without a process unit shutdown, record the expected date of a successful repair, the reason for the delay, the signature of the person whose decision it was that the repair would be delayed, and the date of successful repair or correction action. Certify semiannually that all of the required inspections have been carried out in accordance with these standards. Semiannually, submit a report summarizing all inspections when a water seal was dry or otherwise breached, when a drain cap or plug was missing or improperly installed, or when cracks, gaps, or other problems were identified that could result in VOC emissions, including information about the repairs or corrective action taken.

SECTION 6 INAPPLICABLE REQUIREMENTS

The regulations identified in Table 6 do not apply to the ConocoPhillips Ferndale Refinery as of the date of permit issuance.

Table 6-1 Inapplicable Requirements

CITATION	TITLE	BASIS
NWCAA 321	General Requirements for Registration	The registration requirements do not apply to sources or emission units subject to an Air Operating Permit (AOP).
NWCAA 458	Incinerators - Wood Waste Burners	The facility does not have this source category.
NWCAA 510	Incinerator Burning	The facility does not have this source category.
NWCAA 511	Refuse Burning - Time Restriction	The facility does not have this source category.
NWCAA 580.5	Bulk Gasoline Plants	The facility does not have this source category.
NWCAA 590	Perchloroethylene Dry Cleaners	The facility does not have this source category.
WAC 173-400-050(2)	Incinerator	The facility does not have this source category.
WAC 173-400-091	Voluntary Limits on Emissions	The facility has not requested a regulatory order to limit potential to emit.
WAC 173-400-100 through - 104	Registration	As an Air Operating Program source, the facility is not required to comply with these requirements.
WAC 173-400-105(6)	Change in Raw Materials or Fuels	As an Air Operating Program source, the facility is not required to comply with this requirement.
WAC 173-425-075	Commercial Open Burning	The facility does not have this source category.
WAC 173-425-085	Agricultural Open Burning	The facility does not have this source category.
WAC 173-425-115	Land Clearing Projects	The facility does not have this source category.
WAC 173-434	Solid Waste Incineration	The facility does not have this source category.

CITATION	TITLE	BASIS
40 CFR 60 Subpart D	Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971	All Fossil-Fuel-Fired Steam Generators at the facility were installed prior to August 17, 1971, and have not been Reconstructed or Modified, or are subject to more recent Standards of Performance.
40 CFR 60 Subpart Da	Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978.	All Fossil-Fuel-Fired Steam Generators at the facility were installed prior to September 18, 1978, and have not been Reconstructed or Modified, or are subject to more recent Standards of Performance.
40 CFR 60 Subpart Db to Steam Generating Units other than 22F-1C and 22F-1E	Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units	All Steam Generating Units other than 22F-1C and 22F-1E were installed prior to June 19, 1984 and have not been Reconstructed or Modified. The new CO boiler is not subject to any emission standards under subpart Db.
40 CFR 60 Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	The facility does not have this source category.
40 CFR 60 Subpart GG	Standards of Performance for Stationary Gas Turbines	The facility does not have this source category.
40 CFR 60 Subpart UU	Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture	All storage tanks other than Tank Nos. 247 and 248 process non-asphaltic materials.
40 CFR 60 Subpart XX	Standards of Performance for Bulk Gasoline Terminals	The facility was not constructed, reconstructed or modified subsequent to the applicability date and the gasoline throughput is below the applicability criterion.
40 CFR 61 Subpart J	National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene	The facility does not have equipment *In Benzene Service* as that term is defined in the regulation.
40 CFR 61 Subpart V	National Emission Standard for Equipment Leaks (Fugitive Emission Sources)	The facility does not have equipment *In Volatile Hazardous Air Pollutant Service* as that term is defined in the regulation.
40 CFR 61 Subpart Y	National Emission Standard for Benzene Emissions from Benzene Storage Vessels	The facility does not have this source category.
40 CFR 61 Subpart BB	National Emission Standard for Benzene Emissions from Benzene Transfer Operations	The facility does not have this source category.

CITATION	TITLE	BASIS
40 CFR 63 Subpart F	National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry (SOCMI)	The facility is not a SOCMI source category.
40 CFR 63 Subpart G	National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater	
40 CFR 63 Subpart I	National Emission Standards for Organic Hazardous Air Pollutants for Certain Processes Subject to the Negotiated Regulation for Equipment Leaks	The facility is not subject to the Negotiated Regulation for Equipment Leaks.
40 CFR 63 Subpart R	National Emission Standards for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations)	The facility loading terminal is subject to Title 40 CFR part 63 subpart CC, which references subpart R.
40 CFR 63 Subpart Y	National Emission Standards for Marine Tank Vessel Loading Operations.	The facility's marine tank vessel loading operations are below the throughput and emissions applicability criteria, as defined by the regulation.
40 CFR 63.651	Marine Tank Vessel Loading Operation Provisions	
NWCAA 520.14	Gaseous Fuel Sulfur Standards	The regulation does not apply to sources that must comply with NWCAA 460.