Air Operating Permit — FINAL

Tesoro Refining and Marketing Company

Anacortes, Washington

January 26, 2010

northwest Clean Air agency

Serving Island, Skagit & Whatcom Counties

AIR OPERATING PERMIT
PEMIT INFORMATION PAGE

Tesoro Refining and Marketing Company

10200 West March Point Road, Anacortes, WA 98221

SIC: 2911 NAICS: 324110 **NWCAA ID NUMBER: 006-V-S**
EPA AFS NUMBER: 53-057-00005

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Air Operating Permit Number:	**Issuance Date:**
013 R1	January 26, 2010
Permit Modifications:	**Modification Date:**
Supersedes Permit Number:	**Expiration Date:**
013	January 26, 2015
Application Date:	**Renewal Application Due:**
May 18, 2007	January 26, 2014

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, Tesoro Refining and Marketing is authorized to operate subject to the terms and conditions of this permit.

Northwest Clean Air Agency Approval:

Date: 1/26/10

Theresa Allen, P.E.
Permitting Engineer

Date: 1/26/10

Mark Buford, P.E.
Assistant Director

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SECTION 1 EMISSIONS UNIT DESCRIPTIONS

Emission units and activities at the Tesoro Refining and Marketing Company are listed in the following tables. The Tesoro Refining and Marketing Company petroleum refinery is located in Anacortes, Washington, here in after referred to as Tesoro, the facility, or the permittee. The information presented in Section 1 is included for reference purposes only and is not directly enforceable. The emission unit tables have been organized into logical groupings of the processes, support, or treatment areas. The tables also include emission unit identification numbers corresponding to the emissions inventory references, equipment installation and modification (noted as "mod") dates, federal regulatory applicability, and pertinent permit references.

Table Number	Processing Unit
1.1	Primary Crude Oil Processing
1.2	Hydroprocessing
1.3	Catalytic Cracking, Product Fractionation, and Treating
1.4	Alkylation
1.5	Butane Isomerization
1.6	Storage, Blending and Transfer Operations
1.7	Boiler/Utilities Plant
1.8	Flares
1.9	Effluent Treatment Plant
1.10	Fire Training

1.1 Primary Crude Oil Process Area Emission Units

Table 1.1: Primary Crude Oil Process Area Emission Units

ID	Type & Description	Year Installed	Comments
34	Crude oil distillation, vacuum flasher, fuel oil, asphalt blenders, and jet fuel treater equipment components (including compressors J-205 and J-206) in VOC/HAP service	1955, except: Asphalt blender - 1998 JFT – 1999 J-205, 1985 J-206, 1986	40 CFR Part 63 Subpart CC – existing equipment LDAR (60 Subpart VV)
34	Residuum Oil Supercritical Extraction (ROSE) equipment components in VOC/HAP service	2001	40 CFR Part 63 Subpart CC – existing equipment LDAR (60 Subpart VV) OAC 744a requires enhanced LDAR for new equipment
	Crude unit miscellaneous process vents: 1-1273-003		Vented to fuel gas/flare system 40 CFR Part 63 Subpart CC group 1
	Crude unit miscellaneous process vents: 1-272-004, 1-1290-006		Vented to fuel gas/flare system 40 CFR Part 63 Subpart CC group 2
	Vacuum flasher unit miscellaneous process vents: 2-632-005, 2-647-007, and 2-683-002		Vented to fuel gas/flare system 40 CFR Part 63 Subpart CC group 1
	Vacuum flasher miscellaneous process vent 2-645-013		Normally recovered to process. Vented to Boilers F-751 or F-752 when CCU and Gas Plant is down - 40 CFR Part 63 Subpart CC group 1
01	Crude heater F-101	1955	120 MMBtu/hr; low-NO_X burners; fuel oil and refinery fuel gas. Individual stack; Regulatory Order 26
02	Crude heater F-102	1955	120 MMBtu/hr; fuel oil and refinery fuel gas. Individual stack.
03	Crude heater F-103	1963	132 MMBtu/hr; fuel oil and refinery fuel gas. Individual stack
05	Vacuum flasher heater F-201	1955	96 MMBtu/hr; low-NO_X burners; refinery fuel gas. Individual stack
31	ROSE unit individual drain systems	2001	40 CFR Part 60 Subpart QQQ

Table 1.1: Primary Crude Oil Process Area Emission Units			
ID	**Type & Description**	**Year Installed**	**Comments**
	Jet fuel treater (JFT) individual drain systems	1999 – mod	40 CFR Part 60 Subpart QQQ

1.2 Hydroprocessing Emission Units

Table 1.2: Hydroprocessing Emission Units			
ID	**Type & Description**	**Year Installed**	**Comments**
34	Cat gas splitter (CGS), Clean fuels hydrotreater (CFH) / distillate hydrotreater (DHT) equipment components in VOC/HAP service	CGS 1972 – mod 2006 CFH/DHT 1961 – mod 2006	40 CFR Part 63 Subpart CC - existing equipment (60 Subpart VV) OAC 896a requires enhanced LDAR
34	Catalytic reformer (CR) & Naphtha hydrotreater (NHT) equipment components in VOC/HAP service	1972	40 CFR Part 63 Subpart CC - existing equipment (60 Subpart VV) OAC 827b requires enhanced LDAR for new equipment
	Selective Hydrogenation Unit (SHU) equipment components in VOC/HAP service	2007	40 CFR Part 63 Subpart CC - existing equipment (60 Subpart VV) OAC 989a requires enhanced LDAR
	CR caustic and water wash column vent	1972	40 CFR Part 63 Subpart UUU
04	CGS Column C-113 reboiler F-104	1972 2007 – burners	60 MMBtu/hr; ultra-low-NO_X burners; refinery fuel gas. Individual stack. OAC 827b
11	CFH feed heater F-654	1961	15 MMBtu/hr; refinery fuel gas. Individual stack.
10	DHT Feed heater F-652	1961	67 MMBtu/hr; refinery fuel gas. Individual stack.
15	NHT feed heater F-6600	1972	65 MMBtu/hr; refinery fuel gas. Individual stack. OAC 827b
16	NHT column C-6600 reboiler F-6601	1972	68 MMBtu/hr; refinery fuel gas. Individual stack. OAC 827b
18	CR feed heater F-6650	1972	143 MMBtu/hr; refinery fuel gas. Shares stack with F-6651. OAC 827b

Table 1.2: Hydroprocessing Emission Units			
ID	**Type & Description**	**Year Installed**	**Comments**
19	CR inter-reactor heater 1, F-6651	1972	143 MMBtu/hr; refinery fuel gas. Shares stack with F-6650. OAC 827b
20	CR inter-reactor heater 2, F-6652	1972	67 MMBtu/hr; refinery fuel gas. Shares stack with F-6653. OAC 827b
21	CR inter-reactor heater 3, F-6653	1972	38 MMBtu/hr; refinery fuel gas. Shares stack with F-6652. OAC 827b
22	CR column C-6650 heater F-6654	1972	32 MMBtu/hr; refinery fuel gas. Individual stack. OAC 827b
23	CR regeneration heater F-6655	1972	27 MMBtu/hr; refinery fuel gas. Individual stack
	DHT compressor vents J-650, J-651, J-652	2006 1971	Vent normally to flare
31	DHT individual drain systems	1961 – mod 2006	40 CFR Part 60 Subpart QQQ
	SHU individual drain systems	2007	40 CFR Part 60 Subpart QQQ

1.3 Benzene Saturation Unit

Table 1.3: Benzene Saturation Unit			
ID	**Type & Description**	**Year Installed**	**Comments**
	Benzene saturation (BenSat) unit equipment components in VOC/HAP service	not yet constructed	40 CFR Part 60 Subpart GGGa (60 Subpart VVa) Part 63 Subpart CC; OAC 1037
	Benzene saturation unit equipment in benzene service	not yet constructed	40 CFR Part 61 Subpart J
	Benzene saturation unit individual drain systems	not yet constructed	40 CFR Part 60 Subpart QQQ
17	BenSat column C-6601 reboiler F-6602	1972	73.5 MMBtu/hr; refinery fuel gas <50 ppmv H_2S. Individual stack; NO_X CEMS; OAC 1037

1.4 Catalytic Cracking, Product Fractionation, and Treating Emission Units

Table 1.4: Catalytic Cracking, Product Fractionation, and Treating Emission Units

ID	Type & Description	Year Installed	Comments
34	Catalytic cracking unit (CCU) and Amine 2 unit equipment components in VOC/HAP service	1955 – mod 2002	40 CFR Part 63 Subpart CC - existing equipment (60 Subpart VV)
34	Amine 2 unit equipment components in VOC/HAP service	2007	OAC 952b requires enhanced LDAR
	CCU Miscellaneous process vents 3-655-009, 3-655-011, 65-667-004		40 CFR Part 63 Subpart CC group 2 Vented to F-304
24 25	CCU Carbon Monoxide Boilers (COBs) F-302 and F-304 Flue Gas Diversion Stack	1955 – CCU & F-302 1964 – F-304 2005 - FGS	40 CFR Part 63 Subpart UUU OAC 946a Flue Gas Scrubber (FGS)/Diversion Stack for upset or emergency
	CCU CO Boilers	F-302, 1955 F-304, 1964	Fuels: CCU regenerator vent gas, refinery fuel gas, caustic regenerator vent gas, and SWS tops.
06	CCU Feed heater F-301	1955	128 MMBtu/hr; low-NO_X burners; refinery fuel gas. Individual stack.
09	Startup air preheater F-303	1955	69 MMBtu/hr; natural gas. Shares a stack with F-302.
43	Fresh catalyst hopper V-307	1955; 1983 & 1984, 2007 upgrades	OAC 947; Baghouse PM control
44	Spent catalyst hopper V-308	1955; 1983 & 1984, 2007 upgrades	OAC 947; Baghouse PM control
45	Equilibrium catalyst hopper V-353	1997	OAC 633a; Baghouse PM control
46	Catalyst additive hopper V-356	2001	OAC 946a; Baghouse PM control
	Amine Treating Unit (ATU) 2 and ancillary equipment; acid gas line to General Chemical, absorber tower (C-1110), regenerator (C-1120), and small amine tank (Tk-1140)	2007	OAC 952b
	ATU 2 Individual drain systems	2007	40 CFR Part 60 Subpart QQQ

1.5 Alkylation Process Area Emission Units

Table 1.5: Alkylation Process Area Emission Units

ID	Type & Description	Year Installed	Comments
34	Alkylation Area Equipment Components in HAP Service	1957	40 CFR Part 63 Subpart CC (Part 60 Subpart VV)
34	Alkylation Area Equipment Components and Compressors J-901 and J-902 in VOC Service	1957	NWCAA 580.8 (Part 60 Subparts GGG & VV)

1.6 Butane Isomerization (BI) Process Area Emission Units

Table 1.6: Butane Isomerization (BI) Process Area Emission Units

ID	Type & Description	Construction/ Modification Year	Comments
	Butane isomerization optimization project	2009	OAC 1031 – fuel oil consumption limit
	Butane isomerization miscellaneous process vent 95-648-022	1963	Vented to flare/fuel gas recovery 40 CFR Part 63 Subpart CC group 1
34	Butane Isomerization Unit Equipment Components in VOC Service	1963; Reaction Section replaced 1995	40 CFR Part 60 Subpart GGG (Subpart VV)
31	Butane Isomerization Unit Individual Drain Systems in VOC Service	1963 – mod 1995	40 CFR Part 60 Subpart QQQ

1.7 Storage, Blending, and Transfer Operations Process Area Emission Unit

External Floating Roof (EFR) storage tanks

Table 1.7a: Storage, Blending, and Transfer Operations Process Area Emission Units with External Floating Roofs			
ID	**Type & Description**	**Year Installed**	**Comments**
35	Tanks 1, 2, 3, 4, 5, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 24, 27, 28, 29, 30, 31, and 32 60 88, 90, and 92, 134, 136	1954 1958 1957 1964	External floating roof storage vessels NWCAA 560, 580.3, 580.9, 40 CFR Part 63 Subpart CC group 1
35	Tank Group 5 Tanks 6, 7 89 and 91 113 135	1954 1957 1960 1963	40 CFR Part 63 Subpart CC group 2

Fixed roof storage tanks (some also have internal floating roofs)

Table 1.7b: Storage, Blending, and Transfer Operations Process Area Emission Units with Fixed Roofs			
ID	**Type & Description**	**Year Installed**	**Comments**
32	Tank Group 4 Tank 232	1994	Internal floating roof storage vessel NWCAA 560; 40 CFR Part 63 Subpart CC group 2

Table 1.7b: Storage, Blending, and Transfer Operations Process Area Emission Units with Fixed Roofs			
ID	**Type & Description**	**Year Installed**	**Comments**
32	Tank Group 5 Tanks 8, 9, 10, 11, 12, 23, 25, 26, 33, 34, 35, and 36 109 114 115 138 142 148 171	 1954 1964 1961 1964 1965 1968 1968 1981	40 CFR Part 63 Subpart CC group 2 Fixed roofs EFR
32	Tanks 39, 40, 161	Tanks 39 & 40, 1954 Tank 161, 1972	Internal Floating Roof (wastewater) - OAC 362b, NWCAA 560, 580.3, and 40 CFR Part 63 Subpart CC group 1
32	Tanks 41 and 42	Tanks 41 & 42, 1954.	Cone Roof Storage Vessels; 40 CFR Part 63 Subpart CC group 2
32	Tanks 43 and 87	Tank 43, 1954 Tank 87, 1955	40 CFR Part 63 Subpart CC group 2
32	Tank 44 & 57	Tanks 44 & 57 1954	Wastewater – OAC 362b, 40 CFR Part 63 Subpart CC group 2
	Tank 57	1954	Spent Caustic, 40 CFR Part 63 Subpart CC group 2
32	Tank 62	1954	Utilized only in the event of a crude oil diversion emergency
32	Tanks 96 and 97	1957	Fixed roof 40 CFR Part 63 Subpart CC group 2

NSPS-applicable storage tanks

Table 1.7c: Storage, Blending, and Transfer Operations Process Area Emission Units with NSPS requirements			
ID	**Type & Description**	**Year Installed**	**Comments**
37	Tanks 165, 166	1978	External floating roof - NWCAA 560, 580.3, 580.9, (OACs 187 and 214) 40 CFR Part 60 Subpart K, Part 63 Subpart CC group 1
37	Tank group 2 Tanks 202 and 203	1993	External floating roof - NWCAA 560, 580.3, and 580.9; OAC 358a; 40 CFR Part 60 Subpart Kb, Part 63 Subpart CC group 1
37	Tank Group 3 Tank 231	1994	External floating roof - NWCAA 560, 580.3, 580.9; 40 CFR Part 60 Subpart Kb, 63 Subpart CC group 1
37	Tank Group 6 Tanks 247 and 248 (including loading & unloading)	1998	Asphalt - OAC 649b; 40 CFR Part 60 Subpart UU, and Part 63 Subpart CC group 2

Ammonia storage tanks

Table 1.7d: Ammonia storage tanks			
ID	**Type & Description**	**Year Installed**	**Comments**
38	Tank 129		Ammonia storage tank

Tank Farm Equipment other than Tanks

Table 1.7e: Storage, Blending, and Transfer Operations Process Area Tank Farm Equipment other than Tanks			
ID	**Type & Description**	**Year Installed**	**Comments**
34	Tank farm equipment components in VOC/HAP service		40 CFR Part 63 Subpart CC (Part 60 Subpart VV)
31	Tanks 202, 203, 231 and logistics area wharf hose individual drain systems	1993 – Tanks 202/203 1994 – Tank 231 1998 – Tanks 247/248 1993 – Logistics	40 CFR Part 60 Subpart QQQ
34	LPG loading equipment components in VOC/HAP service	1955	NWCAA 580 (40 CFR Part 60 Subpart GGG - Subpart VV)

1.8 Utilities Plant Emission Units

Table 1.8: Utilities Plant Emission Units

ID	Type & Description	Year Installed	Comments
12	Boiler F-751	1954	268 MMBtu/hr; fuel oil and refinery fuel gas, vacuum flasher tail gas, SWS tops.
13	Boiler F-752	1954	268 MMBtu/hr; fuel oil and refinery fuel gas, vacuum flasher tail gas, SWS tops.
14	Boiler F-753	1994	220 MMBtu/hr; natural gas and propane. Individual stack. OAC 390e; NO_X and O_2 CEMS 40 CFR Part 60 Subparts Db and J
48	Diesel-Fired Emergency Generator	2001	465 hp; diesel; OAC 768
50	Engine-driven plant compressors J-753 & J-755		440 hp each – natural gas and propane.
51	Engine-driven plant compressor J-750		420 hp – diesel
32	Cooling water towers (CWT)	CWT 1, 1955 CWT 2, 1971 CWT 2a, 1963 CWT 2b, 1991	

1.9 Flare Area Emission Units

Table 1.9: Flare Area Emission Units

ID	Type & Description	Year Installed	Comments
	Flare Gas Recovery Compressor J-887	2000	OAC 725b; 40 CFR Part 63 Subpart CC (Part 60 Subpart VV) Barrier Fluid System
30	Flares X-813 (Refinery Flare), X-814 (Catalytic Cracking Unit Flare), and X-819 (Multi-Jet Flare)	X-813 & X-814, 1955 X-819, 1972	40 CFR Part 63 Subpart A
34	Flare area equipment components in VOC/HAP service		40 CFR Part 63 Subpart CC (Part 60 Subpart VV)

1.10 Oily Wastewater Collection and Treatment Emission Units

Table 1.10: Effluent Treatment Plant Emission Units

ID	Type & Description	Year Installed	Comments
31	Facility-wide process individual drain systems and treatment systems	1955	40 CFR Part 61 Subpart FF & 63 Subpart CC 2 Mg option
31	API Separator (X-701), Sludge Thickener (X-715), Primary Clarifiers (X-702 and X-703), Clarifier Sludge Reservoir (X-708)	1955 mod 1992	40 CFR Part 61 Subpart FF & 63 Subpart CC OAC 362b; covered – vapors to with water spray tower, carbon absorption canisters, and water seals.

1.11 Fire Training

Table 1.11: Fire Training

ID	Type & Description	Year Installed	Comments
55	Fire Training Grounds	1955	Permitted Annually with an Outdoor Fire Permit

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 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 condition 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 (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 60 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 the 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 Order of 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 requirements 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 perform 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 NWCAA Regulation 367 and Appendix A 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 NWCAA Regulation 367 and Appendix A 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

NWCAA, 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 the NWCAA 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 the 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 section 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 not 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 Regulation 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 NWCAA 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 the date of permit issuance. The permit shield does not apply to any insignificant emissions unit or activity so 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 Title 173 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	Northwest Clean Air Agency
Suite 900, AWT-107 Attn: Air Operating Permits 1200 Sixth Avenue Seattle, WA 98101	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, report 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, documented 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 NWCAA if the purpose of such reproduction or alteration is to evade or violate any provision or Regulation of the NWCAA, 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; and

(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 shall 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 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 or 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 twelve (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 this 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 NWCAA 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 exceedance of an emission and/or ambient air quality standard, 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 this 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 340.1.

2.4.8 Report of Shutdown or Startup

2.4.8.1 NWCAA 341 (9/8/93)

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 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 (9/8/93)

Keep all process and/or air pollution control equipment in good operating condition and repair. If a breakdown or upset condition occurs and 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 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 conditions 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 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 (10/18/90) and WAC 173-425-045 (1/3/89), WAC 173-435-050(2) (01/3/89) Although SIP-Approved, WAC 173-425-036, –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, 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 (4/9/04)

The permittee shall not produce, process, handle or store any substance listed in 40 CFR 68.130 or any other extremely hazardous substance unless they identify hazards that might result from accidental releases using appropriate hazard assessment techniques, design and maintain a safe facility taking such steps as are necessary to prevent releases, and minimize the consequences of accidental releases that do occur.

Should this stationary source, defined in 40 CFR 68.3 as any buildings, structures, equipment, installations, or substance emitting stationary activities from which an accidental release may occur, be subject or become subject to the accidental release prevention regulations in 40 CFR 68, then the owner or operator shall submit a risk management plant (RMP) by the date specified in section 68.10 and shall certify compliance with the requirements of part 68 as part of the annual compliance certification as required by this permit. The RMP shall be submitted in the method and format to the central point specified by EPA as of the date of submission.

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

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 from the NWCAA in accordance with the cited regulations.

2.8.1.2 State Only: WAC 173-400-110 (6/20/09), WAC 173-460-010 through -150 (6/20/09), NWCAA 300.1-300.12, 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 phrase 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 (11/8/07)

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 (11/8/07)

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, 720 (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 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 (11/8/07)

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 08/29/06 from Betty Wiese, EPA Region X to James Randles, Director of NWCAA)

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)

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)

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)

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)

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 8/29/06 from Betty Weise, EPA Region X to James Randles, Director of NWCAA)

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)

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 8/29/06 from Betty Weise, EPA Region X to James Randles, Director of NWCAA)

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)

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)

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)

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)

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)

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)

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 8/31/06 from Richard Albright, Director, EPA Office of Air, Waste, and Toxics to James Randles, Director of NWCAA).

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

Northwest Air Pollution Authority

1600 S. 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)

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)

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)

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 nor 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)

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)

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)

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)

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 8/31/06 from Richard Albright, Director, EPA Office of Air, Waste, and Toxics to James Randles, Director of NWCAA).

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

Northwest Clean Air Agency

1600 S. 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)

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)

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 63.654 (f), Periodic Reports as required by 63.654 (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)

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)

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)

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)

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)

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 63.654(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 MACT Phase II (Subpart UUU) Affected Sources*
Title 40 CFR 63.1575(h) and 63.1577 (4/11/02)

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)

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 are 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)

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)

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)

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)

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)

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)

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)

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)

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)

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)

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)

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 labeled "Directly enforceable" are legally enforceable requirements added under the NWCAA's "gap-filling" authority [WAC 173-401-615(1)(b) & (c), (10/17/02)]. Other requirements not labeled "directly enforceable" 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 - Generally Applicable Requirements

Permit Term	Citation	Description	Monitoring/Recordkeeping/Reporting
4.1 General	NWCAA 342.1 (7/14/05) State Only	Operation and Maintenance Sources are required to keep any process and/or air pollution control equipment in good operating condition and repair.	*Directly enforceable* Operate in accordance with the terms of the permit.
4.2 General	NWCAA 342.2 (7/14/05) same as 9/8/93 version	Operating Instructions/Maintenance Schedules 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.	

Permit Term	Citation	Description	Monitoring/Recordkeeping/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)	Emission of Air Contaminant - Visual Standard Visible emissions shall not exceed • **20% opacity** 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 emissions to zero as soon as possible. If 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 20%. Otherwise the visual emissions shall be considered in excess of the 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 should be monitored as per Section 5 requirements only. State of Washington Department of Ecology Source Test Method 9A - Visual Determination of Opacity for a three Minute Standard (Revised July 12, 1990).

Permit Term	Citation	Description	Monitoring/Recordkeeping/Reporting
4.5 PM	NWCAA 455.1 (4/14/93) NWCAA 455.1 (11/8/07 State only)	Emission of Particulate Matter Emissions shall not exceed • **0.10 grain/dscf PM** (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 from fuel burning equipment shall not exceed • **0.05 grain PM/dscf** (0.11 g/m^3) corrected to 7% oxygen For catalytic cracking units, emissions shall not exceed • **0.20 grain PM/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 emissions to zero as soon as possible. If 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 20% or the permittee will conduct a Method 5 assessment within 30 days. 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 should be monitored as per Section 5 requirements only. Title 40 CFR Part 60 Appendix A Method 5
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 Emissions greater than • **0.1 grain PM/dscf** Are prohibited	
4.7 PM	WAC 173-400-050(1) & (3) (3/22/91) WAC 173-400-050(1) & (3) (2/10/05 State only)	Emission Standards for Combustion and Incineration Units Emissions from combustion units greater than • **0.1 grain PM/dscf** Are prohibited Measured concentrations for combustion and incineration units shall be adjusted for volumes corrected to seven percent oxygen, except when ecology or the authority determines that an alternate oxygen correction factor is more representative of normal operations.	

Permit Term	Citation	Description	Monitoring/Recordkeeping/Reporting
4.8 SO_2	NWCAA 410 (4/14/93)	Sulfur Oxide Standards Unlawful for any person to cause or permit sulfur oxides to be emitted into the ambient air, measured at an ambient air monitoring station to exceed: • **0.800 ppmv SO_2** for any 5 minute average, not to be exceeded more than once per year • **0.400 ppmv SO_2** for any hour average, not to be exceeded more than once per year • **0.250 ppmv SO_2** for any one hour average, not to be exceeded more than twice in any 7 consecutive days • **0.100 ppmv SO_2** for any one day (24 hours), not to be exceeded more than once per year. • **0.020 ppmv SO_2** for any one year (annual arithmetic mean).	*Directly enforceable* Maintain and operate an ambient air monitor in accordance with NWCAA Regulation 367 and Appendix A.
4.9 SO_2	NWCAA 367 (date State only) NWCAA 460 (8/9/78) NWCAA 460 (2/8/96 State only)	Weight/Heat Rate Standard – Emission of Sulfur Compounds Sulfur compound emissions, shall not exceed • **1.5 lb SO_2/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 drum (V-213) monitoring results as required in Section 5. 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 month subsequent to the reporting period.

Permit Term	Citation	Description	Monitoring/Recordkeeping/Reporting
4.10 SO_2	NWCAA 462 (10/14/87) NWCAA 462 (11/8/07 State only)	Emission of Sulfur Compounds Emissions greater than • **1000 ppm sulfur compounds** (corrected to 7% O_2) averaged for a sixty-consecutive minute period from any equipment is 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.	*Directly enforceable* Continuously monitor and record the concentration of hydrogen sulfide in refinery fuel gas. Operate and maintain the analyzer in conformance with the NWCAA Regulation 367 and Appendix A and 40 CFR Part 60 Appendices B and F. When combusting refinery fuel oil, 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 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 flares will be calculated based on the processes contributing to the flare feed stream.
4.11 SO_2	WAC 173-400-040(6) (9/20/93) The second paragraph of this citation is State Only	Sulfur Dioxide Sulfur compounds emissions calculated as • **1000 ppmdv SO_2** (corrected to 7% O_2) emitted greater than average for a sixty-consecutive minute period Is prohibited.	
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 the NWCAA's jurisdiction has a sulfur content of no more than the allowable limits.
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.	

Permit Term	Citation	Description	Monitoring/Recordkeeping/Reporting
4.14	40 CFR Part 61 Subpart FF §61.340(a) §61.342(b) 40 CFR Part 63 Subpart CC §63.647 (8/18/95)	The facility shall implement Subpart FF tracking, managing, and treating benzene-containing wastes as required in Table 5.10.The general requirements of 40 CFR Part 61 Subpart A apply to the affected facilities (Section 3.2).	Comply with MR&R terms in Table 5.10 applicable to subject waste streams and equipment. The following waste is exempt from subpart FF: (1) Waste in the form of gases or vapors that is emitted from process fluids: (2) Waste that is contained in a segregated storm water sewer system. Any gaseous stream from a waste management unit, treatment process, or wastewater treatment system routed to a fuel gas system, as defined in §61.341, is exempt from this subpart. No testing, monitoring, recordkeeping, or reporting is required under this subpart for any gaseous stream from a waste management unit, treatment process, or wastewater treatment unit routed to a fuel gas system.
4.15	40 CFR Part 63 Subpart GGGGG §63.7881(c) & §63.7884 (b) (11/29/06)	Site remediation activities must follow only *the recordkeeping requirements* provided that the facility-wide total quantity of the HAP (listed in Table 1 to this subpart) contained in the remediation material excavated, extracted, pumped, or otherwise removed during all of the site remediations conducted at the facility must be • **less than 1 megagram (Mg) annually** *Or,* the site remediation must be completed within • **30 consecutive calendar days**	For the 1 Mg exemption: Prepare and maintain at the facility written documentation to support determinations that the total HAP quantity in remediation materials for the year is less than 1 Mg. The documentation must include a description of methodology and data used for determining the total HAP content of the remediation material. For the 30-day activity exemption: If the remediation material is shipped or otherwise transferred off-site, you must include in the applicable shipping documentation, in addition to any notifications and certifications required under §63.7936, a statement that the shipped material was generated by a site remediation activity subject to the conditions of this exemption. The statement must include the date on which you initiated the site remediation activity generating the shipped remediation materials, as specified in paragraph (b)(1)(i) of this section, and the date 30 calendar days following your initiation date. You must prepare and maintain at your facility written documentation describing the exempted site remediation, and listing the initiation and completion dates for the site remediation.

Permit Term	Citation	Description	Monitoring/Recordkeeping/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* A written air contaminant complaint response plan will be maintained at the facility. Upon receiving an air contaminant complaint from the NWCAA or the public, all possible sources of the nuisance emissions at the facility 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 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.
4.17 Odor	WAC 173-400-040(4) (2/10/05 State Only)	Odors Off-site nuisance odors prohibited.	*Directly enforceable* A written air contaminant complaint response plan will be maintained at the facility. Upon receiving a nuisance odor complaint from the NWCAA or the public, all possible sources of the nuisance emissions at the facility 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 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.
4.18 Nuisance	WAC 173-400-040(5) (9/20/93) WAC 173-400-040(5) (2/10/05) State Only	Emission Detrimental to Persons or Property Emissions detrimental to health or property prohibited.	
4.19 Odor	NWCAA 535.1 (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. Best Available Control Technology required to abate odorous emissions. 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.	

Permit Term	Citation	Description	Monitoring/Recordkeeping/Reporting
4.20 PM	NWCAA 550 (4/14/93) NWCAA 550 (11/8/07 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.	Comply with MRR terms 4.17 – 4.19
4.21 PM	WAC 173-400-040(2) (9/20/93) WAC 173-400-040(2) (2/10/05-State Only)	Fallout Nuisance particulate fallout prohibited.	
4.22 PM	WAC 173-400-040(3)(a) (9/20/93) WAC 173-400-040(3)(a) (2/10/05-State Only)	Fugitive Emissions for Attainment Area Take reasonable precautions to prevent release of air contaminants required.	
4.23 Dust	WAC 173-400-040(8)(a) (9/20/93) WAC 173-400-040(8)(a) (2/10/05 State Only)	Fugitive Dust Sources Reasonable precautions to prevent release of fugitive dust required. Maintain and operate source to minimize emissions.	
4.24 Reports	WAC 173-401-615(3) (9/16/02 State Only)	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.	*Directly enforceable* 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 first period shall cover the time from permit issuance until the first month, quarter, six-month period, or year following permit issuance. Reports shall be submitted by the end of the month following the close of the period that the reports cover.

Permit Term	Citation	Description	Monitoring/Recordkeeping/Reporting
4.25 General	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 to the sources identified in the term description or preceding header. The citations include the root applicability which appears in normal text, with referenced requirements noted in *italicized text*. Referenced citations are enforceable through the root applicability citation. 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 [WAC 173-401-615(1)(b) & (c), 10/17/02]. MR&R requirements noted as "CAM" are part of the Compliance Assurance Monitoring Plan for the specified unit(s) as required by 40 CFR §64.6(c) (10/22/97). The CAM plans submitted by the facility per 40 CFR §64.4 are included in the Statement of Basis document accompanying this permit. Other requirements not labeled "Directly enforceable" or "CAM" 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 or pursuant to CAM, 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.

5.1 Primary Crude Oil Processing Area

Table 5.1 Primary Crude Oil Processing Area			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
40 CFR Parts 60 and 63 Subpart A applies to the Crude, Vacuum flasher, and ROSE units – See section 3			
5.1.1	40 CFR Part 63 Subpart CC §63.648 (8/18/98)	Primary Crude Oil Processing Area (Crude, Vacuum flasher, and ROSE units) equipment components: Implement the leak detection and repair program as listed in Table 6.2.	Comply with Table 6.2 LDAR requirements. *Directly Enforceable:* VOC-service components shall be included in the unit LDAR program.
5.1.2	OAC 744a Condition 1 (3/3/09)	ROSE Unit Equipment Components in VOC/HAP Service: Equipment in light liquid and gaseous service shall follow the requirements of 60 Subpart VV in Table 6.2 using the following **leak definitions:** • Vapor or light liquid valves = **1000 ppm** • Light liquid pumps = **2,000 ppm**	Comply with Table 6.2 LDAR requirements. Monitoring instrument must meet the performance criteria of 40 CFR Part 60 Appendix A Method 21.
5.1.3	40 CFR Part 63 Subpart CC §63.643(a)(1) & (b) (8/18/95) §63.644(a)(2) &(3) (8/18/98)	Primary Crude Oil Processing Area Miscellaneous Group 1 Process Vents Reduce emissions of organic HAP's using a flare that meets the requirements of §63.11(b) or reduce emissions of organic HAP's using a control device, by 98% (wt), or to a concentration of 20 ppmv , on a dry basis, 3% O_2, whichever is less stringent. If a boiler or process heater is used to comply with the percentage of reduction requirement or concentration limit, then the vent stream shall be introduced into the flame zone of such a device, or in a location such that the required percent reduction or concentration is achieved.	Comply with flare monitoring requirements in Table 5.9 (flare area). Any boiler or process heater with a design heat input capacity greater than or equal to 44 megawatt or any boiler or process heater in which all vent streams are introduced into the flame zone is exempt from monitoring.

Table 5.1 Primary Crude Oil Processing Area			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.1.4	40 CFR Part 60 Subpart QQQ §60.690 (11/23/88)	ROSE Unit Individual Drain Systems Comply with 40 CFR Part 60 Subpart QQQ – Table 6.1 – *except* for individual drain systems regulated under Part 63 Subpart CC [63.640(o)].	Comply with Table 6.1
5.1.5	Regulatory Order No. 26 (8/22/00)	Crude unit heater F-101: Emissions from combusting gaseous fuels shall not exceed • **21.6 tons NO_X per year** (12- month rolling average) basis. Emissions from combusting fuel oil shall not exceed • **35 tons NO_X per year** (12-month rolling average)	Submit a monthly report summarizing the NO_X emissions from combusting gaseous and liquid fuels. The report shall be submitted prior to the end of the month following the monthly reporting period. *Directly Enforceable* Conduct a NO_X and CO performance test within 6 months of issuance of this permit and at least once every 5 years thereafter in accordance with 40 CFR Part 60 Appendix A Method 7E and Method 19, and NWCAA Regulations Section 367 and Appendix A.
5.1.6	NWCAA 580.221 (2/8/96)	Non-condensable VOC shall be piped to an appropriate firebox, incinerator or to a closed refinery system.	*Directly Enforceable* Record operation and maintenance activities associated controlling VOC emissions in close vent systems routed to flares or other appropriate control device.
5.1.7	NWCAA 580.222 (2/8/96)	Hot wells associated with contact condensers shall be tightly covered and the collected VOC introduced into a closed refinery system.	*Directly Enforceable* Record operation and maintenance activities associated with hot wells with contact condensers.

5.2 Hydroprocessing Area

Table 5.2 Hydroprocessing Area			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
40 CFR Parts 60 & 63 Subpart A applies to the Catalytic Reformer (CR), Naphtha Hydrotreater (NHT), Cat Gas Splitter (CGS), Distillate Hydrotreater (DHT), Clean Fuels Hydrotreater (CFH), Jet Fuel Treater (JFT) and Selective Hydrogenation (SHU) Units – See section 3			
5.2.1	40 CFR Part 63 Subpart CC §63.648 (8/18/98)	Hydroprocessing Area (CR, NHT, CGS/DHT, JFT, CFH, & SHU) Equipment Components: Implement a leak detection and repair program as listed in Table 6.2	Comply with Table 6.2 LDAR requirements. *Directly Enforceable* VOC-service components shall be included in the unit LDAR program.
5.2.2	OAC 827b Condition 2 (6/2/09) OAC 896a Conditions 1 & 2 (3/3/09) OAC 901a Conditions 1 & 2 (3/3/09)	CFH, DHT, NHT, CR, & CGS Equipment leaks: Implement the LDAR program on a unit basis in Table 6.2 following the provisions of 40 CFR Part 60 Subpart VV as cited by Subpart CC and using the following leak definitions: • Vapor or light liquid valve leak definition = **1,000 ppm** • Light liquid pump leak definition = **2,000 ppm** J-600M shall meet 40 CFR Part 60.482-3a	Comply with Table 6.2 LDAR requirements. Monitoring instrument must meet the performance criteria of 40 CFR Part 60 Appendix A Method 21.
5.2.3	OAC 989a Condition 1 (3/3/09)	SHU Equipment leaks: Implement the LDAR program in Table 6.2 following the provisions of 40 CFR Part 60 Subpart VV as cited by Subpart CC and using the following leak definitions: • Vapor or light liquid valve leak definition = **500 ppm** • Light liquid pump leak definition = **2,000 ppm**	Comply with Table 6.2 LDAR requirements. Monitoring instrument must meet the performance criteria of 40 CFR Part 60 Appendix A Method 21.

Table 5.2 Hydroprocessing Area			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.2.4	40 CFR Part 60 Subpart GGGa	Benzene Saturation unit equipment leaks: Implement the LDAR program in Table 6.3	
5.2.5	40 CFR Part 60 Subpart QQQ §60.690 (11/23/88)	DHT, CFH, & SHU Individual Drain Systems Comply with 40 CFR Part 60 Subpart QQQ – Table 6.1 – *except* for individual drain systems regulated under Part 63 Subpart CC [63.640(o)].	Comply with Table 6.1
5.2.6	40 CFR Part 60 Subpart QQQ §60.690 (11/23/88)	JFT Individual Drain Systems Comply with 40 CFR Part 60 Subpart QQQ – Table 6.1 – *except* for individual drain systems regulated under Part 63 Subpart CC [63.640(o)].	Comply with Table 6.1
5.2.7	40 CFR Part 63 Subpart UUU §63.1566 (2/9/05)	CR Reactor Vent Organic HAP Emissions: During initial catalyst depressuring and purging operations, except when reactor vent pressure is 5 psig or less: Vent to a flare that meets the requirements for control devices in §63.11(b). 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. Visible emissions from the flare shall not exceed 5 min in any consecutive 2 hours. 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.	Install and operate a flare with a monitoring device such as a thermocouple, an ultraviolet beam sensor, or infrared sensor to continuously detect the presence of the flare pilot flame in a manner consistent with the manufacturer's specifications or other written procedures that provide adequate assurance that the equipment will monitor accurately. The monitoring system must have valid data from at least 75 percent of the hours during which the process operated. Demonstrate continuous compliance with the work practice standards by maintaining records to document conformance with the procedures in the operation, maintenance, and monitoring plan.

Table 5.2 Hydroprocessing Area			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.2.8	40 CFR Part 63 Subpart UUU §63.1567 (2/9/05)	CR Reactor Vent Inorganic HAP Emissions: Reduce uncontrolled emissions to a concentration of • **10 ppmv HCl** (dry basis), 3% O_2 Prepare an operation, maintenance, and monitoring plan and operate at all times according to the procedures in the plan.	The daily average pH or alkalinity of the scrubbing liquid exiting the scrubber must not fall below the limit established during the performance test; and the daily average liquid-to-gas ratio must not fall below the limit established during the performance test. These operating limits apply during coke burn-off and catalyst rejuvenation. Follow the Alternative Monitoring Plan in Section 7.2. Demonstrate continuous compliance with the work practice standards by maintaining records to document conformance with the procedures in the operation, maintenance, and monitoring plan.
5.2.9	40 CFR Part 63 Subpart UUU §63.1569 (2/9/05)	CR Reactor Vent Bypass line; Seal the bypass line located in the CR unit by installing a solid blind between piping flanges.	Visually inspect the blind at least once a month. Record whether the blind is maintained in the correct position such that the vent stream cannot be diverted through the bypass line.
5.2.10	40 CFR Part 63 Subpart UUU §63.1574(f) (2/9/05) & §63.1576 (2/9/05)	CR Reactor Vent: Prepare an operation, maintenance, and monitoring plan (OMMP) and operate at all times according to the procedures in the plan. Submit any OMMP changes to NWCAA for review and approval and comply with the plan until the change is approved.	The OMMP must contain: process and control device parameters to be monitored, along with established operating limits. Follow the Alternative Monitoring Plan in Section 7.2. Maintain records to demonstrate compliance with the OMMP.

Table 5.2 Hydroprocessing Area			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.2.11	40 CFR Part 63 Subpart UUU §63.1575 (4/11/02)	CR: Submit the semiannual compliance report in Table 43 of 40 CFR Part 63 Subpart UUU, covering the reporting period from January 1 through June 30 or July 1 through December 31 postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. Include performance tests and any requested changes in compliance reports. Tesoro may submit reports required by other regulations in place of or as part of the compliance report if they contain the required information (subject to prior approval by the NWCAA). Maintain records of performance tests and performance evaluations, as required in §63.10(b)(2)(viii).	The report shall contain: (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. *If there were no deviations from any applicable emission limitation or work practice standard*, a statement that there were no deviations from the standards during the reporting period and that no continuous opacity monitoring system or continuous emission monitoring system was inoperative, inactive, out-of-control, repaired, or adjusted; For each deviation from an emission limitation and for each deviation from the requirements for work practice standards that occurs at a source where you are *not* using a continuous emission monitoring system to comply with the emission limitation or work practice standard in this subpart, the compliance report must contain: (1) The total operating time of each affected source during the reporting period. (2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken. (3) Information on the number, duration, and cause for monitor downtime incidents (including unknown cause, if applicable, other than downtime associated with zero and span and other daily calibration checks). When actions taken to respond are not consistent with the startup, shutdown, malfunction plan, Tesoro must report these events and the response taken in the semiannual compliance report. Include a copy of any performance test done during the reporting period on any affected unit in the semiannual compliance report. A complete test report contains a process description; simplified flow diagram, control equipment, and sampling locations; sampling site data; 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. Any requested change in the applicability of an emission standard.

Table 5.2 Hydroprocessing Area			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.2.12	40 CFR Part 63 Subpart UUU §63.1575(h) (4/11/02) & §63.1576 (2/9/05)	CR: For startups, shutdowns, and malfunctions: Develop, maintain, and implement a startup, shutdown, malfunction plan.	Maintain records as specified in §63.6(e)(3) in Section 3. (1) When actions taken to respond are consistent with the plan, Tesoro is not required to report these events in the semiannual compliance report. (2) When actions taken to respond are not consistent with the plan, Tesoro must report these events and the response taken in the semiannual compliance report.
5.2.13	OAC 827b (6/2/09); Condition 3	CGS heater F-104 emissions shall not exceed • **0.035 lb NO_X/MMBtu** (higher heating value)	Periodic testing for NO_X emissions shall be completed once every 5 years, within three months of the preceding test anniversary, in accordance with 40 CFR Part 60 Appendix A Method 7E and NWCAA Regulation 367 and Appendix A. Source shall submit a test plan at least 30 days in advance of any test date and notify the NWCAA at least 2 weeks in advance of the scheduled test date.
5.2.14	OAC 827b (6/2/09); Conditions 1 & 4	F-104 shall combust only natural gas or fuel gas and emissions shall not exceed: • **186 tons SO_2** (rolling 12-month average)[1].	Continuously monitor H_2S content of refinery fuel gas. Compute total sulfur oxides (as SO_2) based upon refinery fuel gas H_2S content and measured gas flow to F-104. Report quarterly: a) Calendar month average concentration of H_2S in refinery fuel gas combusted by F-104 b) the rolling 12-month average total of sulfur oxides emitted

[1] *Note: OAC 952b (3/3/09) establishes a 365-day average limit of 0.10% vol. H_2S for the refinery fuel gas system.*

5.3 Benzene Saturation (BenSat) Unit

Table 5.3 Benzene Saturation (BenSat) Unit			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
40 CFR Parts 60 & 63 Subpart A applies to the BenSat Unit – See section 3			
5.3.1	40 CFR 60 Subpart GGGa (11/16/07) OAC 1037 Condition 1 (6/19/09)	BenSat Unit Equipment in VOC/HAP Service: Implement the LDAR program in Table 6.3 following the provisions of 40 CFR Part 60 Subpart VVa as cited by Subpart GGGa.	Comply with Table 6.3 LDAR requirements. Monitoring instrument must meet the performance criteria of 40 CFR Part 60 Appendix A Method 21.
5.3.2	40 CFR 61 Subpart J §61.110(a), 61.112(a), (12/14/00) As referenced; Subpart V §61.242-9 (12/14/00) 40 CFR Part 61 Subpart A §61.09(b) (11/7/85) OAC 1037 Condition 6 (6/19/09)	Surge control vessels & bottoms receivers in benzene service: Shall comply with 40 CFR Part 61 Subpart V: Each surge control vessel or bottoms receiver that is not routed back to the process and that meets the conditions specified in table 1 or table 2 of this subpart shall be equipped with a closed-vent system capable of capturing and transporting any leakage from the vessel back to the process or to a control device as described in §61.242–11, except as provided in §61.242–1(c); or comply with the requirements of 40 CFR 63.119(b) or (c).	Submit an initial written notification to the NWCAA as follows: (1) A notification of the anticipated date of initial startup of the source not more than 60 days nor less than 30 days before that date. (2) A notification of the actual date of initial startup of the source within 15 days after that date. Comply with the applicable MR&R of Subpart V. *Directly Enforceable below:* The initial notification shall include a list of equipment subject to the provisions of Subpart J and the method of compliance for that equipment with the associated applicable regulatory citations.

Table 5.3 Benzene Saturation (BenSat) Unit			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.3.3	OAC 1037 Conditions 2 & 3 (6/19/09)	Heater F-6602: shall combust only natural gas or refinery fuel gas. Fuel gas shall not contain greater than • **50 ppmv H_2S** (24-hour average). A continuous emissions monitoring system (CEMS) for hydrogen sulfide concentration shall be installed, calibrated, maintained, and operated measuring the inlet stream to F-6602. Alternatively, compliance may be demonstrated by a monitoring device located on the outlet stream of the fuel gas blend drum, subsequent to all unmonitored incoming sources of sulfur compounds to the system.	The H_2S monitor shall be certified in accordance with 40 CFR Part 60 Appendix B and operated in accordance with 40 CFR Part 60 Appendix F and the NWCAA Regulation §367 and Appendix A. Monthly, within 30 days of the end of each calendar month, submit a CEMS summary report including the following: Dates, times, and causes of all periods that the CEMS did not function or operating parameters varied outside of established ranges during the preceding month, H_2S average concentrations, and any periods of excess emissions. Comply with Section 2.1.10.
5.3.4	OAC 1037 Condition 4 (6/19/09)	Heater F-6602: emissions shall not exceed • **4.4 lb NO_X per hour** (1-hour average) at any time • **53 ppmv NO_X** (3-hour average) except during period of startup or shutdown. A continuous emissions monitoring system (CEMS) for NO_X shall be installed, calibrated, maintained, and operated measuring the stack emissions of F-6602.	The NO_X monitor shall be certified in accordance with 40 CFR Part 60 Appendix B and operated in accordance with 40 CFR Part 60 Appendix F and the NWCAA Regulation §367 and Appendix A. Monthly, within 30 days of the end of each calendar month, submit a CEMS summary report including the following: Dates, times, and causes of all periods that the CEMS did not function or operating parameters varied outside of established ranges during the preceding month, maximum hourly average NO_X emissions, maximum 3-hour average NO_X concentrations, and any periods of excess emissions. Comply with Section 2.1.10.
5.3.5	OAC 1037 Condition 5 (6/19/09)	Heater F-6602: emissions shall not exceed • **0.040 lb CO per MMBtu** (net heat input, 1-hour average)	Annually, conduct stack testing to demonstrate compliance with the CO limit in accordance with 40 CFR Part 60 Appendix A Method 10. Stack testing shall also be conducted in accordance with the NWCAA Regulation §367 and Appendix A.

5.4 Catalytic Cracking, Product Fractionation, and Treating Areas

Table 5.4 Catalytic Cracking Unit (CCU), Product Fractionation, and Treating Process Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
40 CFR Parts 60 & 63 Subpart A applies to the CCU – See section 3			
5.4.1	40 CFR Part 63 Subpart CC §63.648 (8/18/98)	CCU (including Gas Recovery and Amine 1 & 2 units) Equipment Components: Implement the leak detection and repair program as listed in Table 6.2	Comply with Table 6.2 LDAR requirements. *Directly Enforceable* VOC-service components shall be included in the unit LDAR program.
5.4.2	OAC 952b Condition 4 (3/3/09)	Amine Unit 2 Equipment in VOC/HAP Service: Implement the LDAR program in Table 6.2 following the provisions of 40 CFR Part 60 Subpart VV as cited by Subpart CC and using the following leak definitions: • Vapor or light liquid valve leak definition = **500 ppm** • Light liquid pump leak definition = **2,000 ppm**	Comply with Table 6.2 LDAR requirements. Monitoring instrument must meet the performance criteria of, 40 CFR Part 60 Appendix A Method 21.
5.4.3	40 CFR Part 60 Subpart QQQ §60.690 (11/23/88)	Amine Unit 2 Individual Drain Systems Comply with 40 CFR Part 60 Subpart QQQ – Table 6.1 – *except* for individual drain systems regulated under Part 63 Subpart CC [63.640(o)].	Comply with Table 6.1

Table 5.4 Catalytic Cracking Unit (CCU), Product Fractionation, and Treating Process Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.4.4	40 CFR Part 63 Subpart CC §63.643(a)(1) & (b) (8/18/95) §63.644(a)(2) &(3) (8/18/98)	<u>CCU Gas Recovery Area Miscellaneous Group 1 Process Vents</u> Reduce emissions of organic HAP's using a flare that meets the requirements of §63.11(b) or reduce emissions of organic HAP's using a control device, by 98% (wt), or to a concentration of 20 ppmv , on a dry basis, 3% O_2, whichever is less stringent. If a boiler or process heater is used to comply with the percentage of reduction requirement or concentration limit, then the vent stream shall be introduced into the flame zone of such a device, or in a location such that the required percent reduction or concentration is achieved.	Comply with flare monitoring requirements in Table 5.9 (flare area). Any boiler or process heater with a design heat input capacity greater than or equal to 44 megawatt or any boiler or process heater in which all vent streams are introduced into the flame zone is exempt from monitoring.

Table 5.4 Catalytic Cracking Unit (CCU), Product Fractionation, and Treating Process Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.4.5	40 CFR Part 63 Subpart UUU §63.1564(a)(1) &(2) & (b), §63.1572 & §63.1576 (2/9/05)	CCU Regenerator Vent Metal HAPs: Comply with the *option 2* PM emission limit in Table 1: Emissions must not exceed • **1.0 lb PM /1,000 lbs of coke burn-off** in the catalyst regenerator Comply with the *option 2* operating limit for a non-venturi jet-ejector design scrubber in Table 2: Maintain the daily average liquid-to-gas ratio above the limit established in the performance test. Install, operate, and maintain continuous parameter monitoring systems for the gas flow rate exiting the scrubber and total scrubbing liquid flow rate according to manufacturer's specifications and other documentation. Implement and maintain the CCU OMMP according to the requirements in §63.1574(f) and operate at all times according to the procedures in the plan.	Daily: compute PM emission rate (lb/1,000 lbs of coke burn-off) as follows: $R_c = K_1 Q_r(\%CO_2 + \%CO) + K_2 Q_a - K_3 Q_r\left[\left({}^{\%CO}/_{2}\right) + \%CO_2 + \%O_2\right] + K_3 Q_{oxy}(\%O_{xy})$ Where: R_c= Coke burn-off rate, kg/hr (lb/hr); Q_r= Volumetric flow rate of exhaust gas from catalyst regenerator before adding air or gas streams. Example: You must measure upstream of a carbon monoxide boiler, dscf/min. You may use the alternative in either §63.1573(a)(1) or (a)(2), as applicable, to calculate Q_r; Q_a= Volumetric flow rate of air to catalytic cracking unit catalyst regenerator, as determined from instruments in the catalytic cracking unit control room, dscm/min (dscf/min); $\%CO_2$= Carbon dioxide concentration in regenerator exhaust, percent by volume (dry basis); $\%CO$ = Carbon monoxide concentration in regenerator exhaust, percent by volume (dry basis); $\%O_2$= Oxygen concentration in regenerator exhaust, percent by volume (dry basis); K_1= Material balance and conversion factor, 0.2982 (kg-min)/(hr-dscm-%) (0.0186 (lb-min)/(hr-dscf-%)); K_2= Material balance and conversion factor, 2.088 (kg-min)/(hr-dscm) (0.1303 (lb-min)/(hr-dscf)); K_3= Material balance and conversion factor, 0.0994 (kg-min)/(hr-dscm-%) (0.0062 (lb-min)/(hr-dscf-%)); Q_{oxy}= Volumetric flow rate of oxygen-enriched air stream to regenerator, as determined from instruments in the catalytic cracking unit control room, dscm/min (dscf/min); and $\%O_{xy}$= Oxygen concentration in oxygen-enriched air stream, percent by volume (dry basis). $E = \frac{K \times C_s \times Q_{sd}}{R_c}$ Where: E = Emission rate of PM, kg/1,000 kg (lb/1,000 lb) of coke burn-off; C_s= Concentration of PM, g/dscm (lb/dscf); Q_{sd}= Volumetric flow rate of the catalytic cracking unit catalyst regenerator flue gas as measured by Method 2 in appendix A to part 60 of this chapter, dscm/hr (dscf/hr); R_c= Coke burn-off rate, kg coke/hr (1,000 lb coke/hr); and K = Conversion factor, 1.0 (kg^2 /g)/(1,000 kg) (1,000 lb/(1,000 lb)). Monitor and record the daily average flue gas and total scrubbing liquid flow rate.

Table 5.4 Catalytic Cracking Unit (CCU), Product Fractionation, and Treating Process Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.4.5 *continued*	40 CFR Part 63 Subpart UUU §63.1564(c) & §63.1576 (2/9/05)	CCU FGS Metal HAPs *continued…*	(2) The continuous parameter monitoring systems must complete a minimum of one cycle of operation for each successive 15-minute period. A minimum of four successive cycles of operation are required 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). (3) Each continuous parameter monitoring system must have valid hourly average data from at least 75 percent of the hours during which the process operated. (4) Each continuous parameter monitoring system must determine and record the hourly average of all recorded readings and the daily average of all recorded readings for each operating day. The daily average must cover a 24-hour period. (5) Each continuous parameter monitoring system must record the results of each inspection, calibration, and validation check. Determine and record each day the average coke burn-off rate (thousands of pounds per hour) and the hours of operation for the catalyst regenerator. Collect the hourly average gas flow rate and water (or scrubbing liquid) flow rate monitoring data; determine and record the hourly average liquid-to-gas ratio; determine and record the daily average liquid-to-gas ratio; and maintain the daily average liquid-to-gas ratio above the limit established during the performance test. Demonstrate continuous compliance with the work practice standard by maintaining records to document conformance with the procedures in the OMMP.
5.4.6	OAC 946a Condition 3 (4/06/06)	CCU FGS: Particulate matter (PM) emissions (as PM-10) from the FGS stack shall not exceed • **0.11 grains PM-10/dscf**, corrected to 7% oxygen.	Demonstration of continued compliance with this PM limit shall be ongoing compliance with the CCU 1.0 lb/1000 lb coke burn standard according to appropriate continuous parameter monitoring system limits and work practice standards in 40 CFR Part 63 Subpart UUU.

Table 5.4 Catalytic Cracking Unit (CCU), Product Fractionation, and Treating Process Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.4.7	40 CFR Part 63 Subpart UUU §63.1565 & §63.1576 (2/9/05)	CCU Organic HAPs: Emissions from the catalyst regenerator vent shall not exceed • **500 ppmv CO** (dry basis) (Table 8) Implement and maintain the CCU OMMP according to the requirements in §63.1574(f) and operate at all times according to the procedures in the plan.	Demonstrate continuous compliance with the work practice standard by maintaining records to document conformance with the procedures in the OMMP.
5.4.8	OAC 946a Condition 10 (4/06/06)	CCU FGS: A CEMS shall be installed, calibrated, maintained, and operated to measure carbon monoxide (CO) from the FGS stack within 180 days of FGS startup ***unless:*** the facility demonstrates that the hourly average CO emissions are less than 50 ppm (dry basis) and files a written request for exemption to the NWCAA[2]. Tesoro shall measure CO concentration and mass emissions annually.	The CEMS shall meet the performance specifications of 40 CFR Part 60 Appendices B and F and NWCAA Regulation §367 and Appendix A. The exemption demonstration shall consist of continuously monitoring CO emissions for 30 days using an instrument that meets the requirements of 40 CFR Part 60 Appendix B Performance Specification 4 and equivalent methods to Appendix A Method 10. The span value shall be 100 ppm CO instead of 1,000 ppm, and the relative accuracy limit shall be 10 percent of the average CO emissions or 5 ppm CO, whichever is greater. If the CO CEMS is not installed on the FGS stack, annually, the facility shall conduct a source test at the FGS stack to measure CO concentration and mass emissions. Annual CO testing shall be conducted according to 40 CFR Part 60 Appendix A Methods 1-4 and 10 and §§ 2.1.8 and 2.1.9. Process data collected and listed in the test report shall include; regenerator coke burn rate, quantity of auxiliary fuel burned in the CO boilers, fresh and recycle feed rates, oxygen addition rate and purity, and bed air blower rotor rotation rate.

[2] *Tesoro requested and was granted the discontinuance of the requirement to monitor CO emissions with a CEMS in 2006. The discontinuance letter states that Tesoro may be required to resume monitoring continuously for CO in the event that unit operations, stack testing, or other emissions data indicate that CO emissions have increased significantly from the CCU.*

Table 5.4 Catalytic Cracking Unit (CCU), Product Fractionation, and Treating Process Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.4.9	OAC 946a Condition 2 (4/06/06)	CCU FGS: Upon request by NWCAA, the facility shall perform visible emissions monitoring of the FGS exhaust by Washington Department of Ecology Method 9A once per calendar month with not less than 15 days between observations. Upon demonstration of no visible emissions for 12 consecutive months from the FGS stack Tesoro may file a written request to discontinue the visual monitoring required by this permit condition[3].	Visible emissions monitoring shall be conducted in accordance with Ecology Method 9A. Records documenting the monitoring shall be kept at the facility for at least 5 years and made available to the NWCAA upon inspection. In the event that visible emissions are observed (VE greater than 0%) during the monthly readings, the NWCAA shall be notified within 7 days.
5.4.10	OAC 946a Condition 4 (4/06/06)	CCU FGS: Sulfuric acid mist emissions from the FGS stack shall be measured annually by source testing according to NCASI Method 8A and NWCAA Regulation §367 and Appendix A. Tesoro may file a written request to discontinue the annual portion of sulfuric acid mist source testing[4].	No MR&R

[3] *Tesoro requested discontinuance of visual monitoring as per this condition on 2/05/07. NWCAA granted the request, with the following provisions in a 2/14/07 letter to Tesoro (paraphrased from the NWCAA letter): Tesoro may utilize the exemption from the monthly monitoring provided in the OAC. Notification and recordkeeping requirements remain in effect. NWCAA may require the facility to resume VE observations on the unit in the future. Observe the plume regularly for visible emissions. Take corrective action if visible emissions are observed. If emissions cannot be corrected, resume monthly VE monitoring using Ecology Method 9A.*

[4] *Tesoro conducted the initial performance test (40 CFR Part 60 Appendix A Method 8) on March 28, 2006 and requested discontinuance of the requirement to test H_2SO_4 emissions annually. The NWCAA allowed discontinuance of annual testing for H_2SO_4 with the provision that Tesoro may be required to test for H_2SO_4 periodically to confirm the measurements of 2006.*

Table 5.4 Catalytic Cracking Unit (CCU), Product Fractionation, and Treating Process Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.4.11	OAC 946a Condition 5, 6, & 7 (4/06/06) CAM	CCU FGS: Sulfur dioxide (SO_2) emissions from the FGS shall not exceed • **25 ppmv SO_2** (dry basis, 0% O_2, 365-day rolling average) or • **50 ppmv SO_2** (dry basis, 0% O_2, 7-day rolling average) as demonstrated by a continuous emissions monitor (CEMS). CAM Plan: An SO_2 concentration of 50 ppm (@ 0% O_2) or greater over a 7-day average shall constitute an "excursion." Tesoro will develop and implement a Quality Improvement Plan in accordance with 40 CFR 64.8 if two or more excursions occur within any consecutive 12-month period.	A CEMS shall be installed, calibrated, maintained, and operated to measure oxygen and SO_2 concentrations from the FGS stack. The monitor shall meet the appropriate specifications of 40 CFR Part 60 Appendices B and F and the NWCAA Regulation §367 and Appendix A. Comply with Section 2.1.10. Sulfur dioxide emissions data from the CEM shall be maintained as hourly averages for at least 60 days, and 7-day rolling, and 365-day rolling averages for at least 5 years, and made available to the NWCAA upon request. Reporting of SO_2 emissions shall be semiannual and due within 31 days of the end of the January through June and July through December periods. The reporting shall include daily average SO_2 concentration (midnight-to-midnight basis), 7-day rolling average, and 365-day rolling average. This report may be submitted electronically. Quality control testing results (CGA and RATA) shall be provided to the NWCAA within 45 days of test completion. The SO_2 mass emission rate in pounds per hour (lb/hr) under normal operating conditions shall be demonstrated within 180 days of startup by methods approved by the NWCAA. The demonstration plan shall be submitted to the NWCAA for approval at least 30 days prior to the demonstration date. Mass emissions of SO_2 shall be determined monthly and reported semiannually CAM Plan: SO_2 will be continuously monitored by a CEMS operated in accordance with 40 CFR Part 60 Appendices B and F and NWCAA 367 and Appendix A. Measurement levels exceeding 50 ppmdv shall constitute an early indication of loss of control. In response to such a reading corrective action will be initiated, including checks of water circulation rate and pH in accordance with facility operating procedures.

Table 5.4 Catalytic Cracking Unit (CCU), Product Fractionation, and Treating Process Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.4.12	OAC 946a Condition 11 (4/06/06)	CCU FGS: Nitrogen oxide (as NO_2) emissions from the combined CO boiler stacks shall not exceed • **1,770 tons NO_X** per any twelve rolling month period.	Annually, the facility shall conduct a source test at the FGS stack to measure NO_X (as NO_2) according to 40 CFR Part 60 Appendix A Method 7E and §§ 2.1.8 and 2.1.9. The source test shall include measurements with the sour water stripper (SWS) vent gas valve opened to both boilers and to each boiler individually. Process data collected and listed in the test report shall include: regenerator coke burn rate, the position of the sour water stripper tops butterfly valve (indicating stream flow to each boiler), quantity of auxiliary fuel burned in the CO boilers, fresh and recycle feed rates, oxygen addition rate and purity, and bed air blower rotor rotation rate. In the event that NO_X (as NO_2) emissions are shown to be above 90% of the emission limit either, the permittee shall submit a plan to the NWCAA within 45 days to either (1) install a NO_X CEMS for the CO boilers, or (2) propose a method to permanently reduce NO_X emissions from the CCU/CO Boiler system. If the second option is chosen, the plan must include testing to determine compliance with the limit. The facility shall determine and report monthly NO_X (as NO_2) emissions with an update of the rolling 12-month NO_X total. The monthly report shall include information on SWS vent position.
5.4.13	40 CFR Part 63 Subpart UUU §63.1569 & §63.1572 (2/9/05)	CCU Bypass Line/Diversion Stack: Monitor the bypass around the CCU Flue Gas Scrubber via the temperature indicator on the CCU Diversion Stack: Install, operate, and maintain the temperature monitoring system in a manner consistent with the manufacturer's specifications.	Continuously monitor temperature in the CCU Diversion stack to detect flow in the bypass line: The temperature monitoring system must complete a minimum of one cycle of operation for each successive 15-minute period. a minimum of four successive cycles of operation are required to have a valid hour of data (or at least two if a calibration check is performed during that hour or if the monitoring system is out-of-control). The temperature monitoring system must have valid hourly data from at least 75 percent of the hours during which the process operated. Determine and record the hourly average of all recorded readings and for each operating day. Record the results of each inspection, calibration, and validation check.

Table 5.4 Catalytic Cracking Unit (CCU), Product Fractionation, and Treating Process Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.4.14	OAC 946a Condition 8 (4/06/06)	CCU FGS Diversion Stack: Sulfur dioxide emissions during bypass of the FGS shall not exceed • **1,000 ppmv SO_2** (dry basis, 7% O_2) averaged for a sixty (60) consecutive minute period as demonstrated by a mass balance calculation or continuous emissions monitor.	If monitoring is chosen as the method to demonstrate compliance, comply with section 2.1.10. If mass-balance calculations are chosen as the method to demonstrate compliance, mass balance calculations must assume all incoming sulfur is oxidized to sulfur dioxide and released to the stack unless demonstrated otherwise by process data and/or analytical methods at representative operating conditions.
5.4.15	OAC 946a Condition 9 (4/06/06)	CCU FGS Diversion Stack: Sulfur dioxide emissions during bypass of the FGS shall be minimized to the extent reasonably practicable by CCU feed rate reduction, CCU feed sulfur content consideration, catalyst utilization, and/or other actions.	Procedures regarding minimization of SO_2 emissions during bypass shall be incorporated into CCU operations and maintenance procedures. Compliance with this provision shall be demonstrated by records of bypass event beginning and end times and specific actions taken during each bypass event, and may take the form of a checklist.
5.4.16	40 CFR Part 63 Subpart UUU §63.1574(f) (2/9/05) & §63.1576 (2/9/05)	CCU: Prepare an operation, maintenance, and monitoring plan (OMMP) and operate at all times according to the procedures in the plan. Submit any OMMP changes to NWCAA for review and approval and comply with the plan until the change is approved.	The OMMP must contain: process and control device parameters to be monitored, along with established operating limits. Procedures for monitoring emissions and process and control device operating parameters for the CCU. Monitoring schedule, including when you will monitor and when you will not monitor. 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. Maintain records of any changes that affect emission control system performance. Maintain records to demonstrate compliance with the OMMP.

Table 5.4 Catalytic Cracking Unit (CCU), Product Fractionation, and Treating Process Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.4.17	40 CFR Part 63 Subpart UUU §63.1575 (4/11/02)	CCU: Submit the semiannual compliance report in Table 43 of this subpart, covering the reporting period from January 1 through June 30 or July 1 through December 31 postmarked or delivered no later than July 31 or January 31, following the end of the semiannual reporting period. Include performance tests and any requested changes in compliance reports. Tesoro may submit reports required by other regulations in place of or as part of the compliance report if they contain the required information (subject to prior approval by the NWCAA). Maintain records of performance tests and performance evaluations, as required in §63.10(b)(2)(viii).	The report shall contain: (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. *If there were no deviations from any applicable emission limitation or work practice standard*, a statement that there were no deviations from the standards during the reporting period and that no continuous opacity monitoring system or continuous emission monitoring system was inoperative, inactive, out-of-control, repaired, or adjusted; For each deviation from an emission limitation and for each deviation from the requirements for work practice standards that occurs at a source where you are *not* using a continuous emission monitoring system to comply with the emission limitation or work practice standard in this subpart, the compliance report must contain: (1) The total operating time of each affected source during the reporting period. (2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken. (3) Information on the number, duration, and cause for monitor downtime incidents (including unknown cause, if applicable, other than downtime associated with zero and span and other daily calibration checks). When actions taken to respond are not consistent with the startup, shutdown, malfunction plan, Tesoro must report these events and the response taken in the semiannual compliance report. Include a copy of any performance test done during the reporting period on any affected unit in the semiannual compliance report. A complete test report contains a process description; simplified flow diagram, control equipment, and sampling locations; sampling site data; 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. Any requested change in the applicability of an emission standard.

Table 5.4 Catalytic Cracking Unit (CCU), Product Fractionation, and Treating Process Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.4.18	40 CFR Part 63 Subpart UUU §63.1575(h) (4/11/02) & §63.1576 (2/9/05)	CCU: For startups, shutdowns, and malfunctions: Develop, maintain, and implement a startup, shutdown, malfunction plan.	Maintain records as specified in §63.6(e)(3). (1) When actions taken to respond are consistent with the plan, Tesoro is not required to report these events in the semiannual compliance report. (2) When actions taken to respond are not consistent with the plan, Tesoro must report these events and the response taken in the semiannual compliance report.
5.4.19	OAC 947 Condition 1 (12/19/05) NWCAA 455.1 (4/14/93) NWCAA 455.1 (5/11/95 *State only*) CAM	V-307 and V-308 exhaust shall be controlled by baghouses with maximum visible emissions not to exceed • **5% opacity** for more than three minutes in any consecutive sixty-minute period as determined by Washington State Department of Ecology Method 9A. Particulate matter emissions from V-307 and V-308 catalyst hopper vents shall not exceed • **0.10 grain PM/dscf** CAM Plan: A period of visible emissions lasting more than three minutes is an "excursion." Take corrective action if an excursion is observed. Develop and implement a Quality Improvement Plan in accordance with 40 CFR 64.8 if six or more excursions occur within any consecutive 12-month period for any of the catalyst hoppers.	A differential pressure gauge shall be installed on each baghouse. Acceptable differential pressure ranges shall be established by the manufacturer or through good engineering judgment and posted on or near the gauges. CAM Plan: Continuous compliance shall be demonstrated by qualitative visible emissions monitoring of the baghouse exhaust during catalyst transfers to V-307 or V-308. A log of catalyst transfer time and date and visible emission observations shall be kept by the facility, and available to the NWCAA upon request. Excess emissions from the V-307 and V-308 exhaust shall be reported to the NWCAA if any opacity is observed. Actions shall be taken to identify and correct the cause of excess emissions immediately. A written operation and maintenance (O/M) manual shall be developed for the baghouses and kept up-to-date. The O/M manual shall be consistent with the manufacturer's recommendations and shall include internal inspection schedules, maintenance requirements and operating procedures. The O/M manual shall be kept on-site and readily available for inspection by the NWCAA. The facility shall keep a (written or electronic) log of all maintenance and repair work performed on the baghouses. The log shall include, at minimum, any differential pressure gauge measurements, all external and internal inspections, any fabric filtration failures, repairs or replacements, the time and date that each activity was performed, and the name of the person performing the work.

Table 5.4 Catalytic Cracking Unit (CCU), Product Fractionation, and Treating Process Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.4.20	OAC 633a Condition 1 (3/6/06) NWCAA 455.1 (4/14/93) NWCAA 455.1 (5/11/95 *State only*) CAM	V-353 exhaust shall be controlled by a baghouse with maximum visible emissions not to exceed • **5% opacity** for more than three minutes in any consecutive sixty-minute period as determined by Washington State Department of Ecology Method 9A. Particulate matter emissions from V-353 catalyst hopper vents shall not exceed • **0.10 grain PM/dscf** CAM Plan: A period of visible emissions lasting more than three minutes is an "excursion." Take corrective action if an excursion is observed. Develop and implement a Quality Improvement Plan in accordance with 40 CFR 64.8 if six or more excursions occur within any consecutive 12-month period for any of the catalyst hoppers.	A differential pressure gauge shall be installed on each baghouse. Acceptable differential pressure ranges shall be established by the manufacturer or through good engineering judgment and posted on or near the gauges. CAM Plan: Continuous compliance shall be demonstrated by qualitative visible emissions monitoring of the baghouse exhaust during catalyst transfers to V-353. A log of catalyst transfer time and date and visible emission observations shall be kept by the facility, and available to the NWCAA upon request. Excess emissions from the V-353 exhaust shall be reported to the NWCAA if any opacity is observed. Actions shall be taken to identify and correct the cause of excess emissions immediately. A written operation and maintenance (O/M) manual shall be developed for the baghouses and kept up-to-date. The O/M manual shall be consistent with the manufacturer's recommendations and shall include internal inspection schedules, maintenance requirements and operating procedures. The O/M manual shall be kept on-site and readily available for inspection by the NWCAA. The facility shall keep a (written or electronic) log of all maintenance and repair work performed on the baghouses. The log shall include, at minimum, any differential pressure gauge measurements, all external and internal inspections, any fabric filtration failures, repairs or replacements, the time and date that each activity was performed, and the name of the person performing the work.

Table 5.4 Catalytic Cracking Unit (CCU), Product Fractionation, and Treating Process Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.4.21	OAC 946a Condition 1 (4/06/06) CAM	V-356 exhaust shall be controlled by a baghouse. Particulate matter emissions shall not exceed • **0.02 grains PM/dscf** nor • **5% opacity** (for more than 3 minutes in any consecutive sixty-minute period as measured by Washington State Department of Ecology Method 9A). CAM Plan: A period of visible emissions lasting more than three minutes is an "excursion." Take corrective action if an excursion is observed. Develop and implement a Quality Improvement Plan in accordance with 40 CFR 64.8 if six or more excursions occur within any consecutive 12-month period for any of the catalyst hoppers.	A differential pressure gauge shall be installed on each baghouse. Acceptable differential pressure ranges shall be established by the manufacturer or through good engineering judgment and posted on or near the gauges. CAM Plan: Continuous compliance shall be demonstrated by qualitative visible emissions monitoring of the baghouse exhaust during catalyst transfers to V-356. A log of catalyst transfer time and date and visible emission observations shall be kept by the facility, and available to the NWCAA upon request. Excess emissions from the V-356 exhaust shall be reported to the NWCAA if any opacity is observed. Actions shall be taken to identify and correct the cause of excess emissions immediately. A written operation and maintenance (O/M) manual shall be developed for the baghouses and kept up-to-date. The O/M manual shall be consistent with the manufacturer's recommendations and shall include internal inspection schedules, maintenance requirements and operating procedures. The O/M manual shall be kept on-site and readily available for inspection by the NWCAA. The facility shall keep a (written or electronic) log of all maintenance and repair work performed on the baghouses. The log shall include, at minimum, any differential pressure gauge measurements, all external and internal inspections, any fabric filtration failures, repairs or replacements, the time and date that each activity was performed, and the name of the person performing the work.

Table 5.4 Catalytic Cracking Unit (CCU), Product Fractionation, and Treating Process Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.4.22	OAC 308a Conditions 1 & 2 (10/14/09)	Amine Treatment Units - Sulfur Curtailment Plan: The facility shall submit and maintain current, a NWCAA-approved sulfur curtailment plan[5]. The plan shall delineate mitigating actions to be followed minimizing emissions of sulfur dioxide (SO2) and maintaining compliance with NWCAA emission standards during curtailment periods. When General Chemical curtails sulfur acceptance, the facility shall immediately implement the approved sulfur curtailment plan	*Directly enforceable* Report all sulfur curtailment events to the NWCAA in the monthly report in term 5.4.24 for refinery fuel gas CEMS data. For events potentially resulting in excess emissions, report to the NWCAA as promptly as possible, and in no event later than 12 hours. Report the steps taken to implement the H_2S Curtailment Plan.

[5] *The current plan was submitted on January 16, 2008 and approved by NWCAA on June 10, 2008.*

Table 5.4 Catalytic Cracking Unit (CCU), Product Fractionation, and Treating Process Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.4.23	OAC 827b Conditions 5, 6, 7, & 8 (6/2/09)	Amine Contactor C-501 outlet fuel gas shall not exceed • **162 ppmdv H_2S,** 24-hour average *Alternate demonstration of compliance* with this limit shall be that refinery fuel gas from V-213 shall not exceed • **400 ppmdv H_2S** on a rolling 24-hour average. When NHT high-pressure separator (HPS) vent gas is fully or partially diverted away from C-501, (to C-1110 or C-524), then the refinery fuel gas H_2S from V-213 shall not exceed 400 ppmdv on a rolling 24-hour average basis or the refinery fuel gas stream exiting the contactor(s) in use shall not exceed 162 ppmdv H_2S on a rolling 24-hour average basis (as measured by CEMS or by draeger tube sampling and analysis every 4 hours). The NHT HPS vent (that bypasses C-501) will be maintained in the closed position at all times except during periods of startup or shutdown of any of the amine contactors (C-501, C-1110, C-524), startup or shutdown of the CR/NHT, startup or shutdown of the cat feed hydrotreater/distillate hydrotreater (CFH/DHT) unit, or during unit upsets. Emissions as a result of the vent gas stream shall be minimized during these periods. The periods during which the NHT HPS vent gas stream is activated shall be recorded at the facility and made available to the NWCAA upon request.	Continuous emission monitor system(s) (CEMS) for H_2S concentration shall be installed, calibrated, maintained, and operated in the refinery fuel gas stream vented from the C-501 (and may be installed on C-524 and C-1110) amine contactor(s). The monitor(s) shall be maintained and certified in accordance with Performance Specification 7 (40 CFR 60 Appendix B) and operated in accordance with 40 CFR 60 Appendix F and NWCAA Regulation 367 and Appendix A. Alternately, H_2S concentration may be demonstrated using Draeger tube analysis at the outlet of the amine contactors, conducted every 4 hours for periods when monitoring is required and the CEMS are not available. V-213 outlet H_2S shall be monitored by CEMS in accordance with Term 5.3.24. After a period of time, if the results of the continuous emissions monitoring system establish that the amine contactor(s) consistently operate(s) well below the standards with minimal variability, the permittee may propose an alternative means for continuous assessment of H_2S emissions. The alternative method shall be submitted to the NWCAA for review and approval before implementation. Report to the NWCAA by the end of the month immediately following the end of the period indicated: Quarterly: The C-501 amine contactor maximum 24-hour concentration of H_2S or the corresponding refinery fuel gas (V-213) maximum 24-hour concentration of H_2S. If NHT HPS vent gas is being partially or fully diverted to C-1110 or C-524, then for those corresponding time periods, also report the refinery fuel gas (V-213) maximum 24-hour concentration of H_2S or the amine contactor outlet maximum 24-hour concentration of H_2S. Monthly: Any period during which any standard in this term is exceeded including the duration of the event, quantified excess emissions, cause of the event, and any corrective actions taken.

Table 5.4 Catalytic Cracking Unit (CCU), Product Fractionation, and Treating Process Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.4.24	OAC 952b Conditions1, 2, & 6 (3/3/09)	Fuel Gas Blend Drum V-213: Fuel gas shall not contain greater than • **0.10% by volume H_2S**, 365-day rolling average. A continuous emissions monitoring system (CEMS) for hydrogen sulfide concentration shall be installed, calibrated, maintained, and operated measuring the outlet stream of the fuel gas blend drum subsequent to all unmonitored incoming sources of sulfur compounds to the system and prior to any fuel gas combustion device.	The monitor shall be certified in accordance with 40 CFR Part 60 Appendix B and operated in accordance with 40 CFR Part 60 Appendix F and the NWCAA Regulation §367 and Appendix A. Monthly, within 30 days of the end of each calendar month, submit a CEMS summary report including the following: Dates, times, and causes of all periods that the CEMS did not function or operating parameters varied outside of established ranges during the preceding month, monthly H_2S and 365-day rolling H_2S average concentrations and monthly reporting requirements of 5.4.22. Comply with Section 2.1.10
5.4.25	OAC 952b Condition 3 (3/3/09)	PC5265A Acid Gas Bypass: Bypass of acid gas from the amine regenerator C-1120 system away from the normal processing flow to General Chemical shall be recorded and reported the NWCAA (i.e., any period that PC5265A is opened). A root-cause analysis shall be conducted and recorded for any bypass event.	Record any period that PC5265A is opened, and conduct and record root-cause analysis as per Section 2.4.3. Report events as per Section 2.4.7

5.5 Alkylation Area

Table 5.5 Alkylation Area			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
Note: The Title 40 CFR Part 63 General Provisions included in Section 3 apply to this affected source.			
5.5.1	40 CFR Part 63 Subpart CC §63.648 (8/18/98)	Alkylation Equipment Components: Implement the leak detection and repair program as listed in Table 6.2.	Comply with Table 6.2 LDAR requirements. *Directly Enforceable* VOC-service components shall be included in the unit LDAR program.

5.6 Butane Isomerization Area

Table 5.6 Butane Isomerization Process Area			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
Note: The Title 40 CFR Part 60 General Provisions included in Section 3 apply to this affected source.			
5.6.1	40 CFR Part 60 Subpart GGG §60.590 (6/2/08)	BI Equipment Components in VOC Service: Implement the leak detection and repair program as listed in Table 6.2.	Comply with Table 6.2 test method and MRR requirements.
5.6.2	40 CFR Part 63 Subpart CC §63.643(a)(1) & (b) (8/18/95) §63.644(a)(2) &(3) (8/18/98)	BI Unit Miscellaneous Group 1 Process Vent Reduce emissions of organic HAP's using a flare that meets the requirements of §63.11(b) or reduce emissions of organic HAP's using a control device, by 98% (wt), or to a concentration of 20 ppmv , on a dry basis, 3% O_2, whichever is less stringent. If a boiler or process heater is used to comply with the percentage of reduction requirement or concentration limit, then the vent stream shall be introduced into the flame zone of such a device, or in a location such that the required percent reduction or concentration is achieved.	Comply with flare monitoring requirements in Table 5.9 (flare area). Any boiler or process heater with a design heat input capacity greater than or equal to 44 megawatt or any boiler or process heater in which all vent streams are introduced into the flame zone is exempt from monitoring.
5.6.3	40 CFR Part 60 Subpart QQQ §60.690 (11/23/88)	BI Unit Individual Drain Systems Comply with 40 CFR Part 60 Subpart QQQ – Table 6.1 – *except* for individual drain systems regulated under Part 63 Subpart CC [63.640(o)].	Comply with Table 6.1

5.7 Storage, Blending, and Transfer Operations

Table 5.7 Storage, Blending, and Transfer Operations Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.7.1	40 CFR Part 63 Subpart CC §63.648 (8/18/98)	Tank Farms 1 & 2 (including blending and transfer operations) Equipment Components: Implement the leak detection and repair program as listed in Table 6.2.	Comply with Table 6.2 LDAR requirements. *Directly Enforceable* VOC-service components shall be included in the unit LDAR program.
5.7.2	NWCAA 580.8 (12/13/89)	LPG Storage and Loading Unit Equipment Components: Implement an LDAR program consistent with 40 CFR Part 60 Subpart GGG. Comply with Table 6.2.	Comply with Table 6.2 test method and MRR requirements.
5.7.3	40 CFR Part 60 Subpart QQQ §60.690 (11/23/88)	Wharf Hose Individual Drain System Comply with 40 CFR Part 60 Subpart QQQ – Table 6.1 – *except* for individual drain systems regulated under Part 63 Subpart CC [63.640(o)].	Comply with Table 6.1
Tanks 6, 7, 8, 9, 10, 11,12, 23, 25, 26, 33, 34, 35, 36, 41, 42, 43, 44, 56, 57, 87, 89, 91, 96, 97, 109, 113, 114, 115, 135, 138, 142, 148, 171, 247, 248, & 232 (MACT Group 2)			
5.7.4	40 CFR Part 63 Subpart CC §63.646 (2/21/97) *§63.119 (a)(3) (1/17/97)*	Group 2 storage tanks; Keep readily accessible records of the dimensions and capacities of each Group 2 storage vessel. Note: The 40 CFR Part 63 General Provisions in Section 3.3 apply to these affected sources.	Maintain records at the facility with dimensions and capacities.

Table 5.7 Storage, Blending, and Transfer Operations Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
Tanks 1, 2, 3, 4, 5, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 24, 27, 28, 29, 30, 31, 32, 60, 88, 90, 92, 134, 136, 165, 166 (MACT Group 1 – EFR)			
Note: The 40 CFR Part 63 General Provisions included in Section 3 apply to affected sources.			
5.7.5	NWCAA 560 (4/14/93)	Storage tanks holding petroleum liquids >40,000 gallons, or other organic liquids or solvents >6,000 gallons having a True Vapor Pressure >1.5 psi and <11.1 psi under actual storage conditions: 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* Maintain records demonstrating that the stored material has a maximum true vapor pressure (TVP) less than 11.1 pounds per square inch. Notify the NWCAA within 12 hours of discovering a maximum TVP in excess of 11.1 pounds per square inch. Maximum TVP shall be determined using the calendar month maximum average local temperature for ambient tanks or the maximum average monthly storage temperature for heated tanks.

Table 5.7 Storage, Blending, and Transfer Operations Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
Tanks 1, 2, 3, 4, 5, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 24, 27, 28, 29, 30, 31, 32, 60, 88, 90, 92, 134, 136, 165, 166			
5.7.6	NWCAA 580.32 (12/13/89) *40 CFR Part 60 Subpart Kb §60.112b(a)(2)(i) 10/8/97),* *§60.113b(b)(1), (2), (4)(i) and (4)(ii) (8/11/89)*	Tanks > 40,000 gallons storing VOC with a true vapor pressure as stored >1.5 pounds per square inch (psia), and <11.1 psia at calendar-month average storage temperatures: Both the primary and secondary seals shall completely cover the annular space between the external floating roof and the storage vessel wall, except for when necessary repairs are being made or the vessel is empty, as provided in 60.113b(b)(4). There should be no holes, tears, or other openings in the primary mechanical shoe, the primary or secondary seal fabric, or the seal envelope. 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. 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 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.	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.

Table 5.7 Storage, Blending, and Transfer Operations Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
Tanks 1, 2, 3, 4, 5, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 24, 27, 28, 29, 30, 31, 32, 60, 88, 90, 92, 134, 136, 165, 166			
5.7.7	40 CFR Part 63 Subpart CC §63.646 (2/21/97) *§63.119(c)(1)(iii) (1/17/97)* *§63.120(b)(1), (b)(2), (b)(4), (b)(5), (b)(6), (b)(9) (1/17/97)* §63.654 (h)(2)(ii) (8/18/98) *§63.123(d) and (g) (1/17/97)*	Group 1 Tanks with External Floating Roof: Except during inspections, both the primary and secondary seals shall completely cover the annular space between the external floating roof and the storage vessel wall. 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. 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 cm^2 per 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 cm^2 per 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.	Except when unsafe (as addressed in §63.120(b)(7)), measure for gaps between the vessel wall and the primary seal 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 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. Notify the NWCAA in writing at least 30 calendar days prior to gap testing. Keep records of the result of each seal gap measurement. Include the date of each measurement, the raw data obtained, and the calculations. 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.

Table 5.7 Storage, Blending, and Transfer Operations Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
Tanks 1, 2, 3, 4, 5, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 24, 27, 28, 29, 30, 31, 32, 60, 88, 90, 92, 134, 136, 165, 166			
5.7.8	40 CFR Part 63 Subpart CC §63.646 (2/21/97) *§63.120(b)(8) (1/17/97)* *§63.123(g) (12/23/04),* §63.654(g)(3) (8/18/98) NWCAA 580.32 (12/13/89) *40 CFR Part 60 Subpart Kb §60.113b(b)(4)(iii) (8/11/89) State only*	Group 1 Tanks with External Floating Roof 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.	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. *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 date of the seal gap measurement, the raw data obtained in the seal gap measurement and the gap calculations described in §63.120(b)(3) and (b)(4) of subpart G of this part, a description of any seal condition specified in §63.120(b)(5) or (b)(6) of subpart G of this part that is not met. A description of the nature of and date the repair was made, or the date the storage vessel was emptied.
5.7.9	NWCAA 580.32 (12/13/89) *40 CFR Part 60 Subpart Kb §60.113b(b)(6) (8/11/89)*	Tanks > 40,000 gallons storing VOC with a true vapor pressure as stored >1.5 pounds per square inch (psia), and <11.1 psia at calendar-month average storage temperatures 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.	Visually inspect the external floating roof, the primary seal, the secondary seal, and fittings each time the vessel is emptied and degassed.

Table 5.7 Storage, Blending, and Transfer Operations Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
Tanks 1, 2, 3, 4, 5, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 24, 27, 28, 29, 30, 31, 32, 60, 88, 90, 92, 134, 136, 165, 166			
5.7.10	40 CFR Part 63 Subpart CC §63.646 (2/21/97) *§63.120(b)(10)(i), (ii), and (iii) (1/17/97)* §63.654(g)(3)(iii) and §63.654(h) (2) (8/18/98)	Group 1 Tanks with External Floating Roof 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 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. 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.
5.7.11	40 CFR Part 63 Subpart CC §63.646 (2/21/97) *§63.119(c)(3) (1/17/97)* §63.646(f)(3) (2/21/97)	Group 1 Tanks with External Floating Roof 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 roof is resting on the leg supports.

Table 5.7 Storage, Blending, and Transfer Operations Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
Tanks 1, 2, 3, 4, 5, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 24, 27, 28, 29, 30, 31, 32, 60, 88, 90, 92, 134, 136, 165, 166			
5.7.12	NWCAA 580.32 (12/13/89) *40 CFR Part 60 Subpart Kb §60.112b(a)(2)(iii) (10/8/97)*	Tanks > 40,000 gallons storing VOC with a true vapor pressure as stored >1.5 pounds per square inch (psia), and <11.1 psia at calendar-month average storage temperatures: 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 roof is resting on the leg supports.
5.7.13	NWCAA 580.33 (12/13/89)	Tanks > 40,000 gallons storing VOC with a true vapor pressure as stored >1.5 pounds per square inch (psia), and <11.1 psia at calendar-month average storage temperatures: 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. Maximum TVP shall be determined using the calendar month maximum average local temperature for ambient tanks or the maximum average monthly storage temperature for heated tanks.

Table 5.7 Storage, Blending, and Transfer Operations Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.7.14	NWCAA Sections 580.93, 580.94,and 580.99 (all 12/13/89)	Tanks > 40,000 gallons storing VOC with a true vapor pressure as stored >1.5 pounds per square inch (psia) at calendar-month average storage temperatures: Tanks subject must 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. Maximum TVP shall be determined using the calendar month maximum average local temperature for ambient tanks or the maximum average monthly storage temperature for heated tanks.
Tanks 1, 2, 3, 4, 5, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 24, 27, 28, 29, 30, 31, 32, 60, 88, 90, 92, 134, 136, 165, 166			
5.7.15	NWCAA 580.95 (12/13/89)	Tanks > 40,000 gallons storing VOC with a true vapor pressure as stored >1.5 pounds per square inch (psia) at calendar-month average storage temperatures: 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 semiannually. 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.
5.7.16	40 CFR Part 63 Subpart CC §63.646(f)(1) (2/21/97)	Group 1 Tanks with External Floating Roof 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.	

Table 5.7 Storage, Blending, and Transfer Operations Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.7.17	NWCAA 580.34 (12/13/89)	Tanks > 40,000 gallons storing VOC with a true vapor pressure as stored >1.5 pounds per square inch (psia), and <11.1 psia at calendar-month average storage temperatures: All openings not related to safety are to be sealed with suitable closures.	Comply with MR&R in Term 5.7.15.
5.7.18	NWCAA 580.96 (12/13/89)	Tanks > 40,000 gallons storing VOC with a true vapor pressure as stored >1.5 pounds per square inch (psia) at calendar-month average storage temperatures: Keep automatic bleeder vents closed at all times except when the roof is floated off or landed on the roof leg supports.	

Table 5.7 Storage, Blending, and Transfer Operations Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
Tanks 1, 2, 3, 4, 5, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 24, 27, 28, 29, 30, 31, 32, 60, 88, 90, 92, 134, 136, 165, 166			
5.7.19	NWCAA 580.97 (12/13/89)	Tanks > 40,000 gallons storing VOC with a true vapor pressure as stored >1.5 pounds per square inch (psia) at calendar-month average storage temperatures: 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.
5.7.20	40 CFR Part 63 Subpart CC §63.646(f)(2) (2/21/97)	Group 1 Tanks with External Floating Roof 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.	
5.7.21	NWCAA 580.98 (12/13/89)	Tanks > 40,000 gallons storing VOC with a true vapor pressure as stored >1.5 pounds per square inch (psia) at calendar-month average storage temperatures: 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.

Table 5.7 Storage, Blending, and Transfer Operations Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
Tanks 1, 2, 3, 4, 5, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 24, 27, 28, 29, 30, 31, 32, 60, 88, 90, 92, 134, 136, 165, 166			
5.7.22	NWCAA 580.32 (12/13/89) *40 CFR Part 60 Subpart Kb §60.112b(a)(2)(ii) (10/8/97)*	Tanks > 40,000 gallons storing VOC with a true vapor pressure as stored >1.5 pounds per square inch (psia), and <11.1 psia at calendar-month average storage temperatures: 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 semiannually. 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.

Table 5.7 Storage, Blending, and Transfer Operations Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
# 37 –Tanks 202, 203, & 231 (NSPS-applicable External Floating Roof)			
Note: The 40 CFR Part 60 General Provisions included in Section 3 apply to these affected facilities.			
5.7.23	40 CFR Part 60 Subpart QQQ §60.690 (11/23/88)	Tanks 202, 203, & 231 Individual Drain Systems Comply with 40 CFR Part 60 Subpart QQQ – Table 6.1 – *except* for individual drain systems regulated under Part 63 Subpart CC [63.640(o)].	Comply with Table 6.1
5.7.24	NWCAA 560 (4/14/93) OAC 358a Condition 1 (10/14/09)	Storage tanks holding petroleum liquids >40,000 gallons, or other organic liquids or solvents >6,000 gallons having a True Vapor Pressure >1.5 psi and <11.1 psi under actual storage conditions: 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. The TVP of liquids stored in Tanks 202 and 203 shall not exceed 11.1 psia	*Directly enforceable* Perform MR&R required in the rest of this table for the subject vessels. Maintain records demonstrating that the stored material has a maximum true vapor pressure (TVP) less than 11.1 pounds per square inch. Maximum TVP shall be determined using the calendar month maximum average local temperature for ambient tanks or the maximum average monthly storage temperature for heated tanks.

Table 5.7 Storage, Blending, and Transfer Operations Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.7.25	40 CFR Part 60 Subpart Kb §60.112b(a)(2)(i) (10/8/97) §60.113b(b)(1), (2), (4)(i), (4)(ii), & (5) (8/11/89) §60.115b(b)(2) & (3) (4/8/87) NWCAA 580.32 (12/13/89)	<u>Tanks 202, 203, & 231 EFR Seal Coverage:</u> Both the primary and secondary seals shall completely cover the annular space between the external floating roof and the storage vessel wall, except for when necessary repairs are being made or the vessel is empty, as provided in 60.113b(4). There should be no holes, tears, or other openings in the primary mechanical shoe, the primary or secondary seal fabric, or the seal envelope. 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. For the primary seal, the accumulated area of gaps shall not exceed 212cm^2 per meter of tank diameter, and the width of any portion of any gap shall not exceed 3.81cm. For the secondary seal, the accumulated area of gaps shall not exceed 21.2cm^2 per meter of tank diameter and the width of any portion of any gap shall not exceed 1.27 cm.	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 in writing at least 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.

Table 5.7 Storage, Blending, and Transfer Operations Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.7.26	40 CFR Part 60 Subpart Kb §60.112b(a)(2)(ii) (10/8/97) NWCAA 580.32 (12/13/89)	Tanks 202, 203, & 231 EFR 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 semiannually. 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.
5.7.27	NWCAA 580.98 (12/13/89)	Tanks 202, 203, & 231 EFR Emergency Drains Provide roof drains with slotted membrane fabric covers or equivalent, which cover at least ninety percent of the area of the opening.	
5.7.28	40 CFR Part 60 Subpart Kb §60.112b(a)(2)(iii) (10/8/97) NWCAA 580.32 (12/13/89)	Tanks 202, 203, & 231 EFR 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 roof is resting on the leg supports.

Table 5.7 Storage, Blending, and Transfer Operations Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.7.29	40 CFR Part 60 Subpart Kb §60.113b(b)(4)(iii) (8/11/89) §60.115b(b)(4) (4/8/87) NWCAA 580.32 (12/13/89)	Tanks 202, 203, & 231 EFR Gap: 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.
5.7.30	40 CFR Part 60 Subpart Kb §60.113b(b)(6)(i) and (ii) (8/11/89) NWCAA 580.32 (12/13/89)	Tanks 202, 203, & 231 EFR Inspection 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.
5.7.31	40 CFR Part 60 Subpart Kb §60.116b(b) (10/15/03)	Tanks 202, 203, & 231 Dimensions and Capacities: Keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.	No MRR
5.7.32	40 CFR Part 60 Subpart Kb §60.116b(c) and (e) (10/15/03)	Tanks 202, 203, & 231 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 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.

Table 5.7 Storage, Blending, and Transfer Operations Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.7.33	NWCAA 580.33 (12/13/89)	Tanks 202, 203, & 231 EFR 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.
5.7.34	NWCAA Sections 580.93, 580.94,and 580.99 (all 12/13/89)	Tanks 202, 203, & 231 EFR: 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.
5.7.35	NWCAA 580.95 (12/13/89)	Tanks 202, 203, & 231 EFR: 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 semiannually. 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.
5.7.36	NWCAA 580.34 (12/13/89)	Tanks 202, 203, & 231 EFR: All openings not related to safety are to be sealed with suitable closures.	

Table 5.7 Storage, Blending, and Transfer Operations Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.7.37	NWCAA 580.96 (12/13/89)	Tanks 202, 203, & 231 EFR Automatic Bleeder Vents: Keep closed at all times except when the roof is floated off or landed on the roof leg supports.	*Directly enforceable* Visually inspect annually for damage and pressure setting.
5.7.38	NWCAA 580.97 (12/13/89)	Tanks 202, 203, & 231 EFR Rim Vents Shall be set to open when the roof is being floated off the leg supports or at the manufacturer's recommended setting.	
Tanks 39, 40, and 161 (Internal floating roof - slop oil/oily wastewater tanks)			
Note: The Title 40 CFR Part 61and Part 63 General Provisions included in Section 3 apply to affected sources			
5.7.39	NWCAA 560 (4/14/93)	Storage tanks holding petroleum liquids >40,000 gallons, or other organic liquids or solvents >6,000 gallons having a True Vapor Pressure of >1.5 psi and <11.1 psi under actual storage conditions: 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* Maintain records demonstrating that the stored material has a maximum true vapor pressure (TVP) less than 11.1 pounds per square inch. Notify the NWCAA within 12 hours of discovering a maximum TVP in excess of 11.1 pounds per square inch. Maximum TVP shall be determined using the calendar month maximum average local temperature for ambient tanks or the maximum average monthly storage temperature for heated tanks.

Table 5.7 Storage, Blending, and Transfer Operations Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.7.40	NWCAA 580.32 (12/13/89) *40 CFR Part 60 Subpart Kb §60.112b(a)(2)(ii) (10/8/97)*	Tanks 39, 40, and 161 > 40,000 gallons storing VOC with a true vapor pressure as stored >1.5 pounds per square inch (psia), and <11.1 psia at calendar-month average storage temperatures: tanks shall meet the internal floating roof equipment specifications and maintenance requirements of 40 CFR Part 60 Subpart Kb.	Comply with MR&R in term 5.7.43
5.7.41	NWCAA 580.33 (12/13/89)	Tanks 39, 40, and 161 > 40,000 gallons storing VOC with a true vapor pressure as stored >1.5 pounds per square inch (psia), and <11.1 psia at calendar-month average storage temperatures: All seals are to be maintained in good operating condition and the seal fabric shall contain no visible holes, tears, or other openings.	Comply with MR&R in term 5.7.43
5.7.42	40 CFR Part 61 Subpart FF §61.351 (9/10/90) 40 CFR Part 63 Subpart CC §63.647 (8/18/95) §63.654(a) (8/18/98)	Tanks 39, 40, and 161 receiving wastes in accordance with §61.342 (c)(1)(ii): Alternative Standards: Tanks shall meet the internal floating roof requirements in 40 CFR Part 60 Subpart Kb §60.112b(a)(1).	Comply with MR&R in term 5.7.43

Table 5.7 Storage, Blending, and Transfer Operations Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.7.43	40 CFR Part 61 Subpart FF §61.351 (9/10/90) §61.356(k) (11/12/02) *40 CFR Part 60 Subpart Kb §60.112b(a)(1)(i) and (ii) (10/8/97)* *§60.113b(a)(2) and (a)(5) (8/11/89).* *§60.115b(a)(2) and (a)(3) (4/8/87)* 40 CFR Part 63 Subpart CC §63.647 (8/18/95) §63.654(a) (8/18/98)	<u>Tanks 39, 40, and 161 - Group 1 tanks with Internal Floating Roof:</u> The internal floating roof shall rest or float 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 (iii) when the vessel is completely emptied before being subsequently refilled. When the floating roof is resting on the leg supports, filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible. The internal floating roof shall be equipped with two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. If the internal floating roof is not resting on the surface, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, repair the items or empty and remove the storage vessel from service within 45 days. If a failure detected during inspections cannot be repaired within 45 days and the vessel cannot be emptied within 45 days, a 30-day extension may be requested. Such a request must document that alternate storage capacity is unavailable and specify a schedule that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.	Annually, conduct a visual inspection of the internal floating roof and seal system through manholes and roof hatches. The inspection shall document any conditions where: • the floating roof is not resting on the VOL surface • there is liquid accumulated on the floating roof • a seal is detached or there are holes or tears in the seal fabric Keep a record of each inspection that includes the tank number, date and any defects discovered. Submit in the Periodic Report the date and description of any defects found and corrective action taken. The report shall include any decision to use a delay of repair extension and documentation that alternate storage capacity was unavailable and that repair was completed as soon as possible.

Table 5.7 Storage, Blending, and Transfer Operations Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.7.44	40 CFR Part 61 Subpart FF §61.351 (9/10/90) §61.356(k) (11/12/02) *40 CFR Part 60 Subpart Kb §60.112b(a)(1)(i) (10/8/97)* *§60.113b(a)(4) and (5) (8/11/89)* *§60.115b(a)(2) (4/8/87)* 40 CFR Part 63 Subpart CC §63.647 (8/18/95) §63.654(a) (8/18/98)	Tanks 39, 40, and 161 - Group 1 tanks with Internal Floating Roof: If, during the inspection after degassing, the internal floating roof has defects, the primary seal or seal fabric has holes, tears, or other openings, the gaskets no longer closes off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10% open area, repair as necessary so that none of these conditions exist before refilling the storage vessel with VOL.	Visually inspect the internal floating roof, the primary seal, the gaskets, the slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. Notify the NWCAA in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required. If the inspection is unplanned, the notification may be made verbally at least 7 days prior to refilling followed immediately by written notification. Keep a record of each inspection identifying the storage vessel, the inspection date, and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings). If the inspection after degassing finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects, a report shall be furnished to the NWCAA within 30 days of inspection. The report shall identify the storage vessel and the reason it did not meet the specifications, and list each repair made.
5.7.45	NWCAA 580.34 (12/13/89)	Tanks 39, 40, and 161 > 40,000 gallons storing VOC with a true vapor pressure as stored >1.5 pounds per square inch (psia), and <11.1 psia at calendar-month average storage temperatures: All openings not related to safety are to be sealed with suitable closures.	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.
5.7.46	40 CFR Part 61 Subpart FF §61.351 (9/10/90) *40 CFR Part 60 Subpart Kb §60.112b(a)(1)(iv) (10/8/97)* 40 CFR Part 63 Subpart CC §63.647 (8/18/95)	Tanks 39, 40, and 161 - Group 1 tanks with Internal Floating Roof: Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.	

Table 5.7 Storage, Blending, and Transfer Operations Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.7.47	40 CFR Part 61 Subpart FF §61.351 (9/10/90) *40 CFR Part 60 Subpart Kb §60.112b(a)(1)(v) (10/8/97)* 40 CFR Part 63 Subpart CC §63.647 (8/18/95)	Tanks 39, 40, and 161 - Group 1 tanks with Internal Floating Roof: Equip automatic bleeder vents with a gasket and close 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 internal roof is resting on the legs supports.
5.7.48	40 CFR Part 61 Subpart FF §61.351 (9/10/90) *40 CFR Part 60 Subpart Kb §60.112b(a)(1)(vi) (10/8/97)* 40 CFR Part 63 Subpart CC §63.647 (8/18/95)	Tanks 39, 40, and 161 - Rim Space Vents Equip with a gasket and set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting.	*Directly enforceable* Comply with MR&R in Terms 5.7.44
5.7.49	40 CFR Part 61 Subpart FF §61.351 (9/10/90) *40 CFR Part 60 Subpart Kb §60.112b(a)(1)(vii) (10/8/97)* 40 CFR Part 63 Subpart CC §63.647 (8/18/95)	Tanks 39, 40, and 161 - 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* Comply with MR&R in Terms 5.7.44

Table 5.7 Storage, Blending, and Transfer Operations Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.7.50	40 CFR Part 61 Subpart FF §61.351 (9/10/90). *40 CFR Part 60 Subpart Kb §60.112b(a)(1)(viii) (10/8/97)* 40 CFR Part 63 Subpart CC §63.647 (8/18/95)	Tanks 39, 40, and 161 - 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.	*Directly enforceable* Comply with MR&R in Terms 5.7.44.
5.7.51	40 CFR Part 61 Subpart FF §61.351 (9/10/90). *40 CFR Part 60 Subpart Kb §60.112b(a)(1)(ix) (10/8/97)* 40 CFR Part 63 Subpart CC §63.647 (8/18/95)	Tanks 39, 40, and 161 - 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* Comply with MR&R in Terms 5.7.44.
5.7.52	40 CFR Part 60 Subpart UU §60.472(c) (10/17/00) and §60.474(c)(5) (10/17/00)	Opacity from Storage Tanks 247 &248; Opacity from storage tank exhaust shall not exceed 0%, except for one consecutive 15-minute period in any 24-hour period when the transfer lines are being blown for clearing.	*Directly enforceable* Monitor semiannually, by observing the vents qualitatively for any visible emissions with sun behind the observer during asphalt transfer. Observed opacity shall be quantified according to 40 CFR Part 60 Appendix A Method 9. Record results of inspections, periods of visible emissions monitored by facility personnel, any related equipment or operational failure, the occurrence dates and the action taken to resolve the problem(s). Retain records for NWCAA inspection.

Table 5.7 Storage, Blending, and Transfer Operations Areas			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.7.53	OAC 649b Condition 2 (10/14/09)	Opacity from asphalt loading Opacity from the truck and rail car racks and from the barge loading of asphalt will not exceed 20%, three-minute average, at any time.	*Directly enforceable* Comply with MR&R in term 5.7.52
5.7.54	40 CFR Part 60 Subpart QQQ §60.690 (11/23/88)	Tanks 247 & 248 Individual Drain Systems Comply with 40 CFR Part 60 Subpart QQQ – Table 6.1 – *except* for individual drain systems regulated under Part 63 Subpart CC [63.640(o)].	MR&R in Table 6.1

5.8 Utilities Plant

Table 5.8 Utilities Plant			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.8.1	OAC 989a Condition 2 (3/3/09) OAC 1031 Condition 2 (1/20/09)	F-751, F-752, F-101, F-102, F-103, and F-201: Total fuel oil combustion facility-wide shall not exceed • **432 barrels per day** (rolling 365-day average)	Record fuel oil use for all combustion devices: Daily total and 30-day rolling average fuel oil use for each unit Monthly, report facility fuel oil use and monthly average sulfur content
5.8.2	OAC 952b Condition 5 (3/3/09) OAC 989a Condition 2 (3/3/09)	Boilers F-751, F-752, and F-753: Quarterly emissions report to the NWCAA	Report quarterly: a) Monthly total and 12-month rolling total heat input and steam production, b) Monthly total and 12-month rolling total NO_X emissions for F-751, F-752, and F-753
5.8.3	40 CFR Subpart Db §60.49b(d) (3/13/00)	F-753 annual capacity factor: The annual capacity factor is determined on a 12-month rolling average basis with a new factor calculated at the end of each calendar month. Note: 40 CFR Part 60 Subpart A General Provisions (Section 3.1) apply to this affected facility	Record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for each fuel for the reporting period. Semiannually, within 31 days of the end of the six-month period, submit a report to the NWCAA summarizing all daily reports.
5.8.4	40 CFR Subpart J §60.104(a)(1) (6/24/08)	F-753 fuel H_2S limitation: fuel gas shall not exceed • **230 mg H_2S/dscm (0.10 gr H_2S/ dscf)**, 3-hour rolling average	Monitor, keep records, and report as per the Alternative Monitoring Plan included in Section 7.

Table 5.8 Utilities Plant			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.8.5	OAC 390e Condition 1 (12/19/07)	F-753 Visible Emissions shall not exceed • **5% opacity** for more than six minutes in any one-hour period.	*Directly enforceable* If visible emissions are observed, emissions shall be reduced to zero as soon as possible. The source may monitor by 40 CFR Part 60 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. EPA 40 CFR Part 60 Appendix A Method 9
5.8.6	OAC 390e Conditions 2, 3, 4, 6, & 7 (12/19/07)	F-753 Nitrogen Oxide Limitation: NO_x emissions shall not exceed • **0.06 lb NO_X/MMBtu** (30-day average).	A continuous emissions monitor system (CEMS) shall be used to measure NO_X emissions from the F-753 stack. The CEMS shall meet 40 CFR Part 60 Appendix B Performance Specification B and the quality control procedures in 40 CFR Part 60 Appendix F and NWCAA Regulation 367 and Appendix A. Comply with section 2.1.10. Stack testing according to 40 CFR Part 60, Appendix A Method 7E may be required by NWCAA. Continuous emission monitoring reports shall be submitted monthly to NWCAA, by the end of the following calendar month, and shall include the following information: The reason and duration of any monitor down time and corrective action planned or taken, results of any stack emission tests or quality assurance tests, and periods of excessive drift. For each occurrence of monitored emissions in excess of the standard the report shall include the following: time of the occurrence, magnitude of the emission excess (concentration and mass), duration of the excess, probable cause, corrective actions taken or planned, and agencies notified.
5.8.7	OAC 390e Condition 5 (12/18/07)	F-753 shall combust only purchased natural gas or propane.	No MR&R

Table 5.8 Utilities Plant			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.8.8	OAC 768 Condition 2 (5/15/01)	Utilities Emergency Generator: shall not operate > 200 hours per year, including test time.	Annual records of the number of operating hours shall be recorded and made available to the NWCAA upon request.
5.8.9	OAC 768 Condition 3 (5/15/01)	Utilities Emergency Generator: shall burn only low sulfur diesel fuel • **0.05 wt%** maximum sulfur content	A fuel specification sheet from the fuel supplier shall be made available to NWCAA personnel upon request.
5.8.10	OAC 768 Condition 1 (5/15/01)	Utilities Emergency Generator: shall not exceed: • **5% opacity** for more than 6 minutes	*Directly enforceable* Visually observe the stack on a daily basis (for days with operation) to qualitatively assess whether emissions are visible. The frequency may be reduced to weekly if no visible emissions are observed for thirty consecutive days 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, emissions shall be reduced to zero as soon as possible. The source may monitor by 40 CFR Part 60 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. EPA 40 CFR Part 60 Appendix A Method 9

5.9 Flare Area

Table 5.9 Flare Area			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
Note: The Title 40 CFR Part 60 and 63 General Provisions included in Section 3 will apply to this affected source.			
5.9.1	40 CFR Part 63 Subpart CC §63.648 (8/18/98) *40 CFR Part 60 Subpart VV §60.482-10 (f), (g), (h), (j) & (l)* *§60.486(c) & (d)* *(12/14/2000)*	Flare Area equipment components: • Leak definition = 5**00 ppm** Leaks shall be repaired as soon as practicable . A first attempt at repair shall be made no later than **5 calendar days** after the leak is detected. Repair shall be completed no later than **15 calendar days** after the leak is detected. Delay of repair of a closed vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown or if the owner or operator determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next process unit shutdown. Vapor collection systems or closed vent systems operated under a vacuum, difficult or unsafe to inspect (no more than 3% of the total number of system components) are exempt from the inspection requirements.	If the vapor collection system or closed vent system is constructed of hard-piping, the owner or operator shall: Conduct annual visual inspections for visible, audible, or olfactory indications of leaks. For each visual inspection during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected. If the vapor collection system or closed vent system is constructed of ductwork, the owner or operator shall: Conduct annual monitoring in accordance with and using an instrument meeting the performance criteria of 40 CFR Part 60 Appendix A Method 21. For each inspection during which a leak is detected record: (1) instrument and operator identification numbers and the equipment identification number (2) date the leak was detected and the dates of each attempt to repair the leak (3) Repair methods applied in each attempt to repair the leak (4) “Above 10,000” if the maximum instrument reading measured by the methods specified in §60.485(a) after each repair attempt is equal to or greater than 10,000 ppm (5) “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak (6) The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown (7) The expected date of successful repair of the leak if a leak is not repaired within 15 days (8) Dates of process unit shutdowns that occur while the equipment is unrepaired. (9) The date of successful repair of the leak 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 the equipment.

Table 5.9 Flare Area			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
Flare Gas Recovery Compressor J-887-M			
5.9.2	40 CFR Part 63 Subpart CC §63.648 (8/18/98) OAC 725b Condition 1 (7/10/07) *40 CFR Subpart H §63.164(a), (b), (c), (d), (e)(1), (f), and (g) (4/26/99)* *§63.654 (8/18/98),* *§63.181(b)(1) (4/26/99)* *§63.182(d) (1/17/97)*	Compressor J-887-M: Equip with a seal system that includes a barrier fluid system that prevents leakage of process fluid. The barrier fluid pressure shall be greater than the compressor stuffing box pressure. The barrier fluid system shall not be in light liquid service. Equip the barrier fluid system with a sensor that will detect failure of the seal system, barrier fluid system, or both. Each sensor shall be observed daily or shall be equipped with an alarm. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, unless a delay of repair is required. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.	Monitor barrier fluid flow sensor daily. If the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected. Maintain records of sensor monitoring. Submit, semiannually, a report for the compressor if a leak was detected, and an indication if the leak was not repaired. The first periodic report shall cover the first 6 months after startup.
5.9.3	40 CFR Part 63 Subpart CC §63.648 (8/18/98) OAC 725b Condition 1 7/10/07) *40 CFR Subpart H §63.162(c) (1/17/97)* *§63.181(b)(1)(i) (4/26/99).*	Compressor J-887-M Equipment Identification Each piece of equipment to which Subpart H applies shall be identified such that it can be distinguished readily from equipment that is not subject to this subpart. Identification of the equipment does not require physical tagging.	Record the identification number for equipment subject to the requirements of this subpart.
5.9.4	40 CFR Part 63 Subpart CC §63.648 (8/18/98), OAC 725b Condition 1 (7/10/07) *40 CFR Subpart H §63.162(f) (1/17/97)*	Compressor J-887-M Leak Identification When a leak is detected, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.	Record the identification number for equipment marked as leaking.

Table 5.9 Flare Area			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.9.5	40 CFR Part 63 Subpart CC §63.648 (8/18/98) OAC 725b Condition 1 (7/10/07) *40 CFR Subpart H §63.171 (12/14/00)* *§63.182(d) (1/17/97)*	Compressor J-887-M 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.
5.9.6	40 CFR Part 63 Subpart CC §63.654 (8/18/98) *40 CFR Subpart H §63.181(a) (4/26/99)*	Compressor J-887-M All records and information shall be maintained in a manner than can be readily accessed at the plant site.	No MR&R
Flares X-819, X-813, and X-814			
Note: The Title 40 CFR Part 63 General Provisions included in Section 3 will apply to this affected source.			
5.9.7	40 CFR Part 63 Subpart CC §63.644(a)(2) & (e) (8/18/98)	Flares X-819, X-813, and X-814: Flares shall be operated with a flame present at all times. Monitor flares to assure continuous presence of a pilot flame and that the flares are operated and maintained in conformance with their designs.	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).

Table 5.9 Flare Area			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.9.8	40 CFR Part 63 Subpart CC §63.643(a)(1) (8/18/95) *40 CFR Part 63 Subpart A §63.11(b)(1), (3), & (5) (12/22/08)*	Group 1 miscellaneous process vents shall be routed to a flare that meets the requirements of §63.11(b). <u>Flares X-819, X-813, and X-814:</u> Flares shall be operated at all times when emissions may be vented to them. Flares shall be operated with a flame present at all times. 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.	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).
5.9.9	40 CFR Part 63 Subpart CC §63.643(a)(1) (8/18/95) *40 CFR Part 63 Subpart A §63.11(b)(4) (12/22/08)*	Group 1 miscellaneous process vents routed to the flare system shall use a flare that meets the requirements of §63.11(b) <u>Flares X-819, X-813, and X-814:</u> 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.	40 CFR Part 60 Appendix A Method 22 – *No specific periodic monitoring.*
5.9.10	40 CFR Part 63 Subpart CC §63.648 (8/18/98) *40 CFR Part 60 Subpart VV §60.482-10(m) (12/14/00) & §60.485(g)(1) & (2) (11/16/07)* *40 CFR Part 60 Subpart A §60.18(c), (e), and (f) (12/22/08)*	<u>Flares X-819, X-813, and X-814:</u> 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. Flares shall be operated at all times when emissions may be vented to them.	Monitor the flare pilot flame using a thermocouple or any equivalent device to detect the presence of a flame. 40 CFR Part 60 Appendix A Method 22 – *No specific periodic monitoring.*

Table 5.9 Flare Area			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.9.11	40 CFR Part 63 Subpart CC §63.643(a)(1) (8/18/95), §63.648 (8/18/98) *40 CFR Part 63 Subpart A §63.11(b)(6) (10/17/00).* *40 CFR Part 60 Subpart VV §60.485(g)(4) (11/16/07)* *40 CFR Part 60 Subpart A §60.18(c)(3)(ii) (12/22/08)*	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), which is identical to the equations in 60.18(f)(3) and 60.485(g)(4).	Maintain records of determinations.
5.9.12	40 CFR Part 63 Subpart CC §63.644(a)(2) (8/18/98) *40 CFR Part 63 Subpart A §63.11(b)(7)(i) (10/17/00)* *40 CFR Part 60 Subpart VV §60.485(g)(7) (11/16/07)* *40 CFR Part 60 Subpart A §60.18(c)(4) (12/22/08)*	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)(ii), 60.18(c)(4)(iii) and 60.485(g)(7).	Maintain records of determinations.
5.9.13	40 CFR Part 63 Subpart CC §63.643(a)(1) (8/18/95), §63.648 (8/18/98) *40 CFR Part 63 Subpart A §63.11(b)(7)(ii) (10/17/00)* *40 CFR Part 60 Subpart VV §60.485(g)(7) (11/16/07)* *40 CFR Part 60 Subpart A §60.18(c)(4)(ii) (12/22/08)*	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 (1,000 Btu/scf).	

Table 5.9 Flare Area			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.9.14	40 CFR Part 63 Subpart CC §63.643(a)(1) (8/18/95), §63.648 (8/18/98) *40 CFR Part 63 Subpart A §63.11(b)(7)(iii) (10/17/00)* *40 CFR Part 60 Subpart VV §60.485(g)(7) (11/16/07)* *40 CFR Part 60 Subpart A §60.18(c)(4)(iii) (12/22/08)*	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.	Maintain records of determinations.
5.9.15	40 CFR Part 63 Subpart CC §63.644(a) (8/18/98) §63.654(g)(6) (8/18/98)	Monitoring Provisions for Flares Used as Combustion Devices for Miscellaneous Process Vent Control All monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturer's specifications or other written procedures.	Submit a Periodic Report no later than 60 days after the end of each 6-month period when a compliance exception occurs. The first 6-month period shall begin on the date the Notification of Compliance Status was due [January 15, 1999]. Record and report in a Periodic Report each occurrence when the flare does not meet the general control device requirements specified in 63.11(b) and shall include: Identification of the flare that does not meet the general requirements specified in 63.11(b), and reasons why the flare did not meet these requirements. Periods that constitute a startup, shutdown, or malfunction, as those terms are defined in 63.641 and 63.2, are exempt from reporting. Note that the recording requirements are not exempted.
5.9.16	40 CFR Part 63 Subpart CC §63.644(e) (8/18/98) §63.654(g)(6) (8/18/98)	Operation Operate a subject control device in a manner consistent with the minimum and/or maximum operating parameter value or procedure required to be monitored under paragraphs (a) and (b) of this section. Operation of the control device in a manner that constitutes a period of excess emissions, defined in §63.654(g)(6)(b) as an operating day when all pilot flames of a flare are absent, or failure to perform procedures required by this section shall constitute a violation of the applicable emission standard of this subpart.	

5.10 Oily Wastewater/Benzene Waste Collection and Treatment

Table 5.10 Oily Wastewater/ Benzene Waste Collection and Treatment			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.10.1	40 CFR Part 61 Subpart FF §61.342(c)(1), (2), & (3)(ii), §61.357(d) (10/17/00) 40 CFR Part 63 Subpart CC §63.647 (8/18/95) §63.654(a) (8/18/98)	For waste streams containing benzene, manage the waste stream in accordance with §§61.343 through 347 and remove or destroy the benzene contained in the waste using a treatment process, or wastewater treatment system that complies with the standards of this subpart. A waste stream may be exempted from the control requirements provided all the following conditions are met: the stream is not exempted as process wastewater with a flow rate less than 0.02 l/min or waste quantity < 10 Mg; 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** as determined per §61.355(a); and all wastes are counted in the year the waste is generated.	Maintain records of measurements of benzene concentration, flow-weighted benzene concentrations, and annual flow rates for subject waste streams, including those chosen for exemption. A waste stream is exempt from paragraph (c)(1) of this section provided that the owner or operator demonstrates at least once per year that the flow-weighted annual average benzene concentration for the waste stream is less than 10 ppmw as determined by the procedures specified in §61.355(c)(2) or §61.355(c)(3) - US EPA Publication No. SW-846 Method 8260b. A waste stream is exempt from paragraph (c)(1) of this section provided that the owner or operator demonstrates at least once per year that all of the following conditions are met: (A) The owner or operator does not choose to exempt process wastewater under paragraph (c)(3)(i) of this section, (B) The total annual benzene quantity in all waste streams chosen for exemption in paragraph (c)(3)(ii) of this section does not exceed 2.0 Mg/yr (2.2 ton/yr) as determined in the procedures in §61.355(j), and (C) The total annual benzene quantity in a waste stream chosen for exemption, including process unit turnaround waste, is determined for the year in which the waste is generated.

Table 5.10 Oily Wastewater/ Benzene Waste Collection and Treatment			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.10.2	40 CFR Part 61 Subpart FF §61.355, & §61.357(d) (10/17/00) 40 CFR Part 63 Subpart CC §63.647 (8/18/95) & §63.654(a) (8/18/98)	<u>Total Annual Benzene Quantity:</u> Update the annual benzene quantity for each waste stream at the facility that has a flow-weighted annual average water content greater than 10 percent or that is mixed with water, or other wastes, at any time and the mixture has an annual average water content greater than 10 percent. The benzene quantity in a waste stream is to be counted only once without multiple counting if other waste streams are mixed with or generated from the original waste stream. Update for each waste stream the annual waste quantity and the flow-weighted annual average benzene concentration at the point of waste generation.	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 representing the waste stream characteristics based on current configuration and operating conditions 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.

Table 5.10 Oily Wastewater/ Benzene Waste Collection and Treatment			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.10.3	40 CFR Part 61 Subpart FF §61.356(b) (11/12/02) 40 CFR Part 63 Subpart CC §63.654(a) (8/18/98)	Benzene Waste Stream Identification Maintain records identifying each waste stream subject to Subparts FF and indicate whether the streams are controlled.	For each waste stream not controlled for benzene emissions in accordance with this subpart, the records shall include all test results, measurements, calculations, and other documentation used to determine the following information for the waste stream: waste stream identification, water content, whether or not the waste stream is a process wastewater stream, annual waste quantity, range of benzene concentrations, annual average flow-weighted benzene concentration, 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.
5.10.4	40 CFR Part 61 Subpart FF 61.355(b)(4) (10/17/00) 40 CFR Part 63 Subpart CC §63.647 (8/18/95) & §63.654(a) (8/18/98)	Process Unit Turnaround Waste For waste generated at two year or greater intervals *and* not exempted under 61.342(c)(3), determine the annual waste quantity 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. Include the resulting annual waste quantity in the annual benzene waste quantity calculation for the year in which the turnaround occurs and for each subsequent year until the unit undergoes the next process turnaround.	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.

Table 5.10 Oily Wastewater/ Benzene Waste Collection and Treatment			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.10.5	40 CFR Part 61 Subpart FF §61.346 (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) 40 CFR Part 63 Subpart CC §63.647 (8/18/95) & §63.654(a) (8/18/98)	Individual Drain Systems in which waste is placed in accordance with §61.342(c)(1)(ii) – Install, operate, and maintain on each drain system opening (including junction boxes, and sewer lines) covers and closed-vent system that routes all organic vapors from the drain system to a control device except during waste sampling or removal, equipment inspection, maintenance or repair. 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. Or each drain shall be equipped with water seal controls or a tightly sealed cap or plug. Junction box vent pipes shall be equipped to prevent the flow of organic vapors during normal operation. 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 closed vent systems in accordance with 40 CFR part 60 Appendix A Method 21. 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 gaskets installed 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 records of engineering design documentation for the life of the control equipment and for each visual inspection that identifies a problem (such as a broken seal, gap, or other problem) that could result in benzene emissions. - *Directly enforceable below* - Inactive drains controlled by water seals shall be inspected weekly. 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 emissions (including water seal is dry or otherwise breached) record the location, date, and corrective action. If low water levels or other conditions that would reduce the effectiveness of the seal are indentified, water shall be added, and/or other efforts to repair shall be made as soon as practical, but not later than 24 hours after detection.

Table 5.10 Oily Wastewater/ Benzene Waste Collection and Treatment			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.10.6	40 CFR Part 61 Subpart FF 61.347 (1/7/93) §61.350 (3/7/90) §61.355(h) (10/17/00) §61.356(d), (g), and (h) (11/12/02) §61.357(d)(6) and (d)(8) (10/17/00) 40 CFR Part 63 Subpart CC §63.647 (8/18/95) §63.654(a) (8/18/98)	Oil-Water Separators: API Separator (X-701), Sludge Thickener (X-715), Primary Clarifiers (X-702 and X-703), Clarifier Sludge Reservoir (X-708) Install, operate, and maintain a fixed-roof and closed-vent system that routes all organic vapors vented from the oil-water separator 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, gasket, or other problem is identified, 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 in accordance with 40 CFR Part 60 Appendix A Method 21. 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 between the cover and oil-water separator and openings 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 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.

Table 5.10 Oily Wastewater/ Benzene Waste Collection and Treatment			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.10.7	40 CFR Part 61 Subpart FF 61.349(a)(1)(i), (ii), (iii) and (iv) (10/17/00) §61.354(f) (10/17/00) §61.355(h) (10/17/00) §61.356(a), (h) (11/12/02) §61.357(d)(6) (10/17/00) 40 CFR Part 63 Subpart CC §63.647 (8/18/95) §63.654(a) (8/18/98)	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 in accordance with 40 CFR Part 60 Appendix A Method 21. 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 bypass line valve(s), checking the position of the valve and the condition of the car-seal to ensure that the valve is maintained in the closed position. Maintain a record of the inspections. Quarterly, submit a certification to the NWCAA that the required inspections have been carried out.

Table 5.10 Oily Wastewater/ Benzene Waste Collection and Treatment			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.10.8	40 CFR Part 61 Subpart FF 61.349(a)(2)(ii) and (c)(1) and (h) (10/17/00) §61.354(d) (10/17/00). §61.356(a), (f)(2), and (j) (11/12/02) 40 CFR Part 63 Subpart CC §63.647 (8/18/95) §63.654(a) (8/18/98)	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 in accordance with 40 CFR Part 60 Appendix A Method 21 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: (1) 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 including all periods and the duration when any valve car-seal or closure mechanism is broken or the bypass line valve position has changed. Maintain records of dates and times of monitoring, when breakthrough is measured and the date and time when the existing carbon is replaced.

Table 5.10 Oily Wastewater/ Benzene Waste Collection and Treatment			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.10.9	40 CFR Part 63 Subpart CC §63.647 (8/18/95) §63.654(a) (8/18/98) 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)	<u>Closed-Vent System and Control Device</u> Operate the closed-vent system and control device at all times except during maintenance or repair of the waste management unit when the repair 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 identification. 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 visible defects such as holes 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.

Table 5.10 Oily Wastewater/ Benzene Waste Collection and Treatment			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.10.10	40 CFR 61 Subpart FF 61.345(a), (b), and (c) (12/4/03) §61.350 (3/7/90) §61.355(h) (10/17/00) §61.356 (g) and (h) (11/12/02) §61.357(d)(6) and (d)(8) (10/17/00)	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 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.	Annually, monitor in accordance with 40 CFR Part 60 Appendix A Method 21. 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, visually inspect each cover and all openings to ensure that they are closed and gaskets properly installed. 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.

Table 5.10 Oily Wastewater/ Benzene Waste Collection and Treatment			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping/Reporting**
5.10.11	40 CFR Part 63 Subpart CC §63.647 (8/18/95) §63.654(a) (8/18/98) 40 CFR Part 61 Subpart FF §61.348(d) (10/17/00) §61.356(a), (e), and (l) (11/12/02)	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 of 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). Maintain documentation that includes the following information: Dates of startup and shutdown of the unit. Periods when the unit is not operating as designed.

5.11 Fire Training

Table 5.11 Fire Training Area			
Permit Term	**Citation**	**Description**	**Monitoring/Recordkeeping,/Reporting**
5.11.1	Fire Permit No. 02002 Condition 1 (12/11/01) and NWCAA 502	Permit Availability A copy of this permit must be available at the site of the fire.	None
5.11.2	Fire Permit No. 02002 Condition 3 (12/11/01) and NWCAA 502	Approval Conditions Approval is granted only for the burning of materials listed above [gasoline, propane and diesel fuels] and during the dates specified [01/01/02 through 12/31/01).	None
5.11.3	Fire Permit No. 02002 Condition 4 (12/11/01) and NWCAA 502	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 the fire), cardboard, treated wood, construction/demolition debris.	None
5.11.4	Fire Permit No. 02002 Condition 5 (12/11/01) and NWCAA 502	Smoke and Fly Ash 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 road.	*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.

SECTION 6 COMMON REQUIREMENTS

This section contains requirements that are common among emission units at the Tesoro refinery but do not apply at all units within the refinery. Section 6 includes individual drain system and equipment component requirements. The requirements are cross-referenced by the specifically applicable terms in Section 5.

The requirements specified in the "Citation" column, and incorporated herein by reference, are federally enforceable unless identified as "state only". "State only" requirements are not enforceable by EPA or citizens under the CAA. 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 labeled "directly enforceable" are legally enforceable requirements added under the NWCAA's "gap-filling" authority [WAC 173-401-615(1)(b) & (c), 10/17/02]. Other requirements not labeled "directly enforceable" 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.

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

Table 6.1 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)].

Permit Term	Citation	Description	Monitoring/Recordkeeping/Reporting
6.1.1	40 CFR Part 60 Subpart QQQ §60.692-2 (a)(1), (2), & (5) (11/23/88) §60.698 (b) & (c) (8/18/95)	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 identification, unless such repair would be covered under term 6.1.4.	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 (including water seal is dry or otherwise breached) record the location, date, and corrective action. Semiannually, submit a certification to the NWCAA that all of the required inspections have been carried out and submit a report summarizing when a 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.
6.1.2	40 CFR Part 60 Subpart QQQ §60.692-2 (a)(3), (4), (5) (11/23/88) §60.698 (b) & (c) (8/18/95)	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, unless such repair would be covered under term 6.1.4.	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. For each problem identified during inspection that could result in VOC emissions (including water seal is dry or otherwise breached or a drain cap or plug is missing or improperly installed) record the location, date, and corrective action. Semiannually, submit a certification to the NWCAA that all of the required inspections have been carried out and submit a report summarizing when a 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.

Table 6.1 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)].			
Permit Term	Citation	Description	Monitoring/Recordkeeping/Reporting
6.1.3	40 CFR Part 60 Subpart QQQ §60.692-2 (b)(1), (2), (3), (4), & (c)(1), (2), (3) (11/23/88) §60.698 (b) & (c) (8/18/95)	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, 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; Unless such repair would be covered under term 6.1.4.	Visually inspect junction boxes semiannually to ensure that the cover is in place and to ensure that the cover has a tight seal around the edge. For each problem identified during inspection that could result in VOC emissions (including broken seals or gaps) record the location, date, and corrective action. Semiannually, submit a certification to the NWCAA that all of the required inspections have been carried out and submit a report summarizing when a 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.
6.1.4	40 CFR Part 60 Subpart QQQ §60.692-6 (11/23/88) §60.697(e) 10/17/00	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.	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. Maintain a copy of the plans or specifications indicating the design and location of the emission point and related process equipment readily accessible for the life of the facility.

6.2 Leak Detection and Repair (LDAR) Program – Existing Equipment in HAP/VOC Service

The Tesoro refinery is regulated under several fugitive emission MR&R requirements that together, comprise the LDAR program for the refinery. The regulations imposing LDAR requirements are 40 CFR Part 60.590 (NSPS Subpart GGG), 40 CFR Part 60.590a (NSPS Subpart GGGa) and 40 CFR 63.640 (NESHAP Subpart CC), NWCAA Regulation 580, in conjunction with orders of approval to construct. All of these regulations cross reference and address overlap to avoid duplication of LDAR strategies and reporting. Ultimately, each of the regulations implements the requirements, either following or based on, 40 CFR Part 60.480 (NSPS Subpart VV) or 40 CFR Part 60.480a (NSPS Subpart VVa).

The Tesoro refinery has elected to demonstrate compliance with the above cited regulations using the methodologies described in 40 CFR Part 60.480 (NSPS Subpart VV) as allowed under 40 CFR Part 60.592 and 40 CFR 63.640(p) for the applicable existing sources. For new units subject to NSPS Subpart GGGa; the benzene saturation unit, the facility must implement NSPS Subpart VVa as listed in Table 6.3.

Table 6.2 presents the LDAR MR&Rs required under NSPS Subpart VV.

6.2 LDAR (40 CFR Part 60 Subpart VV)			
Permit Term	**Citation**	**Description**	**Monitoring, Recordkeeping and Reporting**
6.2.1	As referenced; 40 CFR Part 60 Subpart VV §60.482-2 §60.482-9(d) §60.485(b) §60.486(b), (c) and (e) §60.487(c), and (e) (11/16/07) As modified by specifically applicable OAC terms in Section 5	Pumps in Light Liquid Service, Without Dual Mechanical Seals If there are visible indications of liquids dripping from the pump seal, monitor the pump within 5 days or designate that a leak is detected, *except* when the pump was monitored during the previous week and found to be less than the leak definition. Monitor equipment according to specifically applicable **leak definition**. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected *except* for units with a leak definition of 2,000 ppm. 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 40 CFR Part 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 shall include, when practical, but not limited to, tightening the packing gland nuts and ensuring that the seal flush is operating at design pressure and temperature. Delay of repair will be allowed in accordance with term 6.2.8.	**Each calendar week**, visually inspect each pump for indications of liquids dripping from the pump seal. **Monthly**, instrument monitor using 40 CFR Part 60 Method 21. 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 10,000 ppm methane or n-hexane *except* for units complying with a leak definition of 2,000 ppm shall calibrate using and a mixture of methane and air at a concentration of about 2,000 ppm methane. When a leak is detected, record the information as required in 40 CFR Part 60.486 in a readily accessible location. Maintain records as required in 40 CFR 60.486. Submit a semi-annual report including the appropriate items in 40 CFR Part 60.487(c). Report the results of all performance tests in accordance with 60.8 of the General Provisions.

6.2 LDAR (40 CFR Part 60 Subpart VV)			
Permit Term	**Citation**	**Description**	**Monitoring, Recordkeeping and Reporting**
6.2.2	As referenced; 40 CFR Part 60 Subpart VV §60.482-2(d) §60.485 (c) §60.486(b), (c), (e),(h) §60.487(c), and (e) (11/16/07)	Applicable Pumps in Light Liquid Service, With Dual Mechanical Seals Including A Barrier Fluid System Operate the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure, or route barrier fluid degassing reservoir vent to a process or fuel gas system or 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 is 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. 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 there are indications of liquids dripping from the pump seal, or the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected. Repair a leak as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR Part 60.482-9. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.	**Each calendar week**, visually inspect each pump for indications of liquids dripping from the pump seal. If the sensor is not equipped with an audible alarm, check sensor daily. When a leak is detected, designated by the visual indication of liquids dripping as a leak or instrument monitor using 40 CFR Part 60 Appendix A Method 21. 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 10,000 ppm methane or n-hexane. When a leak is detected, record the information as required in 40 CFR Part 60.486 in Terms 6.2.8 & 6.2.13 in a readily accessible location. Maintain records as listed in 6.2.14 for subject equipment. The design criterion required 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 semi-annual report including the appropriate items in 40 CFR Part 60.487(c).

6.2 LDAR (40 CFR Part 60 Subpart VV)			
Permit Term	**Citation**	**Description**	**Monitoring, Recordkeeping and Reporting**
6.2.3	As referenced; 40 CFR Part 60 Subpart VV §60.482-3 §60.485(b) §60.486(h) §60.487(c) & (e) (11/16/07)	Equip each subject 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, 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 shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR Part 60.482-9 or if recasting of the distance piece or replacement of the compressor are the only options available for repair. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.	If the sensor is not equipped with an audible alarm, check sensor daily and record. When a leak is detected, record the information in required in 40 CFR Part 60.486 in Terms 6.2.8 & 6.2.13 in a readily accessible location. Maintain records as listed in 6.2.14 for subject equipment. The design criterion required must be recorded 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 semi-annual report including the appropriate items in 40 CFR Part 60.487(c). The design criterion that indicates failure of the seal system, barrier fluid or both, must be recorded 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.

6.2 LDAR (40 CFR Part 60 Subpart VV)			
Permit Term	**Citation**	**Description**	**Monitoring, Recordkeeping and Reporting**
6.2.4	As referenced; 40 CFR Part 60 Subpart VV §60.482-4 (12/14/00) §60.485 (c) §60.486(d) and (e) §60.487(c) and (e) (11/16/07)	<u>Pressure Relief Devices</u> Except during pressure releases, each applicable 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 40 CFR Part 60.482-9. Any pressure relief device routed to the fuel gas system or equipped with a closed vent system a 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 as provided in 40 CFR Part 60.482-9.	For pressure relief devices not routed to the fuel gas system or a closed vent system/control device, and without a rupture disk, if a release occurs, monitor the pressure relief device no later than 5 calendar days after the release. 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. Submit a semi-annual report with the facts explaining each delay of repair as per 40 CFR Part 60.482-9, and the dates of process unit shutdowns which occurred within the semi-annual reporting period. Report the results of all performance tests in accordance with 40 CFR Part 60.8 of the General Provisions. The instrument used to monitor leaks shall be calibrated before use each day of use. 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 10,000 ppm methane or n-hexane. Use 40 CFR Part 60 Appendix A Method 21

6.2 LDAR (40 CFR Part 60 Subpart VV)			
Permit Term	**Citation**	**Description**	**Monitoring, Recordkeeping and Reporting**
6.2.5	As referenced; 40 CFR Part 60 Subpart VV §60.482-5 §60.485(b) §60.486(e) (11/16/07)	<u>Sampling Connection Systems</u> Each applicable 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. Purged process 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 the requirements of 60.482-10, or collected and transported to a waste management unit subject to 40 CFR Part 63 Subpart G, or a treatment, storage, or disposal facility submit to 40 CFR part 262, 264, 265, or 266, or a facility permitted, licensed, or registered by a State to manage municipal or industrial solid waste, if the process fluids are not hazardous waste.	The permittee shall maintain a list of identification numbers for equipment subject to the requirements of this condition. Use 40 CFR Part 60 Appendix A Method 21.

6.2 LDAR (40 CFR Part 60 Subpart VV)			
Permit Term	**Citation**	**Description**	**Monitoring, Recordkeeping and Reporting**
6.2.6	As referenced; 40 CFR Part 60 Subpart VV §60.482-6 §60.485(b) §60.486(e) (11/16/07)	<u>Open-ended Valves or Lines</u> Each applicable open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve that seals the open end at all times except during operations requiring process fluid flow or as provided in §60.482-1(c). 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 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.	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 the requirements of this condition. Use 40 CFR Part 60 Appendix A Method 21.

6.2 LDAR (40 CFR Part 60 Subpart VV)			
Permit Term	**Citation**	**Description**	**Monitoring, Recordkeeping and Reporting**
6.2.7	As referenced; 40 CFR Part 60 Subpart VV §60.482-8 §60.485(b) §60.486(b), (c) and (e) §60.487(c) (11/16/07)	<u>Applicable Pumps and Valves in Heavy Liquid Service, Pressure Relief Devices in Light Liquid or Heavy Liquid Service, and Flanges and Other Connectors</u> If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method, within 5 days, eliminate the visual, audible, olfactory, or other indication of potential leak or monitor the leak. 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 40 CFR Part 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, (1) tightening of bonnet bolts, (2) replacement of bonnet bolts, (3) tightening of packing gland nuts; and (4) injection of lubricant into lubricated packing.	When a leak is detected, record the information required in 40 CFR Part 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.. The instrument used to monitor for leaks shall be calibrated before use each day of use. 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 10,000 ppm methane or n-hexane. Submit a semi-annual report with the facts explaining each delay of repair as per 40 CFR Part 60.482-9, and the dates of process unit shutdowns which occurred within the semi-annual reporting period. Use 40 CFR Part 60 Method 21.

6.2 LDAR (40 CFR Part 60 Subpart VV)			
Permit Term	**Citation**	**Description**	**Monitoring, Recordkeeping and Reporting**
6.2.8	As referenced; 40 CFR Part 60 Subpart VV §60.482-9 (11/16/07) §60.486 (c)(5) & (6) (11/16/07) §60.487(c)(vii) (11/16/07)	Delay of repair of applicable 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. Delay is also allowed for equipment isolated from the 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 40 CFR Part 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. (f) 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.	Record: for each equipment found leaking, “repair delayed” and reason for delay if greater than 15 days, signature of owner/operator or designate whose decision is was that repair could not be effected without a shutdown, expected date of repair if greater than 15 days, dates of process unit shutdowns. Monitoring to verify repair must occur within 15 days aterter startup of the process unit. Report, semiannually, the facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible.

6.2 LDAR (40 CFR Part 60 Subpart VV)			
Permit Term	**Citation**	**Description**	**Monitoring, Recordkeeping and Reporting**
6.2.9	As referenced; 40 CFR Part 60 Subpart VV §60.482-7 §60.483-2 §60.485 §60.486(e) §60.487(c), (d) and (e) (11/16/07) As modified by specifically applicable OAC terms in Section 5	Standards for Valves in Gas and Light Liquid Service and Alternative Standards for Valves – Skip Period Leak Detection and Repair Monitor valves according to the sustainable skip period program calculating leak rates on a unit-by-unit basis. Monitor equipment according to specifically applicable **leak definition** to determine leak rates on a unit-by-unit basis. A leak is defined as an instrument reading of 10,000 ppm or greater *except* for units subject to leak definitions of 500 or 1,000 ppm. Tesoro shall make a "first attempt" at repair for any valve within **5 days** after each leak is detected. 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; (1) Tightening of bonnet bolts, (2) Replacement of bonnet bolts, (3) Tightening of packing gland nuts; and (4) Injection of lubricant into lubricated packing. 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 40 CFR Part 60.482-9. If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.	Instrument monitor valves on a monthly schedule in accordance with 40 CFR Part 60.482-7. The facility may elect to follow a less frequent monitoring schedule using the criteria: At process units that have less than 2.0% leaking valves for 2 consecutive months, monitor each valve once every quarter, beginning with the next quarter. After 2 consecutive quarterly leak detection periods with the percent leaking less than or equal to 2.0%, monitor each valve once every 2 quarters. After 5 consecutive semi-annual leak detection periods with the percent of valves leaking is less than or equal to 2.0%, monitor each valve once every 4 quarters. Facility must return to a more frequent monitoring schedule if a process unit on a quarterly, semi-annual or annual schedule has a leak percentage greater than or equal to 2% in any single detection period, monitor valves every month to return to the skip period. The leak percentage shall be determined as noted in term 6.2.11. The instrument shall be calibrated before use each day of use by 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 10,000 ppm methane or n-hexane *except* for units complying with a lower leak definition of shall calibrate using and a mixture of methane and air at a concentration of about the leak definition. Maintain a list of identification numbers in accordance with term 6.2.14. Submit a semi-annual report including the appropriate items in 60.487(c).

6.2 LDAR (40 CFR Part 60 Subpart VV)			
Permit Term	**Citation**	**Description**	**Monitoring, Recordkeeping and Reporting**
6.2.10	As referenced; 40 CFR Part 60 Subpart VV §60.482-7(a) (11/16/07) As modified by specifically applicable OAC terms in Section 5	New gas/vapor service or light liquid service valves: that begin operation in 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 to ensure proper installation or • If the valves on the process unit are monitored in accordance with §60.483–2, count the new valve as leaking when calculating the percentage of valves leaking as described in §60.483–2(b)(5). If less than 2.0 percent of the valves are leaking for that process unit, the valve must be monitored for the first time during the next scheduled monitoring event for existing valves in the process unit or within 90 days, whichever comes first *except* for a valve that replaces a leaking valve and except as provided in paragraphs (f), (g), and (h) of this section, §60.482–1(c), and §§60.483–1 and 60.483–2.	Comply with term 6.2.9.

6.2 LDAR (40 CFR Part 60 Subpart VV)			
Permit Term	**Citation**	**Description**	**Monitoring, Recordkeeping and Reporting**
6.2.11	As referenced; 40 CFR Part 60 Subpart VV §60.485(h) (11/16/07) As modified by specifically applicable OAC terms in Section 5	Calculation of percent leak rate: Tesoro shall determine compliance with §60.483–2 as follows: The percent of valves leaking shall be determined using: $\%V_L = (V_L/V_T) * 100$ Where: $\%V_L$= Percent leaking valves V_L= Number of valves found leaking V_T= The sum of the total number of valves monitored	The total number of valves monitored shall include difficult-to-monitor and unsafe-to-monitor valves only during the monitoring period in which those valves are monitored. The number of valves leaking shall include valves for which repair has been delayed. Any new valve that is not monitored within 30 days of being placed in service shall be included in the number of valves leaking and the total number of valves monitored for the monitoring period in which the valve is placed in service. If the process unit has been subdivided in accordance with §60.482–7(c)(1)(ii), the sum of valves found leaking during a monitoring period includes all subgroups. The total number of valves monitored does not include a valve monitored to verify repair.
6.2.12	As referenced; 40 CFR Part 60 Subpart VV §60.482-10 (a), (d), (e), & (m) (12/14/00)	Standards for Closed vent systems and control devices; Flares used to comply with this subpart shall comply with the requirements of §60.18 as listed in Section 5.8.	Comply with table 5.8.
6.2.13	As referenced; 40 CFR Part Subpart VV §60.486 (b) & (c) (11/16/07)	Maintain records for equipment found leaking. When each leak is detected, attach a weatherproof and readily visible identification, marked with the equipment identification number to the leaking equipment. Identification on equipment except valves may be removed after it has been repaired.	When each leak is determined, record the instrument and operator identification numbers and equipment identification number, date of leak detection and each attempt at repair, repair methods applied for each attempt, instrument leak reading, and date of successful repair of leak.

6.2 LDAR (40 CFR Part 60 Subpart VV)			
Permit Term	**Citation**	**Description**	**Monitoring, Recordkeeping and Reporting**
6.2.14	As referenced; 40 CFR Part 60 Subpart VV §60.486 (e) (11/16/07)	Maintain records for equipment subject to this subpart.	The following information pertaining to all equipment subject to the requirements in §§60.482–1 to 60.482–10 shall be recorded: (1) A list of identification numbers (2)(i) A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of §§60.482–2(e), 60.482–3(i) and 60.482–7(f). (ii) The designation of equipment as subject to the requirements of §60.482–2(e), §60.482–3(i), or §60.482–7(f) shall be signed by the owner or operator. (3) A list of equipment identification numbers for pressure relief devices required to comply with §60.482–4. (4)(i) The dates of each compliance test as required in §§60.482–2(e), 60.482–3(i), 60.482–4, and 60.482–7(f). (ii) The background level measured during each compliance test. (iii) The maximum instrument reading measured at the equipment during each compliance test. (5) A list of identification numbers for equipment in vacuum service. (6) A list of identification numbers for equipment that the owner or operator designates as operating in VOC service less than 300 hr/yr in accordance with §60.482–1(e), a description of the conditions under which the equipment is in VOC service, and rationale supporting the designation that it is in VOC service less than 300 hr/yr.
6.2.15	As referenced; 40 CFR Part 60 Subpart VV §60.485(d) (11/16/07) §60.486(j) (11/16/07)	Process Units Not in VOC Service 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 Part 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.

6.3 Leak Detection and Repair (LDAR) Program – New Equipment in HAP/VOC Service

The Tesoro refinery is regulated under several fugitive emission MR&R requirements that together, comprise the LDAR program for the refinery. The regulations imposing LDAR requirements are 40 CFR Part 60.590 (NSPS Subpart GGG), 40 CFR Part 60.590a (NSPS Subpart GGGa) and 40 CFR 63.640 (NESHAP Subpart CC), NWCAA Regulation 580, in conjunction with orders of approval to construct. All of these regulations cross reference and address overlap to avoid duplication of LDAR strategies and reporting. Ultimately, each of the regulations implements the requirements, either following or based on, 40 CFR Part 60.480 (NSPS Subpart VV) or 40 CFR Part 60.480a (NSPS Subpart VVa).

The Tesoro refinery has elected to demonstrate compliance with the above cited regulations using the methodologies described in 40 CFR Part 60.480 (NSPS Subpart VV) as allowed under 40 CFR Part 60.592 and 40 CFR 63.640(p) for the applicable existing sources. For new units subject to NSPS Subpart GGGa; the benzene saturation unit, the facility must implement NSPS Subpart VVa.

Table 6.3 presents the LDAR MR&Rs as required under NSPS Subpart VVa.

6.3 LDAR (40 CFR Part 60 Subpart VVa)			
Permit Term	**Citation**	**Description**	**Monitoring, Recordkeeping and Reporting**
6.3.1	As referenced: 40 CFR 60 Subpart VVa 60.482-2a(a), (b) & (c), 60.485a(b), 60.486a(a), (b), (c) & (e) and 60.487a(c) & (e) (11/16/07)	<u>Pumps in Light Liquid Service without Dual Mechanical Seals</u> 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 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: (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) (i) 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, with a first attempt at repair within 5 days. The repair shall be complete within 15 days, except as provided in 60.482-9a. Leaking components shall be marked with a weatherproof tag identifying the component and leak date.	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 (v) Instrument reading When a leak is detected, record the information listed in 60.486a(c) in a log. 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 semiannual reports that include the information specified in 60.487a.

6.3 LDAR (40 CFR Part 60 Subpart VVa)			
Permit Term	**Citation**	**Description**	**Monitoring, Recordkeeping and Reporting**
6.3.2	As referenced: 40 CFR 60 Subpart VVa 60.482-2a(b), (c) & (d), 60.485a(b), 60.486a(a), (b), (c), (e), (h) and 60.487a(a), (b),(c) & (e) (11/16/07)	<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 60.482–10a; 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.	Weekly, visually inspect each pump for leaks. 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. 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). 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 semiannual reports with information specified in 60.487a.

6.3 LDAR (40 CFR Part 60 Subpart VVa)			
Permit Term	**Citation**	**Description**	**Monitoring, Recordkeeping and Reporting**
6.3.3	As referenced: 40 CFR 60 Subpart VVa 60.482-2a (e), 60.485a(b) & (c), 60.486a(a), (c) & (e) and 60.487a(a), (b),(c) & (e) (11/16/07)	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.	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 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 semiannual reports that include the information specified in 60.487a.

6.3 LDAR (40 CFR Part 60 Subpart VVa)			
Permit Term	**Citation**	**Description**	**Monitoring, Recordkeeping and Reporting**
6.3.4	As referenced: 40 CFR 60 Subpart VVa 60.482-2a(c) & (g), 60.485a(b), 60.486a(a), (b), (c), (e) & (f) and 60.487a(a),(b),(c) & (e) (11/16/07)	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 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 re-monitoring, by definition. Leaking components shall be marked with a weatherproof tag identifying the component and leak date.	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 semiannual reports that include the information specified in 60.487a.

6.3 LDAR (40 CFR Part 60 Subpart VVa)			
Permit Term	**Citation**	**Description**	**Monitoring, Recordkeeping and Reporting**
6.3.5	As referenced: 40 CFR 60 Subpart VVa 60.482-3a, 60.486a(a),(b), (c), (e) & (h) and 60.487a(a), (b),(c) & (e) (11/16/07)	<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 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 re-monitoring, by definition. Leaking components shall be marked with a weatherproof tag identifying the component and leak date.	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 semiannual reports that include the information specified in 60.487a.

6.3 LDAR (40 CFR Part 60 Subpart VVa)			
Permit Term	**Citation**	**Description**	**Monitoring, Recordkeeping and Reporting**
6.3.6	As referenced: 40 CFR 60 Subpart VVa 60.482-4a, 60.485a(c) 60.486a(e) and 60.487a(a), (b),(c) & (e) (11/16/07)	<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. 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.	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 semiannual reports that include the information specified in 60.487a.

6.3 LDAR (40 CFR Part 60 Subpart VVa)			
Permit Term	**Citation**	**Description**	**Monitoring, Recordkeeping and Reporting**
6.3.7	As referenced: 40 CFR 60 Subpart VVa 60.482-5a and 60.486(a) & (e) (11/16/07)	<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 that complies with the requirements of 60.482-10a.	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.

6.3 LDAR (40 CFR Part 60 Subpart VVa)			
Permit Term	**Citation**	**Description**	**Monitoring, Recordkeeping and Reporting**
6.3.8	As referenced: 40 CFR 60 Subpart VVa 60.482-6a and 60.486(a) & (e) (11/16/07)	<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 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.	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.

6.3 LDAR (40 CFR Part 60 Subpart VVa)			
Permit Term	**Citation**	**Description**	**Monitoring, Recordkeeping and Reporting**
6.3.9	As referenced: 40 CFR 60 Subpart VVa 60.482-8a, 60.485a(b), 60.486a(a), (b), (c) & (e) and 60.487a(a), (b) & (c) (11/16/07)	<u>Pumps, Valves, and Connectors in Heavy Liquid Service, 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 re-monitoring, by definition. Leaking components shall be marked with a weatherproof tag identifying the component and leak date.	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 semiannual reports that include the information specified in 60.487a.

6.3 LDAR (40 CFR Part 60 Subpart VVa)			
Permit Term	**Citation**	**Description**	**Monitoring, Recordkeeping and Reporting**
6.3.10	As referenced: 40 CFR 60 Subpart VVa 60.482-9a and 60.487a(c)(2)(xi) & (3) (11/16/07)	<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 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 subject to delay of repair requirements if two consecutive monthly monitoring instrument readings are below the leak definition.	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.

6.3 LDAR (40 CFR Part 60 Subpart VVa)			
Permit Term	**Citation**	**Description**	**Monitoring, Recordkeeping and Reporting**
6.3.11	As referenced: 40 CFR 60 Subpart VVa 60.482-7a(a)-(e), 60.485a(b), 60.486a(b),(c) & (e) and 60.487a(b), (c) & (e) (11/16/07)	<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 re-monitoring, 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. Leaking components shall be marked with a weatherproof tag identifying the component and leak date.	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 semiannual reports that include the information specified in 60.487a.

6.3 LDAR (40 CFR Part 60 Subpart VVa)			
Permit Term	**Citation**	**Description**	**Monitoring, Recordkeeping and Reporting**
6.3.12	As referenced; 40 CFR 60 Subpart VVa 60.482-7a, 60.483-2a, 60.485a, 60.487a(c), (d) and (e) (11/16/07)	Standards for Valves in Gas and Light Liquid Service and Alternative Standards for Valves – Skip Period Leak Detection and Repair Monitor valves according to the sustainable skip period program calculating leak rates on a unit-by-unit basis. Monitor equipment according to specifically applicable **leak definition** to determine leak rates on a unit-by-unit basis. A leak is defined as an instrument reading of 10,000 ppm or greater *except* for units subject to leak definitions of 500 or 1,000 ppm. Make a "first attempt" at repair for any valve within **5 days** after each leak is detected. 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; (1) Tightening of bonnet bolts, (2) Replacement of bonnet bolts, (3) Tightening of packing gland nuts; and (4) Injection of lubricant into lubricated packing. 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 40 CFR Part 60.482-9. If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.	Instrument monitor valves on a monthly schedule in accordance with 60.482-7a. The facility may elect to follow a less frequent monitoring schedule using the criteria: At process units that have less than 2.0% leaking valves for 2 consecutive months, monitor each valve once every quarter, beginning with the next quarter. After 2 consecutive quarterly leak detection periods with the percent leaking less than or equal to 2.0%, monitor each valve once every 2 quarters. After 5 consecutive semi-annual leak detection periods with the percent of valves leaking is less than or equal to 2.0%, monitor each valve once every 4 quarters. Facility must return to a more frequent monitoring schedule if a process unit on a quarterly, semi-annual or annual schedule has a leak percentage greater than or equal to 2% in any single detection period, monitor valves every month to return to the skip period. The leak percentage shall be determined as noted in term 6.2.11. The instrument shall be calibrated before use each day of use by 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 10,000 ppm methane or n-hexane *except* for units complying with a lower leak definition of shall calibrate using and a mixture of methane and air at a concentration of about the leak definition. Submit a semi-annual report including the appropriate items in 60.487(c). Follow 40 CFR 60 Appendix A Method 21

6.3 LDAR (40 CFR Part 60 Subpart VVa)			
Permit Term	**Citation**	**Description**	**Monitoring, Recordkeeping and Reporting**
6.3.13	As referenced: 40 CFR 60 Subpart VV 60.482-7a(f), 60.485a(b) & (c), 60.486a(a), (b), (c), & (e) and 60.487a(c) & (e) (11/16/07)	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. Leaking components shall be marked with a weatherproof tag identifying the component and leak date.	Monitor valves by the methods specified in 60.485a(b). 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 semiannual reports that include the information specified in 60.487a. Follow 40 CFR 60 Appendix A Method 21

6.3 LDAR (40 CFR Part 60 Subpart VVa)			
Permit Term	**Citation**	**Description**	**Monitoring, Recordkeeping and Reporting**
6.3.14	As referenced: 40 CFR 60 Subpart VVa 60.482-7a(g), 60.485a(b), 60.486a(a), (b), (c), (e) & (f) and 60.487a(b), (c) & (e) (11/16/07)	<u>Valves Designated as Unsafe-to-Monitor</u> 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. Leaking components shall be marked with a weatherproof tag identifying the component and leak date.	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 semiannual reports that include the information specified in 60.487a.

6.3 LDAR (40 CFR Part 60 Subpart VVa)			
Permit Term	**Citation**	**Description**	**Monitoring, Recordkeeping and Reporting**
6.3.15	As referenced: 40 CFR 60 Subpart VVa 60.482-7a(h), 60.485a(b), 60.486a(a), (b), (c) & (e) and 60.487a(c) & (e) (11/16/07)	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 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.	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 monitoring each valve. Submit semiannual reports that include the information specified in 60.487a.

6.3 LDAR (40 CFR Part 60 Subpart VVa)			
Permit Term	**Citation**	**Description**	**Monitoring, Recordkeeping and Reporting**
6.3.16	As referenced; 40 CFR 60 Subpart VVa 60.482-10a (f)-(m) and 60.486a (d) & (e) (11/16/07)	<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 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 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 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. Follow 40 CFR 60 Appendix A Method 21
6.3.17	As referenced: 40 CFR 60 Subpart VVa 60.485a(d) and 60.486a(a) & (j) (11/16/07)	<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.

SECTION 7 ALTERNATIVE MONITORING PLANS

7.1 Alternate Plan for monitoring SO_X from propane combustion unit F-753

7.1.1 Introduction

This alternative monitoring plan (AMP) describes procedures to be followed whenever propane is, or is about to be, utilized as a fuel in Boiler F-753 (including in combination with commercial natural gas). This plan, for conformance with New Source Performance Standards - Subpart J, has been developed as an alternative to the installation of a continuous analyzer to measure either: a) the sulfur content of the fuel stream or b) the sulfur oxide content of boiler flue gas.

7.1.2 Standards

New Source Performance Standards, Subpart J (40 CFR Part 60-100) for Petroleum Refineries stipulates that the sulfur oxide concentration of flue gas will not exceed 20 ppmv (3-hour average) or that the H_2S content of refinery fuel gas shall not exceed 0.10 gr/dscf (3-hour average). The latter, relative to the monitoring plan discussed below, is equivalent to 116 ppmw sulfur in propane.

7.1.3 Definitions of fuels

Finished propane: Non-odorized propane. This is the propane stream anticipated to be utilized most frequently in F-753.

Commercial propane: Finished propane to which odorant, ethyl mercaptan, has been added for placement into commerce.

Commercial propane, relative to use at F-753, includes product produced at the Refinery as well as product purchased from commercial distributors. The latter, irrespective of supplier, is presumed to be a petroleum refinery product and thus subject to this Monitoring Plan as well. Purchased commercial propane when received at the Anacortes Refinery is stored in the same vessels used to store own-produced commercial product.

Commercial propane (own-produced or purchased) would be utilized at F-753 under a variety of circumstances including: natural gas curtailment; high price of natural gas (relative to propane); interruption in propane sales; or, required boiler operation during refinery process shutdowns or start-ups.

7.1.4 Fuel sampling frequency

Sampling - Sampling of commercial propane storage vessels is carried out at a frequency of about once every 4 to 6 hours as part of the Refinery quality assurance program. No product is released from storage for sales prior to completion of product testing for verification of quality, including sulfur; in this case for assurance that enough sulfur (odorant) has been added for legal placement into commercial sales.

7.1.5 Compliance

Compliance with NSPS Subpart J, for combustion of propane at Boiler F-753, will be achieved through periodic monitoring of the propane stream being fueled. Refinery-produced commercial propane, which is higher in sulfur content than finished propane, will be used as a surrogate for the finished propane stream.

7.1.6 Recordkeeping

All records associated with propane gas streams burned at F-753 will be retained for 5 years per requirements of the regulations implementing the Clean Air Act Amendments.

7.1.7 Monitoring Plan

Whenever utilization of propane fuel is planned or underway the monitoring procedures in Alternative Monitoring Plan (AMP) will be followed.

7.1.8 Test Methods

7.1.8.1 Shell Method: SMS 217-82

Method Title: "Hydrogen Sulphide, Mercaptans and Carbonyl Sulphide in Gases".

The following are attached at the end of the air operating permit:

1. a copy of Method SMS 217-82
2. a copy of Method SMS 304-82 (referenced in Method 217-82).

Method SMS 217-82, as carried out at the Anacortes Refinery, provides results in ppmw of sulfur expressed as ethyl mercaptan. This test is carried out on-site. For perspective, the Subpart J Standard of 0.1 grains hydrogen sulfide per dscf equals 116 ppmw sulfur in propane. As long as Method SMS 217-82 test results are less than 225 ppmw sulfur as ethyl mercaptan (i.e., less than 116 ppmw sulfur as sulfur), the concentration of hydrogen sulfide cannot be greater than 0.1 gr/dscf (116 ppmw sulfur).

7.1.8.2 Addendum to SMS 217-82

The following modifications of ***Shell Method Series*** 217-82 are currently in place at the Anacortes Refinery Quality Assurance Lab:

1. The second gas washing bottle is omitted from the method, therefore, determination of carbonyl sulfides cannot be made.
2. The quantity of sample taken for analysis is determined gravimetrically, not volumetrically as noted in the method.
3. Results are reported as ppm (weight) ethyl mercaptan, not as mg/m3 sulfur as stated in the method.

7.1.8.3 ASTM Method: D-2420

Method Title: "Standard Test Method for Hydrogen Sulfide in Liquified Petroleum Gases (Lead Acetate Method)".

Method D-2420 provides qualitative indication of H_2S presence (sensitivity of 1 ppmv), is carried out on-site in the field. For perspective, the Subpart J Standard of 0.1 gr H_2S per dscf equals 160 ppmv sulfur in propane.

7.1.9 Initiation of Propane Burning At F-753

The following steps will be carried out prior to the burning of propane in Boiler F-753. Failure of any potential propane fuel stream to meet a sulfur equivalent standard of Subpart J precludes the stream from utilization.

7.1.9.1 *<u>If finished (non-odorized) propane is to be utilized:</u>*

- Prior to the start of propane burning, SMS 217-82 test results of stored commercial propane for the preceding 24 hours will be checked for sulfur content.
- If all SMS 217-82 test results of commercial propane over the preceding 24 hours show no values in excess of 225
- ppmw (total sulfur as ethyl mercaptan), utilization of finished propane may be initiated.
- If any SMS 217-82 test results of commercial propane are equal to or greater than 225 ppmw, start of finished propane burning will be deferred until a Lead Acetate Test (ASTM D-2420) of the finished propane stream is conducted for determination of the presence of H_2S.
- If the Lead Acetate Test shows hydrogen sulfide to be not-detected, combustion of finished propane may be initiated.
- If the Lead Acetate Test shows hydrogen sulfide to be present, SMS 217-82 testing of a sample of finished propane will be carried out.
- If SMS 217-82 testing of finished propane shows sulfur to be less than 225 ppmw, combustion of finished propane may be initiated.
- If SMS 217-82 testing of finished propane shows sulfur to be equal to or greater than 225 ppmw, burning of finished propane is prohibited.

7.1.9.2 *<u>If own-produced commercial propane is to be utilized:</u>*

- Prior to the start of propane burning, SMS 217-82 test results of stored commercial propane for the preceding 24 hours will be checked for sulfur content. If SMS 217-82 test results of commercial propane over the preceding 24 hours show no values in excess of 225 ppmw (total sulfur as ethyl mercaptan), utilization of commercial propane may be initiated. If any SMS 217-82 test results of commercial propane are equal to or greater than 225 ppmw**,** burning of commercial propane will not be initiated.
- If burning of commercial propane remains attractive, a Lead Acetate Test (ASTM D-2420) of the contents of each vessel will also be conducted for determination of the presence of hydrogen sulfide (H_2S). If the Lead Acetate Test shows H_2S to be not-detected for the contents of given storage vessels, combustion of own-produced commercial propane from the given vessels may be initiated. If the Lead Acetate Test shows H_2S to be present, SMS 217-82 testing of the contents of specific storage vessels will be carried out to assess the suitability of each. If SMS 217-82 testing shows sulfur to be less than 225 ppmw (total sulfur as ethyl mercaptan) for given storage vessels, combustion of own produced commercial propane from the given vessels may be initiated. If SMS 217-82 testing shows sulfur to be equal to or greater than 225 ppmw for given storage vessels, burning of own-produced commercial propane from the vessels is prohibited.

7.1.9.3 *<u>If purchased commercial propane is to be utilized:</u>*

Prior to the start of propane burning, a Lead Acetate Test (ASTM D-2420) of the propane stream will be conducted for determination of the presence of H_2S. If the Lead Acetate Test shows H_2S to be not-detected, combustion of purchased propane may be initiated. If the Lead Acetate Test shows H_2S to be present, a SMS 217-82

test of stored purchased commercial propane will be carried out. If SMS 217-82 test results show sulfur to be less than 225 ppmw (total sulfur as ethyl mercaptan), utilization of purchased product may be initiated. If SMS 217-82 test results show sulfur to be equal to or greater than 225 ppmw**,** burning of the purchased propane in F 753 is prohibited.

7.1.10 Ongoing Monitoring of Propane Burning At F-753

The following steps will be carried out whenever propane is being burned in Boiler F-753. Failure of any potential propane fuel stream to meet a sulfur equivalent standard of Subpart J triggers investigation or discontinuation of use.

7.1.11 If own-produced propane (finished or commercial) is being utilized:

During each operating shift, results of commercial propane testing (SMS 217-82) will be forwarded from Quality Assurance to Utilities (boiler operations). In the event that any one test result exceeds 225 ppmw (total sulfur expressed as ethyl mercaptan), the following steps will be taken:

7.1.11.1 If finished propane is being utilized:

A Lead Acetate Test (ASTM D-2420) of the finished propane stream will be conducted for determination of the presence of H_2S.

- If the Lead Acetate Test shows hydrogen sulfide to be not-detected, use of finished propane can be continued.
- If the Lead Acetate Test shows hydrogen sulfide to be present, SMS 217-82 testing of finished propane stream will be carried out.
- If SMS 217-82 testing shows sulfur (expressed as ethyl mercaptan) to be less than 225 ppmw, combustion of finished propane can be continued.
- If SMS 217-82 testing shows sulfur to be equal to or greater than 225 ppmw, efforts to begin utilizing natural gas or a natural gas/propane fuel mix in place of finished propane stream will be pursued on a priority basis. Furthermore, if there is reason to believe that the average sulfur content has been greater than the standard for any rolling 3-hour period, the Northwest Clean Air Agency will be notified. If at the time of notification, compliance has not been achieved, an anticipated schedule of compliance will be provided.

7.1.11.2 If commercial propane is being utilized:

A Lead Acetate Test (ASTM D-2420) of the specific storage vessel in use will be conducted for indication of the presence of H2S

- If the Lead Acetate Test shows hydrogen sulfide to be not-detected, combustion of the commercial propane stream can be continued.
- If the Lead Acetate Test shows hydrogen sulfide to be present, SMS 217-82 testing of the propane stream lined up to F-753 will be carried out.
- If SMS 217-82 testing shows sulfur to be less than 225 ppmw (expressed as ethyl mercaptan), combustion can be continued.
- If SMS 217-82 testing shows sulfur to be equal to or greater than 225 ppmw, efforts to utilize an alternative fuel (natural gas or finished propane) or fuel mix in place of the commercial propane stream will be pursued on a priority basis. Furthermore, if there is reason to believe that the average sulfur content has been greater than the standard for any rolling 3-hour period, the Northwest Clean Air Agency will be notified. If at the time of notification,

compliance has not been achieved, an anticipated schedule of compliance will be provided. This procedure will be followed for each vessel utilized as long as QA testing of all commercial vessels are not less than 225 ppmw for a full 24 hours.

7.1.11.3 *If purchased commercial propane is being utilized:*

At the time of receipt of additional deliveries of purchased commercial propane, a Lead Acetate Test (ASTM D-2420) of the purchased material will be conducted for indication of the presence of H_2S-

- If the Lead Acetate Test shows hydrogen sulfide to be not-detected, combustion of the purchased propane can be utilized.
- If the Lead Acetate Test shows hydrogen sulfide to be present, Method SMS 217-82 testing of the contents of the specific storage vessel will be carried out.
- If SMS 217-82 testing shows sulfur to be less than 225 ppmw (total sulfur as ethyl mercaptan), the contents of the vessel may be utilized.
- If testing shows sulfur to be equal to or greater than 225 ppmw, use in F-753 is prohibited.

7.2 Alternate Monitoring Plan for the Catalytic Reformer

The Tesoro Anacortes Refinery operates a cyclic catalytic reformer (CR) unit subject to 40 CFR 63.1567, Inorganic HAP emissions from CR Units.

7.2.1 Regeneration Overview

The Anacortes CR process utilizes five reactors. As a cyclic process, one of the reactors is periodically removed from the reaction loop, via piping lineup, and placed into a regeneration loop. The frequency of regeneration fluctuates based upon business needs, but generally ranges between once per month to once per day, with the majority of the time being once per day.

The regeneration process consists of several steps, including purging, coke burn-off, catalyst rejuvenation, and reduction. 40 CFR 63.1567 regulates emissions associated with the coke burn-off and rejuvenation steps, which is the focus of this correspondence. HCl and CO2 are generated during these regulated steps.

The CR regeneration process treats, cools and circulates the regenerator exhaust gas. The majority of the gas is circulated back to the reactor, with a small amount (about 0.6 mmscfd) vented to atmosphere during the coke burn-off and rejuvenation steps.

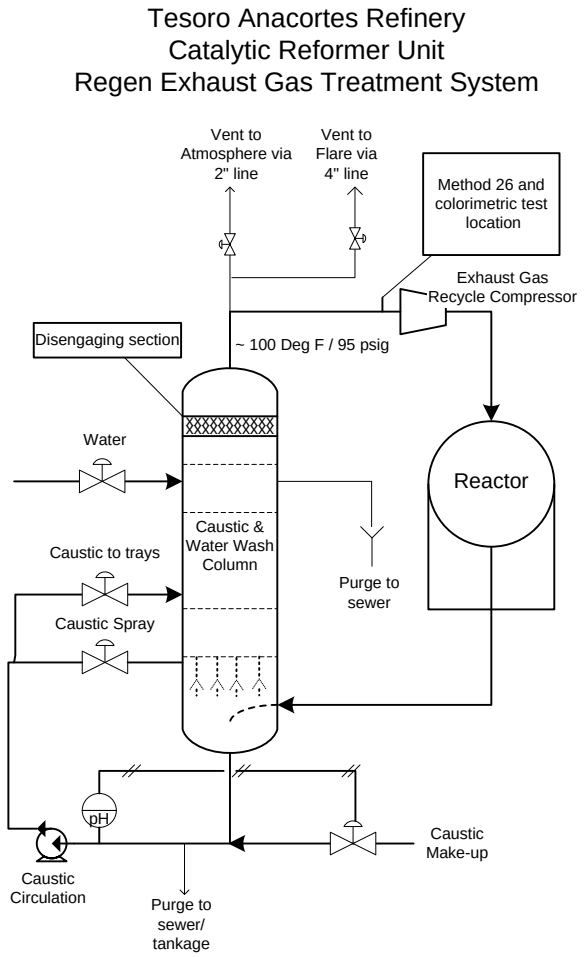
The process design requires proper treatment of the exhaust gas to guard against process equipment corrosion and to provide proper process conditions for an efficient regeneration.

7.2.2 Treatment

The CR regeneration process is equipped with a caustic and water wash column designed to neutralize and cool the circulating gas and to remove carbon dioxide after the coke burn-off step. Gases from all steps of the regeneration process are routed to the water wash column, where they are cooled and treated to remove CO2 and HCl.

The caustic and water wash column is divided into four sections: 1) a caustic spray zone that contacts the entering gas stream with a mist spray which removes HCl and CO2 before it contacts the first tray; 2) a caustic section (trayed section) – for direct liquid contact and further CO2 removal; 3) a water wash section to remove entrained caustic and CO2; and 4) a disengagement (knock-out) section (blind tray with demister mat) at the top of the column for removing entrained liquid from the overhead gas stream. (See Figure 1).

Figure 1 Regeneration Exhaust Gas Treatment System



The pH of the caustic circulation is controlled via a pH controller that regulates the quantity of caustic make-up.

7.2.3 Classification of Scrubber - "Wet scrubber" or " internal scrubbing system"

Tesoro has reviewed the proposed and final rule to determine if our scrubber meets the definition of "wet scrubber" or "internal scrubbing system". Our scrubbing system is internal to the process, given that the column treats the gas and circulates back to the reactor. However, based upon the overall design, high treatment efficiency, and pH control, it functionally matches more closely with multi-stage treating, which we believe is more analogous to the "wet scrubbers." Due to various technical issues which will be explained below, it is our belief that a combination of

the requirements listed for "wet scrubbers" and "internal scrubbing systems" is more appropriate for our system.

7.2.4 Performance Test

The Final Rule requires that Method 26 (40CFR60, Appendix A) be used for performance tests conducted on "internal scrubber systems" while Method 26A be applied to systems with "wet scrubbers". The draft technical amendments require that Method 26A be used for both internal scrubbing systems and wet scrubbers (as listed in Table 25 (1)(e)). Method 26A requires isokinetic sampling, with certain flow criteria, pipe diameters and pipe lengths that cannot be achieved at our small 2" vent line. Additionally Method 26A cannot be safely achieved on the larger 12" recycle line due to the high operating pressure of ~150 psig. For the same reasons, Tesoro is unable to meet the performance test requirements specified in the draft technical amendments as presented in Table 25 (1) (a) – (d). These are new requirements that were not originally listed in the Final Rule. In November 2004, the Northwest Clean Air Agency (NWCAA) reviewed our process during an on-site refinery visit. Although the agency agreed that our system is unique – and meets elements of both types of scrubbers -- the NWCAA suggested that Tesoro apply for an Alternative Monitoring Plan (AMP) to obtain a clear regulatory determination. The NWCAA agreed that Method 26A is not feasible, and that Method 26 must be used given our design. After that meeting, Tesoro conducted a pre-performance test using Method 26. The performance test results are summarized below.

7.2.5 Pre-performance test

Tesoro conducted a pre-performance test on 11/22/2004 and 11/23/2004 to determine the HCl concentration in exhaust gas exiting the water wash column. The HCl was sampled and tested by a third party contractor (Emissions Technologies, Inc.) using Method 26. All test reports are provided in Attachment 3. The sample was taken from a bleeder located on the recirculation line, upstream of the exhaust gas compressor. In addition, Tesoro conducted colorimetric testing at the same sample location and at the inlet to the water wash column. The column was operated at normal conditions during a full regeneration cycle.

During the coke burn-off step (~ 13 hours), the HCl concentration entering the water wash column (uncontrolled) averaged 8 ppmv. The HCl concentration exiting the water wash column (controlled) was not detected at a detection limit of 0.06 ppmv for the three (3) Method 26 test runs and also not detected during the eleven (11) colorimetric tests that were taken.

During the rejuvenation step (~ 6 hours), at which time the chloriding agent is injected, the HCl concentration entering the water wash column (uncontrolled) averaged 500 ppmv and the HCl existing the water wash column (controlled) was not detected at a detection limit of 0.06 ppmv for the three (3) Method 26 test runs and also not detected during the eleven (11) colorimetric tests that were taken. See attachment 2 for a summary of operating data.

Tesoro conducted subsequent tests in which the pH and caustic flow rates were lowered. Again HCl was not detected during any of the colorimetric tests.

7.2.6 Continuous Monitoring Requirements

Facilities with "wet scrubber" designs are expected to continuously monitor pH and liquid-to-gas ratio and operate within the operating limits established during the performance test. On the other hand, facilities with "internal scrubber systems" are expected to continuously monitor HCl concentration (via colorimetric testing) and

operate within the operating limits established during the performance test. Given that Tesoro's treatment system could arguably be categorized as either type of scrubber, we believe the Alternative Monitoring Plan described below fully meets the objectives of the MACT requirement.

Tesoro will meet the continuous monitoring requirements by implementing a continuous parameter monitoring system (CPMS) for pH (or alkalinity) and liquid-to-gas ratio, which is the requirement listed for "wet scrubbers". Our operation is steady, extremely efficient and is equipped with the necessary hardware to implement the CPMS. However, to ensure compliance with the regulation we are seeking Agency approval regarding the following issues:

1. Data Collection: The Tesoro Anacortes CR process has not yet been converted to digital control, and still utilizes strip charts and periodic data logging. Until the system is converted to a digital control system (which is anticipated to occur by the end of 2007), Tesoro will use the strip charts to record the required data. The strip charts will be visually assessed to determine a daily average. Of the process data needed to complete the liquid-gas ratio calculation, only the gas temperature is not continuously recorded on a strip chart. Rather, the temperature is logged twice per day into a data capturing system, and does not fluctuate enough to affect overall treatment efficiency or the l-g ratio calculation. We reviewed current data collection capabilities with the Northwest Clean Air Agency, and the agency agreed that strip charts should be adequate to demonstrate continuous compliance.

Note: At the time of permitting, the facility has converted to digital control. Records are being kept as required in 40 CFR Part 63 Subpart UUU. The strip charts are no longer in use.

2. pH analyzer: The Final Rule (in Table 41, Item 5) states that the pH meter's calibration should be conducted on at least two points every 8 hours of process operation. The draft technical amendments state that the analyzer is to be maintained according to manufacturer's recommendations. However, the following maintenance protocol has enabled Tesoro to maintain the reliability of our pH control system. Therefore, we request approval to utilize the following maintenance plan for our pH control system:

   1. Flush the pH probe four times / week
   2. Calibrate the pH monitor weekly
   3. And otherwise maintain according to manufacturer's recommendation.

3. Operating below the establishing l-g ratio or pH operating limit: As mentioned earlier, based on the test results obtained in November 2004, we expect no measurable break-through of HCl during the performance test. However there are several process parameters that can change during the normal 5-year run that could yield lower l-g ratios or pH operating conditions from those originally established during the compliance performance test. If that occurs, Tesoro will utilize the CPMS Back-Up Monitoring Plan (as specified below) until the process can be returned to the normal operating limits or until new lower limits can be assessed and re-established per the guidelines provided in 40 CFR 63.1571(e). Implementing the CPMS Back-up Plan will maintain compliance with the standard whereby temporary operation below the l-g ratio or pH operating limit is not a violation of the standard.

4. CPMS down time (pH monitor): In the event that the monitor is down for maintenance, Tesoro will monitor pH according to the provisions of 40 CFR 63.1572

or will monitor compliance according the CPMS Back-Up Monitoring Plan until such time that the pH monitor is functioning normally.

5. CPMS down time (l-g ratio inputs): In the event that data needed to assess l-g ratio is not available, Tesoro will utilize the CPMS Back-Up Monitoring Plan.

7.2.7 CPMS Back-Up Monitoring Plan

To demonstrate continuous compliance when the CPMS is down or otherwise unavailable or if the l-g ratio or pH are operating below the established operating limits, Tesoro will implement the following CPMS Back-Up Monitoring Plan:

Tesoro will measure and record the concentration of HCl one time during the coke burn-off step and one time during the rejuvenation step using a colorimetric tube sampling system. If HCl is detected (> 0 ppmv), then monitoring will be increased to once every two hours throughout the remaining portion of the coke burn-off or rejuvenation step. If the average HCl concentration exceeds 10 ppmv (as directly measured by the colorimetric tube), then Tesoro will notify the local air agency, conduct an engineering assessment to determine the cause for the increase, and take appropriate corrective action. If the problem cannot be resolved with seven (7) regeneration cycles, then Tesoro will conduct a Method 26 test within 45 days to verify compliance with the standard. Colorimetric readings, although useful for trending the operation, have the potential to over-state actual HCl concentration. Therefore, conducting a follow-up Method 26 analysis would be appropriate for compliance verification.

7.2.8 Gas Measurement

Tesoro will utilize the calculation method for assessing the flow rate of the gas to the caustic and water wash column, in lieu of direct measurement. This provision is not listed in the Final Rule for CR units, but was added as a provision in the draft technical amendments. However, Tesoro believes that an error exists in the published equation -- the pressure term needs to be corrected to have P(vent) in the denominator.

63.1573 Equation (1) as published:

Q(gas) = (1.12 scfm / dscfm) x (Q air + Qother) x (Temp(gas) / 293K) x (Pvent / 1 atm)

63.1573 Equation (1) as corrected:

Q(gas) = (1.12 scfm / dscfm) x (Q air + Qother) x (Temp(gas) / 293K) x (1 atm / P vent)

The equation should be based on the following ratio of actual vs. standard conditions.

V(1) = V(2) x T(1) / T(2) x P(2) / P(1)

1 = actual

2= standard

V(1) =ascfm

V(2) = scfm (as measured by the instrument)

T(1) = actual temperature (as measured by the instrument)

T(2) = standard temperature (293K)

P(1) = actual pressure (as measured by the instrument)

P(2) = standard pressure (1 atm)

But the regulation shows the pressure term to be P(1) / P(2) instead of P(2) / P(1).

Note: The regulation has been updated to allow for calculation of gas flow rate and the equation is corrected. The facility is following the regulation directly.

7.2.9 Operating Limit for the "Internal Scrubbing System" classification

As mentioned earlier, Tesoro has reviewed the CR regen exhaust gas treatment system to determine if our process meets the definition of a "wet scrubber" or "internal scrubbing system". The proposed monitoring plan discussed above leans heavily on the "wet scrubber" classification. However, for overall completeness, we want to take this opportunity to discuss an issue with how the operating limit is established for "internal scrubbing systems" should this become on issue in negotiation of this AMP.

Facilities with "internal scrubbing systems" are required to establish an operating limit whereby the HCl in the exhaust gas must not exceed the limit established during the performance test. Based on our process design and historical testing data we would expect that no HCl would be detected during the performance test. According to the rule, then our limit would be 0 ppmv or "non-detectable", a limit that we might not be able to achieve 365 days per year given normal process variability. A more reasonable operating limit would seem to be 10 ppmv to match the emission limit set forth in the standard. If this AMP is approved, Tesoro will not be required to set a performance based limit (other than the 10 ppmv emission limit) for the HCl concentration exiting the scrubber, therefore eliminating the need to further evaluate alternatives regarding this issue.

7.2.10 Alternative Monitoring Plan

Attachment 1 includes a tabulated Alternative Monitoring Plan, mirroring the table format used in the regulation. The attachment is a summary of what we are seeking in an Alternative Monitoring Plan and incorporates applicable changes that are highlighted in the draft technical amendments. However there may be issues discussed above that have not been completely reiterated in the table.

ALTERNATIVE MONITORING PLAN

Emission Limit (Table 22)[6] Cyclic reforming unit	Reduce emissions of HCl to a concentration of 10 ppmv (dry, 3% O2).
Operating Limit (Table 23)[7] Wet scrubber/internal scrubbing system combination	You must meet this operating limit during coke burn-off and rejuvenation … The daily average pH (or alkalinity) of the scrubber liquid exiting the scrubber must not fall below the limit established during the performance test; and the daily average liquid-to-gas ratio must not fall below the limit established during the performance test ; If operating below either of the two operating limits, then the CPMS Back-Up Monitoring Plan will be implemented (as specified in the AMP application).
Continuous Monitoring System (Table 24)[8] Wet scrubber/internal scrubbing system combination	You must install and operate this type of continuous monitoring system: (1) Continuous parameter monitoring system (CPMS) to measure and record the pH (or alkalinity) of the scrubbing liquid exiting the scrubber during coke burn-off and rejuvenation. You can use the alternative in 63.1573 instead of a CPMS for pH (or alkalinity) of the water; AND; (2) CPMS to measure and record the gas flow rate to the scrubber and the total water (or scrubbing liquid) flow rate to the scrubber during coke burn-off and catalyst rejuvenation; OR; If the above monitoring system is not operational, then the CPMS Back-Up Monitoring Plan will be implemented (as specified in the AMP application.)

[6] Refers to Table 22 to Subpart UUU of Part 63—Inorganic HAP Emission Limits for Catalytic Reforming Units.
[7] Refers to Table 23 to Subpart UUU of Part 63—Operating Limits for Inorganic HAP Emission Limitations for Catalytic Reforming Units.
[8] Refers to Table 24 to Subpart UUU of Part 63—Continuous Monitoring Systems for Inorganic HAP Emissions from Catalytic Reforming Units.

Requirements for Performance Tests (Table 25)[9] Wet scrubber/internal scrubbing system combination Continued… …continued Requirements for Performance Tests (Table 25)	(a) You must measure the HCl concentration on the CR regeneration exhaust gas recycle line, using Method 26 (40 CFR part 60, App A), according to these requirements: (1) Sampling rate must be at least 0.014 dscfm/min (0.5 dscf/min). (2) You must do the test during the coke burn-off and catalyst rejuvenation cycle, but don't make any test runs during the first hour or the last 2 hours of the cycle. (3) Determine and record the HCl concentration corrected to 3% O2 (using Equation 1 of 63.1567) at the outlet of the scrubber for each test run. (4) Determine and record the average HCl concentration (corrected to 3% O2) for the overall source test from the recorded test run values. (b) Establish the operating limit for pH (or alkalinity) level, according to these requirements: (1) Measure and record the pH (or alkalinity) of the water (or scrubbing liquid) exiting the scrubber every 15 minutes during the entire period of the performance test. Determine and record the minimum hourly average pH (or alkalinity) level from the recorded values. (2) If you use the alternative pH method in 63.1573, measure and record the pH of the water (or scrubber liquid) exiting the scrubber during coke burn-off and rejuvenation using pH strips at least three times during each run. Determine and record the average pH level for each test run. Determine and record the minimum test run average pH level. (3) If you use the alternative alkalinity method in 63.1573, measure and record the alkalinity of the water (or scrubbing liquid) exiting the scrubber during the coke burn-off and catalyst rejuvenation using discrete titration at least three times during each test run. Determine and record the minimum test run average alkalinity level. (c) You must establish the operating limit for liquid-to-gas ratio using data from the continuous parameter monitoring systems, according to these requirements… (1) Measure and record the gas flow rate entering or exiting the scrubber and the total water (scrubber liquid) flow rate entering the scrubber every 15 minutes during the entire period of the performance test. Determine and record the hourly average gas flow rate and total water (or scrubbing liquid) flow rate. Determine and record the minimum liquid-to-gas ratio from the recorded paired values. (2) If you use the alternative procedure for gas flow rate in 63.1573, Equation 1, then collect air flow rate monitoring data or determine the air flow rate using control room instruments every 15 minutes during the entire period of the initial performance test. Determine and record the hourly average rate of all the readings. Determine and record the maximum gas flow rate using Equation 1of 63.1573.
Initial Compliance (Table 26)[10], Cyclic reforming unit	You have demonstrated initial compliance if the average emissions of HCl, measured using Method 26, 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."

[9] Refers to Table 25 to Subpart UUU of Part 63—Requirements for Performance Tests for Inorganic HAP Emissions From Catalytic Reforming Units.
[10] Refers to Table 26 to Subpart UUU of Part 63—Initial Compliance With Inorganic HAP Emission Limits for Catalytic Reforming Units.

Continuous Compliance (Table 27)[11], Cyclic reforming unit	Maintain HCl concentration to no more than 10 ppmv (dry basis), corrected to 3% O_2.

Continuous Compliance with Operating Limits (Table 28)[12] Cyclic reforming unit Wet scrubber/internal scrubbing system combination	For this operating limit: <u>The daily average pH (or alkalinity) of the scrubber liquid exiting the scrubber must not fall below the limit established during the performance test;</u> You must demonstrate continuous compliance during coke burn-off and catalyst rejuvenation by: (1) (a) collecting the hourly and daily average pH (or alkalinity) monitoring data according to 63.1572 or (b) collecting continuous data via strip chart and visually assessing a daily average, according to the AMP application. (2) maintaining the daily average pH or alkalinity above the operating limit established during the performance test. (3) if the daily average pH (or alkalinity) of the scrubbing liquid exiting the scrubber falls below the limit established during the performance test or if CPMS is not available, then the CPMS Back-Up Plan will be implemented to demonstrate continuous compliance with the operating limits. For this operating limit: <u>The daily average liquid-to-gas ratio must not fall below the limit established during the performance test ;</u> You must demonstrate continuous compliance during coke burn-off and catalyst rejuvenation by: (1) (a) collecting the hourly average gas flow rate and total water (or scrubbing liquid) flow rate monitoring data; and (b) determining and recording the hourly liquid-to-gas ratio; and (c) determining and recording the daily average liquid-to-gas ratio; OR (d) collecting continuous data via strip chart and visually assessing a daily average, according to the AMP application. (2) maintaining the daily average liquid-to-gas ratio above the limit established during the performance test. (3) If the daily average l-g ratio falls below the limit established during the performance test or if the CPMS is not available, then the CPMS Back-Up Plan will be implemented to demonstrate continuous compliance with the operating limits.

[11] Refers to Table 27 to Subpart UUU of Part 63—Continuous Compliance With Inorganic HAP Emission Limits for Catalytic Reforming Units.
[12] Refers to Table 28 to Subpart UUU of Part 63—Continuous Compliance With Operating Limits for Inorganic HAP Emissions From Catalytic Reforming Units.

SECTION 8 INAPPLICABLE REQUIREMENTS

The regulations identified in Table 6 do not apply to the Tesoro Refining and Marketing Company as of the date of permit issuance.

CITATION	TITLE	BASIS
40 CFR Part 60 Subpart Ka	Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984	The facility has no storage vessels subject to this requirement.
40 CFR Part 60 Subpart D	Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971	Fossil-Fuel-Fired Steam Generators F-751 and F-752 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 Part 60 Subpart Da	Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978.	No affected facilities
40 CFR Part 60 Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	No affected facilities
40 CFR Part 60 Subpart XX	Standards of Performance for Bulk Gasoline Terminals	No affected facilities
40 CFR 61 Subpart Y	National Emission Standard for Benzene Emissions from Benzene Storage Vessels	The facility does not operate any storage vessels meeting the applicability threshold.
40 CFR 61 Subpart BB	National Emission Standard for Benzene Emissions from Benzene Transfer Operations	No affected facilties
40 CFR Part 63 Subpart Q	National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers	The facility does not use chromium-based water treatment chemicals in its process cooling towers.
40 CFR Part 63 Subpart R	National Emission Standards for Hazardous Air Pollutants for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations)	The facility does not have any applicable emission units.
40 CFR Part 63 Subpart Y	National Emission Standards for Hazardous Air Pollutants for Marine Tank Vessel Loading Operations.	The facility's marine tank vessel loading operations are exempt as an existing offshore loading terminal, as defined by the regulation.
40 CFR Part 63 Subpart EEEE	National Emission Standards for Hazardous Air Pollutants for Organic Liquid Distribution	The facility does not have any applicable emission units.
40 CFR Part 63 Subpart ZZZZ	National Emission Standards for Hazardous Air Pollutants for Internal Combustion Engines	All RICE on-site are less than 500 hp.

CITATION	TITLE	BASIS
40 CFR Part 63 Subpart LLLLL	National Emission Standards for Hazardous Air Pollutants for Asphalt Process and Roofing Manufacturing	The facility does not have any applicable emission units.